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A WEEKLY REVIEW OF MEDICINE

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Original Communications.

CHRONIC FLUORINE POISONING.

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Although hydrofluoric acid is known to be a dangerous corrosive, and acute and chronic fluorine poisoning has been studied experimentally on animals, fluorine preparations are regarded as non-poisonous, and have been recommended of late as food preservatives and as therapeutic agents.

The object of this paper is to prove that the salts of fluorine produce, under certain conditions, dangerous effects, and should therefore be used with great caution. My case shows so many interesting pathological features, apart from its medico-legal aspect, that it justifies consideration in all its details.

Anamnesis.—The patient, a journalist, thirty-eight years old, was in the habit of drinking large quantities of whiskey up to six years ago, then he changed to claret, and about two years ago gave up both, giving the preference to large daily quantities of bottled beer. His work kept him at home, and he consumed from 3,000 to 4,500 ccm. of beer a day, always using the same brand, from the same bottler. On December 26, 1900, he complained of pain in his left leg. I found a phlebitis in one of the cutaneous branches of the vena saphena. The pain and swelling disappeared under ichthyol applications in a week. But on January 4, 1901, the pain returned and a clot formed in the left femoral vein up to Poupert's ligament. The leg became much swollen, and was very painful, while the rectal temperature rose to 103° F. Ichthyol salve, lukewarm compresses, and raising of the leg brought relief, and gradually, toward the beginning of February, re-established circulation. On February 12th the patient got up, wearing an elastic stocking; but a few days later he had a relapse, which led to a total occlusion of the vena femoralis and vena obturatoria on the left side. The leg swelled enormously. On the 25th the patient complained of intense pain in the abdomen, and shortly afterward the right leg and the skin of the lower abdomen, perinæum, etc., swelled, in consequence of thrombosis of the right iliac vein.

For a long time my search for a cause of this clotting was futile, and I will now endeavor to give the development of the diagnosis.

Status in January, 1901.—The patient is of average strong build, well nourished. Heart, lungs, liver, kidneys, spleen, stomach, all apparently unchanged; pulse soft and full; arteries unchanged; heart's action strong, varying from 64 to 78; no varicose veins; no skin disease, which might have caused infection; nothing to explain the clotting.

On March 1st I made the following additions to the foregoing statements: Both legs are very œdematous; so are the lower third of the abdominal wall, the perinæum, and the sacral region. Heart's action somewhat weaker than in January, but no other changes of importance. The patient complains of pains in both legs, pain while urinating, etc., undefined pains in the abdomen, in the region of the liver, along the ribs, in the sternum, and, as he expressed it, "in every bone in his body." The following more special clinical observations belong to the period between February 25th and March 15th, and I also give in detail the analysis of urine, fæces, and blood.

I. Clinical Examinations. a. Urine.—Already in January and February I had examined the urine in the usual way, without, however, finding anything abnormal in the specific gravity, urea, etc. Sugar, albumin, and bile pigment were absent. Before going further into detail, I will say that in the middle of February, while determining the percentage of hæmoglobin, I noticed that the blood clotted very quickly. This rapid clotting was practically the first point which made me suspect that some chemical disturbance must be at the root of the evil, and I began to test the coagulability of the blood. While experimenting by various methods, on which I will report at the end of this paper, I lost about two weeks, and, as the patient began to be impatient at being continually examined instead of treated, I put him on a diet that was as free of lime as possible, with a view to reducing the coagulability of the blood.

(According to the well-known researches of Limbeck, and especially those of Castellino, we know that the coagulability of the blood is increased by food containing large percentages of calcium salts, while it loses its coagulative power through lack of lime.) In considering the following urine tables, we must, therefore, bear in mind that the urine was produced from a diet which contained only a fraction of the usual quantity of lime. As specially rich in lime, I omitted amylaceous food, excepting rice and potatoes, milk (of the dry substance of which 1.51 per

D. Figures...	Normal	Feb. 20	Mar. 7	Mar. 13	Mar. 14	Mar. 18	Mar. 19	Mar. 29	Apr. 3	Apr. 7	Apr. 12
Quantity....	1500 ccm.	1700 ccm.	2720 ccm.	1775 ccm.	2720 ccm.	3200 ccm.	3200 ccm.	2160 ccm.	1890 ccm.	1600 ccm.	1600 ccm.
Spec. Grav...	1.015	1.012	1.008	1.010	1.015	1.008	1.009	1.010	1.017	1.020	1.019
Reaction...	Acid 5	Acid 6	Acid 2	Acid 4	Acid 15	Acid 2	Acid 7	Acid 2	Acid 2	Acid 10	Acid 5
Urea.....	30.00	18.70	13.60	33.72	32.64	12.80	22.40	10.80	16.20	15.00	15.00
Uric Acid....	0.75	0.34	0.272	0.53	0.816	0.32	0.48	0.21	0.27	0.30	0.30
Chlorides....	15.00	3.40	0.0	3.55	16.32	19.20	19.20	12.96	15.30	0.40	0.5
Phosphates..	2.50	2.34	0.136	3.10	1.70	1.60	3.20	1.512	1.35	0.80	1.25
Calcium.....	0.25	0.34	0.163	0.65	0.30	0.30	0.50	0.20	0.18	Trace	0.08

cent. is lime), and yolk of egg (of the dry substance of which 0.4 per cent. is lime).

Remarkable in this table are the following facts:

1. The presence of neutral and basic phosphate of calcium, notwithstanding the normally large amount of phosphoric acid and the normal acidity of the urine. In such urine one would expect to find acid phosphate of calcium; the presence of the neutral and the basic phosphates points directly to a surplus of lime in the urine; in fact, I found in frequent determinations, and in spite of the diet, an average of 0.4 gr. CaO, while the normal quantity, by ordinary nutrition, amounts, according to Soborow, to 0.2 to 0.28 gr. a day, and after two days of fasting to only 0.1 gr.

2. The small percentage of chlorine, which at one time was reduced to mere traces. To this I shall return later.

3. The reduced percentage of uric acid and urea are also noteworthy facts (as showing a rather low vitality).

The increased quantity of lime in the urine suggested to me the possibility of increased quantities of lime in the blood. Unfortunately, there are no records showing the percentage of lime in the blood of man or beast that had been put on a diet poor in lime, so that we have no means of comparison.

b. *Examination of the Blood.*—As already indicated, I made in the course of January and February numerous examinations of the blood, which, however, in respect to hæmoglobin and the number of blood-corpuscles, revealed only the symptoms of a slight anæmia. On March 1st I found 80 per cent. of hæmoglobin, 4,100,000 red blood-corpuscles, 25,000 white corpuscles, no poikilocytosis, and remarkably numerous uninuclear leucocytes.

Blood reaction: 0.02 NaOH to 100 (too little).

Iron: 0.00086 Fe, or 5.75 per cent. of the ashes.

Specific gravity: 1.050.

In taking the specimens of blood, I was impressed by their rapid coagulation; for instance, in the capillary tube of Fleischl's hæmoglobinometer, or in that of the Gower-Sahli apparatus, it clotted before I had time to mix it with water. When I drew blood into a Pravaz syringe, by inserting a needle into the vena mediana, it clotted almost instantly, and I was obliged to unscrew the syringe and withdraw the clot by means of a forceps. Even in a glass syringe into which I drew 30 ccm. of blood, it formed a solid mass within twenty seconds.

It would take me too long to give all the details of the blood analyses, which Dr. Hübner made in the most thorough manner, I shall content myself with the more important points: The blood was evaporated to a constant weight on the water bath, and then incinerated. The ash proved the presence of the normal quantity of CaO, a deficiency of Cl, and a relatively larger quantity of iron (on account

of the decrease of Cl). The dry residue from one ccm. amounted to 0.4 gr. The solids were incinerated and gave 0.015 gr., equal to 3.75 per cent. of dry residue, or 1.5 per cent. of the blood (normal, about 1 per cent.) The quantity of iron was 0.00086 gr., or 5.75 per cent. of the ashes. Calcium amounted to 0.00013 gr., or 0.86 per cent. of the ashes.

After the dry residue had been incinerated, it was extracted with distilled water. On adding the water to the ashes, an intensely penetrating odor was noticed, which was identified as that of hydrofluoric acid. It resembles the odor of hydrochloric acid, but is more pungent.

In the course of further investigations, the blood was again dried and incinerated. This was carried on in a nickel dish. On removing the ashes from this vessel, the surface of the latter seemed slightly corroded. As ordinary blood does not attack nickel upon incineration, or only in the very slightest degree, the corrosion must have been produced by fluorine. But this time fluorine could no longer be detected in the ashes; it, therefore, must have gone into combination with the nickel.

The figures of the second analysis are as follows:

Blood	13.29 gr.
Dry residue (water bath)	3.67 gr.
Ashes	0.150 gr.

The ashes contained: Cl: 0.01070

Fe: 0.0048

Ca, Na, K, P₂O₅, SO₄.

A quantity of the same blood was evaporated on a glass dish, and upon removal of the dry residue the dish appeared etched. This again demonstrated the presence of fluorine.

While these examinations were being carried on I determined, as mentioned before, according to several methods, the rate of coagulation of the blood, and found it to be, in the beginning of March, thirty to forty seconds, while the average clotting time is about nine minutes. On March 6th it required one minute, and in the middle of March two minutes, to clot.

White blood-corpuscles were present in the following proportions:

49 per cent. uninuclear leucocytes (10 small, 3 medium, 28 large, 6 very large).

51 per cent. polymorphous and multinuclear (36 multinuclear, 5 transitory forms, 5 eosinophilous multinuclei, 6 eosinophilous transitory forms, 2 large granulated basophiles, 1 multinuclear basophile).

This shows that there existed a peculiar uninuclear leucocytosis, which generally only appears as a forerunner of leucæmia. Ehrlich has suggested for this form the name of "passive leucocytosis," in contradistinction to "multinuclear leucocytosis," or "active leucocytosis." (Only the multinuclear cells have active power of motion, and can, for example,

he brought into the circulation through chemotaxis.)

The multinuclear cells are mostly smooth, not neutrophile, and the uninuclear cells have extraordinary pale nuclei with a smooth body.

The blood analysis gives the following result: Slight anæmia, pronounced uninuclear leucocytosis; enormously increased power of coagulation of the blood, while the chemical examination shows a deficit of chlorine and probably an increase of lime.*

c. Fæces, March 1, 1901.

Quantity (for examination) .40.00 grm.

Solids 9.5605 grm.

Ashes 1.1428 grm.

Ashes:

Soluble in hot water.....0.070	(alkali chlorides)	6.12 %
Insoluble in dil. HCl...0.0997	(Fe ₂ O ₃ , SO ₂ , P ₂ O ₅).....	8.72 %
CaO0.3127	27.36 %
MgO0.1009	14.08 %
	Balance partly.....	P ₂ O ₅

Percentage of CaO = 0.78175 % (in spite of the lime-free diet.)

The examination of the fæces (frequently repeated) gave 1.66 gr. CaO as the average for a day; in other words, the patient lost through the fæces and urine together about 2.5 gr. of CaO daily. Eventually the excretion of CaO continued to be increased, despite the lime-free nourishment.

Detection of Fluorine in the Urine.

The presence of fluorine in the urine was detected in the following manner: In 100 ccm. of urine, 10 grs. of ammonium chloride were dissolved, and this mixture was allowed to stand for several weeks in a well-stoppered Erlenmeyer flask. Then the flask was emptied and rinsed with acid and alkali in order to cleanse it from all deposits. The part of the flask that had not come in contact with the mixture showed a slight opaque etching, while in the part which had been in contact, the glass had become thinner. Fluorine gas (fluorammonium) had caused the upper part of the flask to become opaque (a dull etching is produced when gas is used). When fluorine is in solution the etching appears smooth.

II. *Clinical Remarks.*—The presence of fluorine, in perceptibly large quantity, in the patient's body having been demonstrated, the question arose as to whether it could be held responsible for the patient's condition.

The literature on fluorine is relatively poor, although fluorine derivatives, such as sodium fluoride, fluoroform, and hydrofluoric vapors, are used therapeutically, mainly in the treatment of consumption. Some authors think that they have derived good results from it (Zeiler, Garcin, Herard, Gager), while others have seen only bad results (Poriac, Grancher, Chautard, Hörmann, Opolsky). Chevy and Gotbrecht recommend inhalations of hydrofluoric acid as an antiseptic. Bergeron treats diphtheria with in-

halations of fluoric acid. But, taking everything into consideration, I conclude that the results are unsatisfactory. The toxicology of sodium fluoride, which salt is variously used as a food preservative and antifermentative, has been studied by Rabuteau, and later, in a very exact manner, by Tappeiner and Hewelke.

The acute poisoning is indicated by salivation and increased action of the lacrymal glands, drowsiness, muscular twitching, and cramps, in consequence of irritation of the nerve centres. The toxic dose, as found by Tappeiner, is 0.15 gr. per 1,000 gr. of an animal's weight, in subcutaneous injection.

Chronic poisoning has been brought about in animals by mixing small quantities of soluble fluorine salts with the food and administering them for a time. An accumulation of the salts in the system takes place under such conditions, as Brandl and Tappeiner have proved. A large part of the fluorine is retained in the bones (20 gr. in three days), forming a crystalline compound which the above-mentioned authors consider to be calcium fluoride. Fluoride of calcium is but sparingly soluble—one part in 26,000 parts of water.

As in the animals, so in my patient, the seat of the disease was in the bones, and this pain in the bones, the blood analysis, and the excretion of calcium, all proved the correctness of my diagnosis. How the conversion of Fl Na into Ca Fl_2 is accomplished in the bones is not easy to determine. The bones, after the removal of the periosteum and the drying of the marrow, consist of 68 per cent. salts and 32 per cent. organic matter. Of the 68 per cent. salts, 84 per cent., or 57.12 gr., consist of basic calcium phosphate ($\text{P}_2 \text{O}_5 \text{Ca}_3$), 1 per cent., or 0.68 gr. of basic magnesium phosphate ($\text{P}_2 \text{O}_5 \text{Mg}_3$), 7.6 per cent., or 5.168 grs. of salts of calcium (Ca CO_3 , CaCl_2 , CaFl_2) and 7.4 per cent., or 5.632 gr., of alkali salts (NaCl), etc.

These figures appear simple enough, but the manner in which the molecules combine is decidedly complicated. Chloride of calcium and calcium phosphate enter probably into a combination similar to the one occurring in the mineral "apatite" (Ca Cl_2 , $3\text{Ca}_3 \text{P}_2 \text{O}_8$), and there is also a double compound of the formula $(\text{Ca}_3 \text{P}_2 \text{O}_8)_3 (\text{CaCO}_3)$.

The remaining elements, as magnesium, potassium and sodium, are combined with HCl , CO_2 , and, in the teeth, FlH ; but under normal conditions fluorine exists in the teeth only in minutest traces.

The fluid of the bones contains Na Cl and alkali sulphates. These salts do not seem to possess much stability, but slide easily from one combination into another, the halogens combining with the haloids, according to the strongest affinities. Fluorine drives out chlorine, the latter bromine, etc. In the case un-

*The literature, as far as I have been able to see, does not give any percentage of calcium in the blood of persons subsisting on lime-free food. It probably should be very small, while in my patients the blood contained a little more than the normal quantity.

der discussion the fluorine takes the place of chlorine, and calcium fluoride is formed, while the Cl combines with the sodium, which then is excreted and thus lost to the system. This might explain the deficit of Cl.

It seems probable that the calcium fluoride does not remain in the bones as such, but a calcium compound, somewhat resembling apatite, is possibly found as fluor apatite, as we find in nature an apatite containing fluor and an apatite free from fluor.

To say that the coagulability of the blood increases under the influence of fluorine seems at first sight incongruous. Theoretically, fluorine should combine with the Ca in the blood and form insoluble Ca compounds. Here we touch a weak spot in physiological chemistry, and all attempts at an explanation of this apparently paradoxical behavior are hypothetical. I can, however, refer to a somewhat similar case from literature: Arthus, *La Coagulation du sang, et les sels de chaux* (*Archives de physiol.*, 28, i., 1896).

If oxalic acid is added to the blood, in proportion of 1 to 1,000, and then a few milligram of magnesium chloride and traces of lime, the plasma will coagulate; the Ca is *not* precipitated, although the oxalic acid should do this immediately. The presence of Ca compounds in solution is necessary for the coagulation of the blood; but that is all. What sort of salt, is immaterial. In some organic compounds Ca is so strongly united that even fluorine cannot precipitate it, just as iron albuminates are often not affected by Cl.

(I do not believe that Ca is present in blood only as Ca Cl₂, but am rather inclined to think that it is in organic combination.)

The following point has not yet been fully elucidated by the authorities. We can increase the coagulability of the blood by increasing the Ca in it; but whether this is possible with *all* persons, and whether it depends upon the proportion of Ca in the blood, we do not know. This much, however, is sure, that I have not yet met a person whose blood has not gained in power to coagulate upon the administration of calcium hypophosphite. E. Wright has already drawn our attention to this fact (*Lancet*, January 18, 1896).

During the last five years I have treated and stopped hæmorrhages from the lungs with large quantities of lime, 6 to 10 grammes a day, and milk with lime water, and encountered in all that time scarcely a failure. I wish to mention this fact as a rather important observation.

The assimilation of salts in the body has not yet been studied sufficiently. We know, approximately, this much: Every organ has its special desires for various salts, and takes up Na, Cl, K, Ca, Fe, etc.,

according to the prevalent "hunger." Evidently each cell has its own definite osmotic quality, in accordance with its special function, yet, perhaps, widely different from those of others of its kind. As soon as a deficit in a certain salt is felt, that want is supplied from the blood to restore the equilibrium. As the blood has its own osmotic resting point, the variations are kept within certain limits. The potassium salts are mostly stored in the cells, while the sodium salts are kept in circulation. Up to 99 per cent. of the Ca salts are retained in the bones and teeth. Apparently, fluorine follows the same course, Sodium fluoride is evidently taken up as such by the blood, and then kept back by the bones, where the fluorine combines with the Ca and displaces P₂ O₅ and Cl, forcing the latter salts to combine with sodium. When the calcium fluoride compounds are precipitated in the bones, they cause so much irritation that resorptive inflammation takes place. This may account for the increased excretion of lime and the pain in the bones.

When the introduction of fluorine was stopped, at the end of February, the conversion of Ca also soon ceased, and with it the Cl displacement, in consequence of which we see the Cl deficit in the urine. Not until the patient had taken large quantities of Na Cl and HCl for a long time did the chlorides appear again in normal quantities in the urine.

The tendency of the blood to coagulate may also find an explanation in the lack of salt in the patient's body; but further investigations are necessary to support this hypothesis.

Epicrisis.—The result of all the clinical researches presents itself thus:

1. Uninuclear leucocytosis.
2. Greatly increased excretion of lime in the fæces, and great increase of its excretion in the urine.
3. General pain in the bones, as in osteomalacia.
4. Increased coagulability of the blood, with a tendency to thrombosis.

These indications, together with the detection of fluorine, I should like to set down as the symptoms of chronic fluorine poisoning.

The rapid coagulation of the blood should, however, not be pronounced a direct action of the fluorine. It is rather to be looked upon as a result of disturbed assimilation of lime and chlorine. The uninuclear leucocytosis, on the other hand, is to be regarded as having been caused by the presence of calcium fluoride in the bone marrow, in the spongiosa. Here I should like to mention an interesting fact from hæmatology: In tumors of the bones, specially sarcomatous processes in the bone marrow, the blood often affords the picture of pernicious anæmia and often that of uninuclear leucocytosis, approaching leucæmia (as Strauss and Rohnstein, Charité) have recently emphasized.

In this case of fluorine poisoning there is what I might designate as an artificially produced leucæmic condition of the blood. If an autopsy could have been made we should undoubtedly have found an accumulation of lymphadenoid tissue in the tubular bones; but, since the post-mortem is lacking, it will be necessary to resort to experiments upon animals in order to study these details.

The Source of the Fluorine.—How did the fluorine get into the patient's body? By what vehicle? He ate the same kind of food as other people, and his provisions were obtained from reliable dealers. His only peculiarity was his extraordinary consumption of beer. I therefore soon began to look upon this beverage with suspicion, and my misgivings were intensified when I learned that the patient always used the same brand of beer, from the same bottler, and that for the last two years he had drank only bottled beer, in daily quantities, during the last winter, of from eight to ten bottles, or three cases of twenty-four pint bottles a week.

I submitted the beer to a complete analysis. The first researches were, however, negative; but as I learned later on, fluorine combines with the glass of the bottle, forming fluorsilicium, which is precipitated on the inner surface of the bottle as a gelatinous substance. Sodium fluoride, on the other hand, goes into combination with some of the ingredients of the beer, forming a nitrogenous compound, particularly fluorammonium. This latter is one of the most volatile fluor salts. However, the presence of fluorine in the beer can be proved in the same manner as in the urine. Where the glass comes in contact with the liquid it shows a smooth etching, beyond the line of contact the etching is dull. On evaporating a quantity of the beer from a glass dish we find the latter etched. By leaving thin leaves of aluminum in a bottle of the beer for some time, aluminum fluoride is formed, which method can be used in collecting the fluoride from a larger quantity of the beer.

To detect fluorine in very high dilution is difficult, on account of the high volatility of its salts, which easily evaporate when one tries to concentrate the liquid.

Treatment.—After I had become convinced that the patient was suffering from fluorine poisoning, I had to determine upon a plan of treatment. From the foregoing statements it would seem to be a rather difficult task to eliminate the accumulated fluorine from the system. The only way was to wash it out with large quantities of water, to keep the bowels well open, to saturate the system with salt, in order to allow the Ca to form the combination of CaCl_2 . I therefore allowed the patient, from March 4th on, to go back to a regular diet, after his food for weeks had been poor in Ca. I prescribed two or three bottles of Vichy Celestin daily, and, besides, Hunyadi or Carlsbad water in the morning, and, on account

of the lack of chlorides, well-salted food and diluted hydrochloric acid after meals.

The diuresis increased to 2,500 and 3,500 ccm. a day, and the quantities of urea and chlorides soon became normal. At the beginning of April the time of blood coagulation was lengthened to from three and a half to four minutes. Later it required about five minutes, and longer, before coagulation was completed. During this period, the general condition of the patient improved satisfactorily, the thrombosis disappeared and new veins developed; the pain in the bones diminished. At the beginning of May it disappeared altogether. Only in the region of the liver was there still some sensitiveness, which I, however, ascribed to indiscretions in diet, of which the patient was, at times, guilty.

On May 3d he was attacked with icterus. I gave him strong cathartics, and detected in the grayish stools small sandy granules, of about the size of a split pea, which consisted mainly of calcium soap. At the same time the liver became swollen and was painful on pressure. It seemed as though concretions had formed in the bile-duct, evidently in consequence of the increased excretion of lime.

From May 15th on, the jaundice diminished, and bile began to pass again through its natural channels. The condition of the blood was also improved, its coagulability decreasing until complete coagulation required six minutes. As decreasing coagulability generally accompanies icterus, I almost welcomed the appearance of the jaundice.

Since May 25th the icterus has disappeared, the faces have regained their natural color, and the liver has become smaller. Clotting now took place after five minutes; the mass became more solid after six minutes, and entirely firm after seven minutes.

The condition of the leucocytes was: 45 per cent. of uninuclear and 55 per cent. of multinuclear forms. There were now quite a number of neutrophile granular cells present, but there were also many still of the type of Ranvier's *celles médullaires*.

The patient was able to leave his bed, but is still too weak to go out.

Before closing, I will express my thanks to the chemist, Dr. Robert Hübner, who performed all these difficult analyses in the most competent manner.

Conclusion.—As the most important conclusion one can draw from the above-described case, I should like to point out the fact that fluorine is capable of a cumulative action under certain conditions. In small doses, it is a relatively harmless preservative agent; but as soon as it is given a chance to accumulate in the body through continued administration, it becomes dangerous, and its employment should be prohibited by law. This applies especially to beverages and food stuffs that are consumed regularly and in large quantities, particularly beer, green vegetables, milk, and meat.

Medical science can also profit by the experience, inasmuch as great caution should be exercised in prescribing fluorine for internal use. Especially in recent years, numerous fluorine preparations have been recommended for the treatment of consumption al-

ways accompanied by the assertion that they are positively non-toxic.

There is no doubt in my mind that poisoning can also be produced by organic fluorine combinations, if used too long. It is particularly necessary to draw attention to this latter fact, as the symptoms of fluorine poisoning are not very pronounced, and it is rather difficult to detect the fluorine in the body. The cost of such complicated analyses as these is considerable, and the cases in which they are carried to completion will no doubt remain rare.

To Determine the Coagulability of the Blood.—Of the methods which up to the present have been used to determine the coagulability of the blood, Vierort's and Wright's methods are the ones most generally taken into consideration. Vierort draws some blood into a capillary tube and inserts a (fat-free) horse-hair into the blood column; and by pushing the hair a little deeper every half minute he determines the moment at which the blood begins to stick to the hair. This method is rather incorrect.

Wright fills six or eight capillary tubes with blood and attempts to blow them out at intervals of half a minute. As soon as the blood begins to stick, the coagulation is looked upon as complete. This method has the advantage that the capillary tubes are kept at a constant temperature, but has the drawbacks that: 1. Too much blood is used up. 2. The power employed in bringing the blood into motion is entirely unknown.

I have therefore worked out a method of my own, which, I think, is free from these objections: I take a capillary tube which is kept in a test-tube at a temperature of 37° C. and draw into it about 4 cmm. of blood by means of a syringe. The column of blood is moved slightly every fifteen seconds by means of an accurately constructed screw syringe. With the tube which connects the capillary tube with the syringe, I place a manometer, and I consider the coagulation as ended as soon as 3 ccm. mercury pressure does not move the blood column any more (because it has adhered to the glass).

Of course, there are other and perhaps better methods possible than this one, which has the great advantage of requiring so little blood. It can be employed on a small part of the drop of blood necessary to the most simple blood examination.

THE LIMITATION OF DRUG THERAPY.*

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The purpose for which this association was established, that is, to promote the study of climatology and hydrology, is a tacit acknowledgment of

the great value of the therapeutic agencies residing in Nature. Medicine is justly styled the healing art and therefore, if we would become healers of the sick, as well as diagnosticians, we must endeavor to make a practical application in therapeutics, of the truths taught us by pathology, bacteriology, physiological chemistry, etc. We have passed beyond the time when practitioners of medicine were mere empirical prescribers of nauseous drugs. We have learned that many internal diseases are best managed without medicines, or that if these latter are to be employed at all, it is only in accordance with definite indications, and then only with the view of aiding the natural powers of resistance inherent in the human organism. It is only the tyro or ignorant empiric who fancies he can drive out disease by remedies which at the most only modify symptoms. The fact that we possess two so-called specifics, namely, quinine against malaria and mercury against syphilis, does not at all invalidate the truth of the foregoing remark. Indeed, the very paucity of specific medicinal agencies serves to emphasize the limitation of drugs in the eradication of those infectious diseases which are the scourge of mankind. We manifest our recognition of this fact every day and we daily admit our impotence in dealing with these and kindred maladies. We nurse a typhoid-fever patient through his attack often most successfully when we administer no medicine, and then, when convalescence sets in, we send him into the country or upon a sea voyage that he may avail himself of Nature's remedies, fresh air and sunshine. A patient comes to us for treatment because of a bronchitis, perchance. We prescribe appropriate medicines and are or are not successful in bringing about a termination of the process. In many instances we exhaust our therapeutic resources, and at length, discouraged by the continuance of symptoms, the patient takes it into his head to go to a warmer climate, or in despair over the futility of our efforts we advise him to go South. Why is this? Because we know that in a suitable climate, where he can live out of doors, breathing a balmy air, soothing to his irritable respiratory passages, and invigorated by sunshine and plenty of oxygen; away from the dust and germ-laden atmosphere of his home environment he will get from Nature's laboratory what we and our drugs cannot give him. We send gouty and rheumatic sufferers to some resort that they may be benefited by the waters of a natural spring or receive a course of baths and at the same time enjoy the invigorating effects of pure air and sunshine, for we know full well that in a way wholly impossible by our medicinal therapeutics these means will modify nutrition and reinforce the resistance inherent in the tissues. These are but a few of the many instances that might be cited in illustration of our dependence

*President's address delivered at the eighteenth annual meeting of the American Climatological Association at Niagara Falls, May 30, 1901.

upon Nature and Nature's remedies. Notwithstanding the widespread advertisements of nostrums, and the ever-increasing manufacture of pharmaceutical products, all vaunted as unfailing and unequalled, the really intelligent, observing, and conscientious physician grows year by year more impressed with the futility of such medication.

Not many weeks ago I was visited by a representative of a well-known firm of manufacturing chemists who, after politely requesting to be excused for trespassing upon my valuable time, proceeded, after the manner of his kind, to enlighten me upon some of the products of their laboratory. In particular he called attention to one of their normal tinctures, *Echinacea angustifolia*, which possessed wonderful curative powers in all conditions attended by the formation of pus. Upon my expressing some astonishment and incredulity regarding such action on the part of a vegetable product he waxed very enthusiastic in its praise, saying that it was Black Sampson root, and enjoyed great reputation among the American Indians. Indeed, he narrated two very wonderful cases in which its conjoined internal and external use had cured where all other measures had failed. One was a case of a purulent discharge from the rectum following an operation, I believe, for piles. Here the medicine had been used as an enema and lotion, as well as by the stomach. In the other, a boy had crushed his hand so badly that the surgeon decided an amputation would be necessary. An objection to this operation had been made, and instead the injured member was dressed with the tincture of Black Sampson root, with the result that the hand was saved in a tolerably serviceable condition. The remedy was only administered internally. As my visitor, a quondam retail druggist, proceeded with his thrilling narrative, I sat with my head resting on my hands and, with a scarcely suppressed smile of amusement, pondered on the ignorance (or was it the effrontery?) of the house that was attempting to retain—nay, to revive—the therapeutics of a century ago. I declined the proffered sample with thanks.

Thirty years ago, when surgeons used to talk about "laudable pus," it might have been in order to attempt to arrest pus formation by means of a vegetable alterative, but in the light of our modern notions of infection such treatment is a manifest absurdity. It seems to me akin to the treatment of acute fibrinous pneumonia by expectorants and tartar emetic, or, if I venture to utter what may sound like heresy, with aconite or veratrum viride.

Not only in suppurative and other infectious processes have we come to realize the futility of the internal administration of ordinary drugs, but, as our experience increases in general, we find ourselves relying less and less on medicine and insensibly di-

minishing the number of our remedies in the treatment of diseases of all kinds.

We devote more attention to the patient's diet and habits, and more often send him away with good advice than with hastily written prescriptions. We recommend exercise in the gymnasium, outdoor recreation, rest from business and home cares, change of air and scene, the use of water internally and externally; in short, all those various factors and conditions that have been provided by Mother Nature directly and indirectly for the preservation and restoration of health. On the part of the more intelligent lay members of the community, as it seems to me, there is a growing dislike to medicine and medicine givers. This is evinced not only by the frequent remark, "Oh, I'm not much of a hand to take medicine," or by the running after faith healers, mind healers, Christian Science healers, and the like, but by the disposition to patronize the numerous instructors in respiratory gymnastics, masseurs, osteopaths, etc., who effect what good they do without the aid of drugs. From the earliest times down to the present, natural springs of one kind and another, health resorts, milk cures, grape cures, and so on, have possessed an unceasing charm for invalids. Some of the attraction, no doubt, lies in novelty, some in the desire to get away from the dreary monotony of medical treatment at home; but, in most instances, patients are impelled to seek these places and means of cure because of the remarkable benefits there derived by friends and acquaintances, while in a few cases they are sent thither by physicians who have failed in their medicinal management or expect failure.

In this country the distrust of medical men and their medicines is shown by the great numbers of intelligent people who have turned to Christian Science and mental healing; while, from the equally credulous but more ignorant, a Dowie or a Schlatter is able to win thousands of devoted followers who accept faith as the only means of salvation from disease. In Germany the dislike of medical treatment is manifested in a more rational and sensible manner. In various parts of that country there have been established sanatoria where the *Naturärzte* subject patients to methods of healing which at the first glance seem quite shocking to our notions of propriety. Upon the principle that the more nearly one returns to the ways of primitive man, the more surely he will rid himself of the physical evils resulting from modern civilized life, large areas of land are enclosed by high board fences behind which the patients disport themselves in a state of complete nudity. Within separate enclosures, men and women, without clothing, expose their bodies to the action of air and sunshine all day long, working in the earth, playing games, bathing in pools or streams,

wallowing in the dirt, and in every other way coming in contact with Mother Nature. They are said even to sleep in the open air, with only sufficient protection from the cold night air by a roof and a modicum of clothing, to prevent undue chilling of their bodies. The dietary is extremely simple and is vegetarian. It is asserted that, thus exposed to wind, rain, and sun, the skin becomes hardened and glows with the warmth of vigorous circulation, the functions of the several organs become natural, and mere physical existence reaches a degree of enjoyment entirely unknown before. The land is said to be flooded with publications setting forth the wonderful results of such life for a few weeks or months, and so many thousands flock to these institutions that this *Naturheilkunde* has become a serious menace to the prosperity of the rank and file of medical practitioners. The initiative to this method of natural healing seems to have been given, so far as I can learn, by the Kneipp cure. We are wont to think of this latter as consisting chiefly of morning walks with bare feet in the grass, wet with the dews of night. This is, however, but one manifestation of Father Kneipp's teachings. His method of treatment was founded on the principle that the body possessed natural power of reaction to cold, and that if it was subjected to the influence of cold water, great vigor of body would result. Kneipp cures have been established in our country, and it will be surprising if the fad for returning to the nakedness of savages does not also invade our land. In these divers modes of natural healing we see not a mere whim to try something novel and exciting, but a desire to escape from bondage to the medical profession, with its time-honored adherence to drug therapy, which, with its conservative repugnance for whatever smacks of charlatanism, looks askance upon all such methods. It would be a display of unwarranted pessimism to assert that a belief in a fad or any one of the so-called natural methods of healing is to replace in the popular mind the well-merited confidence entertained for the art of medicine. There is, however, a certain feeling of distrust in many quarters which may be regarded as a reaction against the heroic dosage of the forepart of the last century. Nor is this reaction confined to the laity, for, among the members of our profession, it has found expression in the therapeutic nihilism that still dominates medical thought in Germany.

The wonderful success that has attended the antitoxine treatment of diphtheria and the activity shown along the line of serum therapy betoken the dawn of a new era in therapeutics, but, as this weapon can be said to be forged only against those diseases having a definite bacterial origin, there will still be left that very large class of organic maladies of a degenerative or sclerotic kind, which are out of

reach of sera and antitoxines, as well as those disorders which seem to depend upon perversion of function of the chylipoietic viscera and as yet have no definite pathology. What is to be done with these? Indeed, it is, for the most part, from the sufferers of these maladies that are recruited the ranks of those runners after new doctrines. Are we to leave them still to the *Naturärzte*, faith healers, osteopaths, and the like? We of the medical profession are ourselves largely responsible for the defection of our quondam patients. We have ever looked with suspicion on the methods, however successful and rational from a therapeutic standpoint, of those lay healers—nay, even of those enlightened medical practitioners who have sought to replace pharmaceutical remedies by Nature's remedies, and therefore we have practically left the field to ignorant empirics. This has been shown particularly in our neglect of hydrotherapy. To the shame of the profession be it said it required the teachings of an ignorant peasant, Priessnitz, to bring us back to the wisdom of the ancients. Although lamentably ignorant of anatomy, physiology, pathology, and other fundamental branches of medical knowledge, which are the just pride of modern medicine, ancient physicians were keen observers who set us an example in the employment of Nature's remedies which we must not find it beneath our dignity to follow. This is eminently true of their use of water. Hippocrates is said to have formulated rules for the use of water in acute and chronic diseases, which are still followed by empirics and even physicians. Asclepiades, a friend of Cicero, achieved great renown as a therapist, and mainly through his employment of this agency, although he did not neglect rubbing, exercise, and diet. A disciple of his, Antonius Musa, is said to have restored Augustus Cæsar and the poet, Horace, to health by means of cold baths. Paulus Ægineta, that renowned surgeon and obstetrician of the seventh and eighth centuries A. D., has the merit of having first recommended cold affusions for sunstroke and anuria. During the dark ages, when medicine, like all other arts and sciences, languished under the domination of the priesthood, this potent therapeutic agency was but little employed, certainly not in the form of baths, whether for cleanliness or health. In the seventeenth and eighteenth centuries, on the other hand, there were a number of eminent physicians who promulgated the therapeutic virtues of water, both by writing and example. Among these were Floyer, in England; the illustrious Friedrich Hoffmann in Germany, besides Theden, the physician to Frederick the Great; Hann, Hufeland, and others. Thence the advocacy of water spread to Italy, France, and then again to England. It was employed in fevers, dysentery, variola and the other exanthemata, in rheumatism and other acute and

chronic maladies. But, as we all know, it is to Winternitz that we are indebted for the systematic and scientific knowledge of the physiological effects and rational application of hydrotherapy. As stated in effect by Baruch, it has ever been the liberal and enlightened men in our profession who have recognized the value of this remedial agent, and who have employed it most largely and intelligently. Such is its potency and universal applicability in one form or another that, although it has passed through many vicissitudes of favor and neglect, water is almost the only remedial agency that has stood the test of time. Nay, more, originating with the ancients, it stands higher in popular and professional favor to-day than two thousand years ago. The same cannot be said of bloodletting, that other equally ancient means of therapy. It would be a mistake to think that by hydrotherapy is meant the internal and external employment of water only, after the manner of the hydropaths. In its broadest sense, hydrotherapy includes every form in which water can be used, from the bath and sponging with warm, hot or cold water to steam and ice and all modes of administration, internally as by drinking, by lavage, and enemata, and externally, in ablutions partial or general, affusions, local or general packs, fomentations, ice-bags, compresses, bandages, etc.

The immense value of water is shown by the Brand method of treating typhoid fever, and this alone should suffice to win for it a grateful appreciation. By including the study of hydrology among the objects of our association, it was the intention of the founders, as I take it, to have us learn to apply this agency therapeutically, whether as pure or medicinal waters. Because of the foregoing consideration, it seems to me greatly to be regretted that, as an association intended to investigate and disseminate facts concerning hydrology, we have allowed this department of therapeutics to remain so comparatively neglected. Thus far we seem to have been contented with holding an occasional meeting at some resort whose springs are its chief attraction, and almost as infrequently with papers upon the benefit of natural waters in some chronic condition of a gouty or rheumatic nature. I therefore heartily commend that portion of the present programme devoted to the clinical aspects of the spa treatment.

Water, in its various forms of administration, is so powerful an agency for good in a large number of nervous and other chronic disorders, that a series of contributions upon this subject ought to prove both edifying and interesting. So numerous have been the contributions to the subject of tuberculosis that it has been said, with some show of truth, that we are in danger of becoming a society for the treatment of tuberculosis rather than of the broader scope originally intended. This is natural, owing to the

absorbing interest and universal importance of this class of diseases. Is it not singular that we have not had discussions upon the use of cold in the treatment of pneumonia and pleurisy, for instance? To my mind, cold in the form of baths or the ice-bag is so valuable in these affections, both as an antipyretic and analgetic and for its tonic effect on the nervous system, that its employment by the rank and file of the profession is altogether too much neglected. Another profitable discussion might be had on the local use of cold in the treatment of pericarditis and endocarditis. There is much diversity of opinion regarding the comparative merits of the ice-bag and poultices in these affections, and therefore it would be advantageous to have it established, which is the better, or, if both are good, in what cases indications are furnished for one as against the other. The use of normal salt solution falls appropriately under the head of hydrology in its broad sense, and here again is a subject full of possibilities for instructive discussion for our members. I have seen such striking improvement follow the use of alternate hot and cold affusions in a case of arthritis consequent upon the injection of antistreptococcus serum that I am sure we should find instructive a paper on the employment of water in arthritic inflammations, whether rheumatic or not, a plan of treatment which, because employed by Theden more than 150 years ago, is not therefore so old as to merit neglect. These are only a few of the topics belonging to hydrology that might with profit receive consideration at our hands. They would certainly possess the merit of novelty as contrasted with the papers that have composed our programme since I had the privilege of becoming a member of this association, and therefore they are respectfully suggested for consideration at future meetings.

The remarkable activity of the past thirty years along the lines of bacteriological investigation has culminated in the notion that to some pestiferous microbe is to be attributed every acute infectious disease. The particular micro-organism has not been identified in every instance, but it is confidently expected that the deficiencies of our knowledge in this respect will some day be removed. In the first flush of bacteriological discovery such potency was attributed to these microscopic entities that we thought it was only necessary for pathogenic bacteria to gain access to the human organism to have an infection result. Then it was discovered that they were often carried around in the mouth without disease being necessarily set up; nay, further, that under some circumstances they failed to create symptoms of infection even when they gained access, by accident or experiment, to the living body; so that we now know that there must be some additional factor besides the presence of germs, if disease is to follow. This ad-

ditional factor may be said to be that condition of the tissues which renders them a good soil or medium for the growth of bacteria. Without entering into the discussion of how it is that the cells of the body are able to resist and even overcome the invading microbes, it may be stated that the likelihood of a resulting infection depends upon the degree and vigor of the cell resistance. This varies, not only in different individuals, but in the same individual at different times. In other words, the susceptibility of a person to the action of micro-organisms, as to other causes of disease, is greater at one time, less at another. We are not always able to decide whereon this difference in the resistance of an individual depends. We are apt to content ourselves with the vague statement that a person's vitality has become lowered, or that he has lost his powers of resistance, or that he has become "run down." At all events, we know that, other things being equal, he is the most likely to develop disease who habitually violates the recognized laws of health. The dissipated, the intemperate, the unclean, the over-worked, the under-fed, the anæmic, the infant, the aged, these are the ones who, as a rule, furnish the great contingent of sufferers from tuberculosis, pneumonia, and other acute and chronic maladies. How can we best protect these individuals from the evils almost sure to follow their acquired and inherent proneness to disease? Surely not, most certainly, by the administration of medicine! How best can roses be restored to the cheeks, and strength to the muscles of the anæmic, flabby child? How can we most surely restore tone to the nervous system and vigor to the circulation of the overworked business and professional man, the devotee of fashion and society, the stooped-shouldered, hollow-cheeked student or clerk; in short, bring back health to any one of the great multitude of victims of modern civilized life? Assuredly not by our long list of so-called hæmatic and nerve tonics. Bunge's researches seem to have proved conclusively that iron is restored to the blood in only minute amounts when it is administered internally. The beneficial effects which seem to follow its use are probably due to its local action within the intestines, and not through its absorption, even in the form of the organic preparation, now so much in vogue. Therefore, when it is necessary to overcome anæmia, it is to be accomplished by the ingestion of foods rich in nucleo-albumins and by life out of doors, where oxygen and sunshine may be had in an abundance and the metabolic processes are stimulated. We are of necessity compelled to fall back upon the aid of Mother Nature, who has given us pure air and sunshine, mountains and forests, an inexhaustible supply of living water, and pools and springs of medicinal waters for the healing of the multitude. We can find no more striking example

of the powerful influence for good of natural remedies, even in organic disease, than in the treatment of circulatory disorders by means of baths after the manner used at Bad Nauheim. The use of digitalis in heart disease exemplifies, in the highest manner, the beneficial effects of medicinal therapy, and it would seem that, if any drug was destined to retain its hold on the confidence of the profession, it would be digitalis. And yet it is most significant of the inevitable tendency to abandon medicine that, in this balneological-treatment of cardiac affections, digitalis is already encountering a formidable rival.

Climatotherapy was employed by the ancients and has ever since been recognized as a most efficient weapon against tuberculosis. Yet it may be said that the profession is being awakened to its possibilities in a manner and to an extent wholly unprecedented. The practitioner is already behind the times who relies upon medicine for the treatment of consumption, and yet the finest climate in the world is of little service to him who is pent up within four walls; while, on the other hand, all the benefits of climatic treatment may be enjoyed in an unpropitious climate by him who knows how to make the best of his possibilities.

We Americans are too prone to regard the state of the weather, as if rain, wind, and sunshine could be hurtful to him who is properly prepared to encounter them. Let us not as an association, however, devote our energies too exclusively to the climatology of consumption, ignoring the other natural means of cure in the treatment of diseased conditions in general. Let us broadly preach the gospel that good health means the intelligent daily use of those agencies with which bountiful Nature has supplied us, and which, alas! but too few physicians, as well as patients, know how to employ intelligently. By instructing the people how to make proper use of fresh air, exercise, healthful food, and water we shall not only furnish them with what is better than prescriptions, but we shall guard them against many of those ills to which they now succumb, and thereby rid ourselves of the opprobrium of being mere "medicine men."

REMARKS ON APPENDICULAR ABSCESS.

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The question of the presence or absence of pus in appendicitis is one of the most important questions that we have to decide upon in the treatment of this, the most important of all abdominal diseases, for if pus is present an operation should be performed to allow of its escape, otherwise it would break internally and fatally.

The method of judging whether pus is present or

not is by the temperature and pulse, the degree of pain, and the amount of thickening in the right iliac region. We are often told that the degree of temperature and the rate of the pulse are of no importance in the diagnosis or prognosis or as factors indicating an operation; but these views are not generally accepted, and it seems but fair to assume that in a disease of such a variable character every point should be grasped which can be of the slightest aid to us.

As we understand appendicitis to-day, it is a catarrhal or an infectious disease; in the first instance not going on to the formation of pus unless infection is added, and in the second instance, the infection being present, going on to suppuration in a large majority of cases. Personally, I think that nearly all cases are infectious, but that certain factors favoring a suppurative condition must exist to give rise to an appendicular abscess.

In a slight attack of appendicitis there may be simply a localized area of inflammation in the appendix with a congestion of a part or a whole of the organ, while in a severe attack the infiltration about the area of inflammation is so great that all the coats of the appendix become involved and adhesions are contracted with the surrounding tissues while a slough and perforation may occur at the original seat of inflammation.

In the severe attacks of appendicitis Nature seeks backing, or assistance, or otherwise the perforations might open at once into the peritoneal cavity and death from septic peritonitis would result. The assistance is offered by the adjacent tissues, which become adherent to the inflammatory area before a possible slough has occurred, by means of the protecting lymph which has been thrown out; and the more extensive the inflammation in the appendix, the greater the number and extent of tissues that will be involved. The matting together of these tissues forms a bunch at this locality which, if of sufficient size and firmness, can be felt as a tumor in the right iliac region. Such a tumor is generally an abscess, the centre of which is the area of slough, and the walls are the matted tissue about it.

We can here stop a moment and say that the cause of irritation giving rise to an attack of appendicitis is generally a twist of the appendix or some irritating substance in its lumen, and, the mucous membrane having been injured, some of the germs of suppuration, such as the streptococcus, staphylococcus, or colon bacillus, which are ever present in the colon, enter the abraded tissues and an inflammation of greater or lesser severity takes place, depending on the amount of concretion in the appendix, the size and freedom of the appendicular canal, the virulence of the infection, the character of the circulation, the conditions of the blood, and the general resisting

power of the patient. If all these conditions favor a rapid development, a slough, or gangrene, of the appendix might take place before the surrounding tissues could provide sufficient aid, and death from general septic or gangrenous peritonitis would result. The tissues that come to the rescue of an appendix in trouble and prevent general invasion of the peritoneal cavity are the colon, cæcum, ileum, omentum, parietal peritonæum, rectum, ovary, Falloppian tube, small intestines, uterus, bladder, and many other tissues. Of all these, the omentum is the most useful, as it reaches out like a protecting hand and covers the area where reinforcement is necessary.

We have thus seen how an appendicular abscess is formed, and it is only necessary to account for the symptoms which it produces. They are pain, tenderness, fever, rapid pulse, muscular rigidity of the abdomen, and a tumor.

In the ordinary attack of appendicitis, the so-called catarrhal, the patient is suddenly taken with a heavy, distressing abdominal pain, usually situated in the upper and middle portions of the abdomen, or of a general character, because the pain is reflected through the nerves of the superior mesenteric plexus, which is widely distributed to the small intestines. As the day advances, these pains usually become severe until the patient has to seek relief by going to bed and calling for his physician, if in the habit of having a medical attendant when ill. The physician finds the abdomen distended and on palpation notes that the most marked point of tenderness is in the right iliac region. The temperature is from 100° to 104° F., and the pulse from 90 to 120. The physician may empty the bowels by small doses of calomel or salines, and put an ice-bag over the region of tenderness. For twenty-four hours the symptoms may continue increasing in severity, the pain being so intense that the patient is compelled to draw up his legs to take the strain off the abdominal muscles. The temperature and pulse rate then begin to go down, and in three or four days the symptoms have passed away.

If, however, instead of the symptoms passing away, the temperature and pulse are up at the end of three or four days, we think that pus may be present and an abscess forming, and we proceed to palpate the right iliac fossa. By this time the abdominal muscles in this region have become tired and relaxed in a measure and a small tumor can often be felt.

This picture that I have described is not, however, always presented to us, and we are often called upon to see cases in which the patient has been suffering for some time, and in which a well-marked tumor can be made out at the first visit, of a size varying according to its duration, although not always so, for tumors that have existed for months are often no larger than an orange or a lemon, while those of a

few weeks' standing are at times as large as an adult head.

While an appendicular abscess is present there is a varying degree of increased temperature and pulse rate, as the patient is septic. If the abscess is not interfered with, it will usually break either into the general peritoneal cavity, into the gut, into the bladder, or through the skin, although at times, when the amount of pus is small, it may be gradually absorbed. As a rule, it may be said that, unless an abscess is operated upon, it will break into the peritoneal cavity.

To bring out certain points of interest in this paper I will, in narrative style, speak of a number of cases that have been of interest to me in the past, for we can all look back on our past experience in this line in a reminiscent way and recall certain cases that have come before us, as if they occurred but yesterday, while others are entirely forgotten and not even the histories and notes can recall them to our memory.

The cases which we remember are usually those from the observation of which we have acquired some knowledge, and therefore illustrate certain surgical principles which have been lessons to us. I will speak first of some cases of large appendicular abscess and afterward of those of smaller size. It must not be thought that the percentage of deaths in my cases of appendicular abscess is as great as in the cases quoted, for they are usually uneventful recoveries.

CASE I.—The first case of appendicitis which came under my observation was when I was interne in a medical ward of the City Hospital, and it was an extremely interesting one, not only because it was my first, but also for the reason that it was a grape-seed case. The tumor was in the iliac region, of large size, and the skin over it was reddened at its summit. The patient had been having a septic temperature for some weeks, and was much prostrated and emaciated. I obtained permission of the attending physician to open it, and remember well the escape of the pus as it ran down into a basin by the side of the loin, for every now and then a grape-seed escaped from the opening. It was the first and last time I have ever seen them in an appendicular abscess. The cavity was washed out and packed with gauze and dressed daily, but the patient died in a few days from exhaustion. Now, as I look back upon this case, which occurred fifteen years ago, when they were considered rare, I see no reason why the patient should have died, and feel that if she had been operated on earlier, or if I had explored, washed, drained, and perhaps opened the abscess cavity more thoroughly, it might not have been fatal, although I find, as a rule, that large abscesses of comparatively slow development, especially if they extend down into the pelvis, have usually brought the patients into such a low condition before the operation that it is difficult for them to rally, and that they slowly die of asthenia.

CASE II.—Shortly after this I had a similar case in a woman in a tenement house. The abscess was opened in a similar way over the site of the appendix. The woman was stronger, the drainage was better, and recovery took place, although the patient had a slight temperature and pulse elevation for some weeks afterward.

Three cases of large appendicular abscesses then came to my notice, all of which, though fatal, were nevertheless interesting.

CASE III.—This was the case of a woman who entered the French Hospital, complaining of abdominal pains with a temperature of 103° , pulse 115, and respirations 22. Examination revealed a tumor of the size of a cocoanut, in the right iliac region. An appendicular abscess was diagnosed and an immediate operation recommended. The patient refused, however, until she could see her husband, on the following day. On my visiting the hospital twenty-four hours later the tumor had disappeared and the patient was in collapse, the abscess having broken into the peritoneal cavity. There was general tympanites, pulse 140, irregular, temperature 104° . The abdomen was quickly opened, the peritoneal cavity was washed out with saline solution, and the usual restoratives and stimulants were given, but the patient sank rapidly, dying of shock. There was a great deal of hæmorrhage in the case, due to the cutting of the circumflex iliac artery.

This case illustrated the principle that in appendicular abscess we should never wait, for, while they sometimes break into hollow viscera or point to the surface and break externally if not opened, they generally extend in the line of least resistance, that is, into some part of the peritoneal cavity when they burst, as in this case. In such a case as the one just cited a special messenger should have been sent to the husband and he should have been directed to come immediately to the hospital, and during the interval all preparations should have been made for the operation, in order that it might be performed right away on obtaining his consent, and if he then had not consented the surgeon would have felt that he had done his best for the interest of the patient.

CASE IV was that of a man who entered the Columbus Hospital complaining of some difficulty in urinating and of pain in the hypogastric region. His temperature was 101° , pulse 70. He had been sick for some weeks, with a history rather indefinite. Examination revealed a tumor in the hypogastric region having the shape of a distended bladder. Rectal examination showed a fulness on the right side in front of the gut. A catheter inserted drew two ounces of urine, the tumor remaining of the same size. The passing of an instrument through the urethra showed that the bladder had been pushed over to the left side. Aspirations brought away thin, liquid pus from the upper layers and thick pus from the deeper ones. The case had the appearance of a dislocated bladder or a cystic tumor of the pelvis. Catheterism, aspiration, and the general symptoms showed it to be an abscess. An incision was made in the median

line below the umbilicus, and about two quarts of pus and considerable gas escaped. The cavity was washed out and drained. The patient did well for a few days, and then was attacked with septic pneumonia and died.

The case shows the possibility of a tumor in the pelvis that may correspond in shape with the bladder, and illustrates how extensive an accumulation of pus may be and how yielding and kindly disposed the tissues are to allow themselves to be pushed about by the pus and to conform to the wall of the cavity which it chooses to make. It also suggests that in a case of this kind, in which the abscess cavity extends down into the pelvis in front of the rectum, it might have been much simpler to open it through the rectum and drain it into this channel instead of subjecting the patient to an abdominal operation. The development of a septic pneumonia in this case was the second one I have seen, and shows that it is a complication in appendicitis which occurs not infrequently. The tympanitic resonance was caused by the presence of gas in the abscess cavity, and was due, in all probability, to a communication with the intestine through the sloughed appendix. If it had not been for the unfortunate development of the septic pneumonia, this patient might possibly have recovered.

CASE V.—A carpenter, aged thirty-six, had been sick for three weeks with pains in the right side extending to the umbilicus. Temperature 99° , pulse 150. A mass could be felt in the right side, both through the abdomen and *per rectum*. The patient was confined to his bed, was very emaciated, and had several bed-sores.

Operation.—Abdominal incision and evacuation of pus. The patient was entirely too septic to rally, and died in two weeks, from exhaustion.

The loss of this patient has further impressed me with the idea that it would be well in similar cases to open the abscess through the rectum. We do not, however, as a rule, see these abscesses so large as the one I have just mentioned so frequently as we formerly did, any more than we now see the cases of enlarged cystic ovary that were formerly so common. The smaller abscesses are much more easily handled, and the results are good if judgment is used in operating. I will accordingly speak of some cases of smaller abscesses.

CASE VI was that of a housewife, aged forty-three, who was taken ill ten days before I first saw her, with pain in the right side of the abdomen, which had confined her to bed up to date. Her temperature was 102° , and her pulse 80. The tumor was three inches long and two inches wide. It was situated in the right iliac fossa, and was very tender. On operation, four ounces of pus were evacuated. The temperature dropped to normal in three days. The wound healed in five weeks. Six months later I saw her in a second attack of three days' standing,

temperature 102° , pulse 96. The tumor was an inch and a half long and one inch wide. The patient was sent to the hospital and operated on the same day. A small incision was made over the area of the tumor, the finger was introduced, about two drachms of pus were evacuated, and a drainage-wick was inserted. The temperature dropped to normal in twenty-four hours, and the patient felt well. Two hours later, and twenty-six hours after the operation, she said she felt uncomfortable and distressed. The temperature had gone up to 100° , and the pulse to 96. Two hours later, twenty-eight hours after the operation, I found her in collapse, temperature 103° , pulse 150. Her temperature continued to go up till it reached 105° during the next two hours, when she died.

This was a surprising case. The woman had recovered from an operation on a large abscess when she had been in a septic condition for some time, and when there had been considerable handling of the intestines in breaking up the adhesions, and she died after an operation when the incision had been made over the centre of a small tumor and the finger had gone directly into the middle of the abscess, evacuating the pus, after which a drainage-tube had been inserted. The second operation had only lasted five minutes, and I had felt sure that the result would be successful. The rapid change on the following day from a feeling of perfect health to collapse in four hours and death in six hours is one of the mysteries of surgery. An autopsy would probably have shown a rupture into the general peritoneal cavity, but rupture often occurs, while such a rapid death is a rare result. There may have been in this case two abscesses present, one of which had been opened and the other not, but had burst later. The temperature chart would not bear this out, however, unless the infection in the two abscesses had been different, a condition which I can hardly believe possible. It was a lesson which taught me never to say after an operation: "This patient will surely recover," but which tends to show that the most favorable case may end fatally and the most serious ones in recovery. It also argues in favor of the removal of the appendix.

CASE VII.—To illustrate that these cases of small abscesses are not always so simple as they may seem, I will speak of a schoolgirl, fourteen years old, who had been complaining of pain in her stomach for several days, of sufficient gravity to keep her in the house and latterly in the bed. On my first visit her temperature was 102° , pulse 115, respiration 24. There was considerable tympanites, with tenderness in the right iliac region and a tumor of about the size of a small egg. An immediate operation was advised, but a consultant called in advised waiting for some days to allow the abscess walls to become thicker and firmer. The abscess was incised on the following day and about two ounces of pus were evacuated. The abscess cavity was under the cæcum, which formed its roof. The cavity was drained for sev-

eral days, when there was a rise of temperature with pain again about the wound. The wound was reopened, under an anæsthetic, and about half an ounce of pus evacuated. As the drain had not been securely put down to the bottom of the cavity at each dressing after the first operation, it had on some one occasion been forced out and had allowed the cæcum to swing over, shutting off the sinus between the bottom of the abscess and its outlet, thus causing another attack.

The swinging of the cæcum is an important factor in the question of drainage. In this case, when the abscess formed, it pushed the cæcum upward and inward, and when the cavity was opened the cæcum swung over again to the right, shutting off the bottom of the cavity like a valve, and became quickly adherent to the parietal peritonæum, allowing pus to accumulate beneath the cæcum.

CASE VIII.—The question of waiting until the abscess walls are thicker before operating reminds me of the case of another schoolgirl of the same age, in the same condition as the last, of five days' standing, temperature 102° , pulse 120, with a well-defined tumor. I saw the girl one evening at 7 o'clock, and advised an immediate operation. It was postponed, however, until the following day, and I operated twelve hours later. During the night the abscess had broken and a general peritonitis had developed. An incision was made over the right side behind the cæcum, to the appendix. The leak into the peritoneal cavity was a small one, and a concretion was found lying near the appendix. Flushing with hot saline solution of the entire peritoneal cavity and the free use of peroxide of hydrogen were resorted to. At the time of operation the pulse was 130, temperature 104° . The abscess had broken under the cæcum. One drain was placed between the cæcum and the abdominal wall, the other on the inner side of the cæcum, between it and the small intestine. Drainage took place along the outer drain and the inner one was removed in a few days. The patient had a high temperature for a number of weeks.

This case illustrates the folly of waiting until thicker walls have been formed. I should have removed the appendix had not the pulse gone up to 150 during the operation, and the patient sunk into such a weak condition that rapidity was indicated in performing the operation. If the abscess is a small one of very short duration, the adhesions may be broken up, the appendix removed, and the abdominal cavity washed out, but the operator should be governed at the time by the condition of the patient on whom he is operating and the extent and character of the pus accumulation. Sometimes we open the peritoneal cavity when we do not intend to and do not remove the appendix, in which case we are much worried for a few days after the operation.

CASE IX.—Only recently a girl twelve years of age entered the hospital suffering from abdominal pains, and a small tumor in the right iliac region was found. The history was indefinite. Her temperature was

102° , pulse 100. There were tenderness and muscular rigidity over the site of the tumor. She was treated in the usual way, by the ice bag, salol, and rest. Her temperature and pulse gradually went down almost to normal, and it looked as if she would recover. On going to the hospital one morning I noticed that her temperature and pulse had gone up again. In the afternoon I received word that she was worse, and in the evening found her temperature was 103.5° , and her pulse 124. I operated at once and opened the cavity, a small amount of pus coming away. This escaped at times and then ceased, certain manipulations causing a little more to flow away. I did not feel satisfied that I could insert my finger well down into the bottom of the abscess cavity, which is so important in order to know where to insert the end of the drain. I accordingly started to hunt for the appendix, feeling that it would be at the bottom of the cavity. While I was exploring the gut carefully, the exploring finger went down into what seemed a pocket; there was no bottom to it, however, and I realized that my finger was in the peritoneal cavity. On my withdrawing the finger, a knuckle of small intestine escaped. I was working on the inner side of the cæcum. I pushed the loop of intestine back with a piece of gauze, holding it in place, and then started to look for the appendix, but, as the child's condition became alarming, I gave up the hunt and, inserting a long soft-rubber tube through the opening from which the knuckle of gut had protruded, and pushing the end of it well over to the other side of the abdomen, I flushed out the cavity with hot saline solution, the fluid washing out the pus cavity from within as it escaped. I then washed the parts thoroughly with peroxide, again flushing, and, having walled off the peritoneal cavity, I hurriedly closed the wound. The patient was in bad condition for forty-eight hours after the operation, and then made an uneventful recovery.

I feel sure that if I had stopped to remove this appendix I should have lost my patient. There is a great difference in the character of pus cases and in their histories. We often feel that pus is present, although we cannot discover any tumor and there is no history of a prolonged attack.

CASE X.—A short while ago I was called to see a boy, seventeen years of age, who had suffered from abdominal pain some five days before. He had then felt better and had been about his daily duties for three days when he again began to suffer from abdominal pains and went to bed. When I saw him he was suffering great pain. His pulse was 94, temperature 101° . I advised palliative treatment and waited until the following day before deciding what I should do. The next morning the temperature had gone down to 100° , but the pulse had gone up to 102 and he was suffering much pain. In the afternoon his temperature had gone up to 101° and his pulse to 114. I therefore decided to operate immediately. The usual incision was made through the abdominal wall and peritonæum, opening the cavity and allowing about six ounces of thin purulent fluid to escape. There was a wall of protecting lymph about this in places three-quarters of an inch in thickness. I had opened an abscess on one side of which was the appendix, and I began to dissect the appendix with my

finger, when suddenly there was a gush of thick, yellowish pus from a cavity on the other side of the appendix. I inserted my finger into the cavity and found lying in it a faecal concretion of about the size of the end of the thumb. As there was an abscess on either side of the appendix, I decided to remove it, and did so, ligating the stump below the area of slough. The patient died two days later.

This patient was very sick at the time of the operation and was operated upon during a period in the summer when people were dying in the streets from heat-stroke, which must have had a bad influence in his case. I cannot see, however, that any mistake was made, and if a similar one were sent to me to-day I should probably perform the same operation in the same way.

CASE XI.—In some cases the practitioner who calls in the surgeon to operate insists on certain work being done, even if it is contrary to the opinion of the operator. Last year I was hurriedly called to operate on a young man, twenty-two years of age, by a practitioner who has a large surgical practice. The patient had just come under his care and he had sent for me to operate immediately. The patient's temperature was 103° , pulse 120. There was a well-marked tumor present. I cut down over it, opening it very quickly, evacuating pus. My colleague asked me to take out the appendix. I replied that I feared the patient would not stand a prolongation of the operation, as his pulse was over 130, but that I would continue if he desired me to. He replied that he would like me to remove it, as he felt that it was a better procedure. A thirtieth of a grain of strychnine was given, and I broke up the adhesions, removing the appendix. It added twenty minutes to the operation. His peritoneal cavity was washed out with peroxide and salt solution. A hot rectal enema of salt solution was given, also strychnine, a thirtieth of a grain every four hours, alternating with stimulating enemata of whiskey. The patient died on the same night. I feel that the case was a desperate one, and the patient would probably have died even if I had not removed the appendix, but at the same time I think that it would have been better to simply open the abscess.

CASE XII.—Sometimes waiting is rewarded, although, as a rule, it must be condemned. In the case of a laundryman, twenty-four years of age, who entered the hospital with a septic temperature of from 101° to 103° , and a pulse of from 90 to 110, with a well-marked tumor in the right iliac region, an immediate operation was advised. The patient refused to permit it, and, as he was too sick to be sent out, he was kept in the institution. Each day the tumor continued to increase in size and the patient to become more septic. Every argument was used to induce him to submit to be operated upon, and he was told that, in case he did not consent, he would probably die, to which he replied that he preferred death to an operation. When all chances of recovery seemed to be gone, he was attacked with diarrhœa, having seventeen movements composed almost entirely of pus. On the following day he had several more movements. His temperature dropped to normal, his tumor disappeared, and he left the hospital

shortly afterward, firmly believing that the non-operative treatment of appendicitis was the best. He played the game which has cost many their lives and won. Had he been operated upon he might possibly have died.

Sometimes pus is absorbed and tumors disappear, even when a patient has been septic for some time. I have seen cases in which tumors have disappeared, and others in which a little thickening could still be felt, and in both varieties the patients have had septic temperatures for a week or more, and yet no pus was present when they were operated upon, the thickening simply being a mass of tissues held together in a bunch of adhesions.

CASE XIII.—One interesting case illustrating the difficulties of the gynæcologist occurred during my last service at the hospital. A woman (housewife), aged thirty-two, entered the hospital suffering from pains in the pelvis, in the region of the uterus. Examination showed a mass behind the uterus which was diagnosed as a pelvic cellulitis. A vaginal incision was made for drainage, but without success. An exploratory laparotomy showed a mass between the uterus and the rectum, composed of these two organs, with the appendix, omentum, small intestine, and sigmoid. The appendix was in the centre, the rectum behind, the uterus in front, the small intestine to the left, and the omentum forming the roof. These tissues were all agglutinated together and a few drops of thick pus were present. The nest was treated with hydrogen peroxide and the appendix removed. The drain from the posterior vaginal incision was brought up to the centre of the cavity. The patient made a very uneventful recovery. I have no doubt that in a few days more all the pus would have dried up or been absorbed.

There is another class of appendicular abscesses in which the abscess does not break and the pus is not absorbed. It is of a very chronic nature, and shows itself as a very dense tumor in the right iliac region.

CASE XIV.—A boy, twenty-one years of age, had suffered for some months with pain in the right iliac region. He had a slight elevation of temperature and pulse. Examination showed a tumor of the size of half a cocoanut to be present. A surgeon had opened the abdomen, examined the growth, and declared it an "inoperable" sarcoma. I decided to operate and explore the growth. On opening the peritoneal cavity the cæcum was seen to be very much thickened, and on all sides, forming an intensely hard tumor. I dissected down and along the outer side of the tumor. The knife went through this mass of tissue as if going through cartilage, and after traversing a wall from one to two inches in thickness a small cavity was discovered containing about one drachm of pus. The patient made an uneventful recovery, but it required about two months for the dense walls of the abscess to be slowly absorbed.

Some cases of appendicular abscesses are of tuberculous origin, in which case they are much more difficult to heal, and at times counter-openings have to

be made to facilitate drainage, which may leave troublesome sinuses and occasionally intestinal fistulas.

The question of the various infections giving rise to appendicitis is not so interesting in connection with the subject of this paper as it would be in one on acute appendicitis before the development of a well-defined tumor, and has already been referred to in the opening remarks.

Conclusion.—One might think from listening to the recital of the above-mentioned cases that nearly all cases of appendicular abscess were fatal, but such a conclusion would be far from correct. It is true that I have referred to a number that ended fatally, but we always learn more from such cases than we do from those that have an uneventful recovery. In the ordinary case of appendicular abscess that comes to us the abscess is opened, packed, and dressed every day. Recovery takes place, and we think no more about it. The cases cited were abscesses of large and small size, which were not of the every-day type.

It may be said of all appendicular abscesses that we should operate at once, for, although they may break into surrounding viscera, or even externally, or the pus may become encapsulated and the bacteria die, leaving a sterile fluid which is absorbed, such is not the usual outcome, for in cases not interfered with death from septic peritonitis, general sepsis, or asthenia results. It has also been exemplified how much more fatal abscesses of large size are than the smaller ones, showing how important it is to make our diagnosis early and to operate immediately. Many of these large abscesses do not spring from the right iliac fossa, but from some other point to which the appendix has swung. The presence of the end of the appendix far down in the pelvis shows how far the end can travel. I have frequently seen it in hernias on the right side, and it has even been seen in hernias on the left side. Its traveling capacity all depends upon its length and that of its mesentery. The appendix is sometimes eight or nine inches in length. It swings on its mesentery. If the mesentery is very loose it can be straightened out to its full length, but if it is short, the appendix will curl up. We can thus see that a long appendix with a loose mesentery may swing to almost any part of the peritoneal cavity, whereas a small appendix with a short mesentery can swing only in a small area. When an appendix is inflamed at the end, it becomes heavy and tends to gravitate down, becoming adherent to any tissue with which it comes in contact. It will thus be easy to see how in certain cases pus may be present and yet no tumor exist in the iliac fossa and there be no tenderness at McBurney's point. It also shows how remote abscesses may occur, in the pelvis, for example, due to an appendix when their

origin is not suspected. In cases in which there is a large abscess extending into the pelvis it is a question whether it might not be better to open through the rectum in case the tumor is immediately in front of the gut, and I have concluded to resort to this procedure in the next such case that I find.

The question of counter-openings is an interesting one. I think it may be said that the smaller the incision, and the fewer the number, the better it is for our patient. In almost every case one incision is enough. In some cases, however, where the abscess is under the cæcum or ascending colon, and we have to drain around a curve, a counter-incision in the loin may be of assistance. As the fascia is often dense, a cross incision may be made in order to drain with ease. It can easily be seen how much more directly the drain can be inserted from below into the bottom of the abscess cavity, in the class of cases mentioned, than from above. When the abscess cavity has filled to the outer side of the gut it is no longer necessary to use double drainage, and we can drain from above or below, as we prefer.

One of the most important questions in the appendicular surgery of to-day is whether we should remove the appendix in abscess cases or not. It may be said definitely, I think, that in all large abscesses no effort should be made to remove it, but in the case of small, recent abscesses, or multiple abscesses of short duration, it might be well to do so, provided the condition of the patient is good.

In all operations on the appendix care should be taken not to handle the tissues roughly, as by using force we may tear the gut, iliac vein, omentum, or some other important tissue. The complications that may occur are hæmorrhage from the circumflex iliac artery at the time of the operation, intestinal fistula, intestinal obstruction from bands of adhesions that have formed or from adherent omentum, phlebitis of the external iliac and femoral veins, suppurative nephritis, septic pneumonia, and any other suppurative conditions.

In regard to the after-treatment, the drain should be allowed to remain in place for the first thirty-six or forty-eight hours. The drains are either glass tubes, gauze, rubber tubes, or wicks, the last being preferable. In some cases in which the sinus going to the bottom of the abscess cavity is a curved one, and a counter-opening is not made, one or more large elbowed catheters can be pushed down to the bottom and pinned or sutured to the skin.

The diet should be fluid for the first week, or, at any rate, as long as the patient has an elevated temperature. The bowels should be moved daily by salines, to be assisted by enemata if necessary.

Regarding the prognosis, the surgeon should never say that a patient will recover after an operation, as in some of the simplest cases they occasion-

ally die, while in some of the worst they at times recover.

75 WEST FIFTY-FIFTH STREET.

AN IMPROVED FORM OF AMBULANCE WOULD INCREASE THE VALUE OF THE TREATMENT OF HEAT PROSTRATIONS.

BY FREDERICK GRIFFITH, M. D.,

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With the coming of summer our city hospitals make preparations for the treatment of sunstroke. In the coolest portion of the building, at ready access from the street, to save time in the removal of the patient from the ambulance, or in the yard, where a free circulation of air may be had, are set up a bathtub with connections for a plentiful supply of cold water, or the water is brought from a distance through hose-pipe, a box to hold cracked ice, and cots protected by rubber sheets, where the patient is kept until he is transferred to a ward or goes home recovered. A rectal irrigator and blankets, which are sometimes needed after reaction has taken place, with a supply of antipyretics, heart stimulants, and sedatives to be used hypodermically, complete the outfit.

It is in the construction of ambulances that I think improvement could take place, and the following is supplemental to suggestions for an improved form of ambulance which appeared in the *New York Medical Journal* for March 30, 1901:

The present-day ambulance is the result of an evolutionary development, and we have seen within a year an advance in the change from horse to automotive power. It requires no great stretch of the imagination to tell whence came the ambulance or to trace its development. The first patient entered the hospital leaning on his friend or shambled in by the aid of his staff. Faring well, he helped to bear the fever-stricken one along the way to where the doctors gave out health.

Some returned not back, but went the other way, and man, abhorrent with the inborn hate for bodies dead, made the beast drag away what he disliked to touch; so there came to be a dead-cart.

The hearse, being not always in use for the removal of dead bodies, began to be employed for the carrying of live patients, and, while the dead-wagon grew to become the modern plumed funeral car, the ambulance changed but little, save for the warning bell, easy springs, and rub-

ber tires of the present form until the instalment of automotive power.

To conserve the health of the individual being the motive for the existence of hospitals and their appurtenances, the ambulance being the open door through which the severely sick most frequently pass to enter, it behooves those in authority to seriously consider any innovation which seems to be for the betterment of the patient.

As ambulances are too cold in winter, so are they too hot in summer, and, so far as an improved construction of the vehicle would increase the value of the hospital's treatment of the patient while on his way to its doors in midwinter, will it likewise add to the comfort of any class of patient, but becomes of special value, and would reduce the mortality in sunstroke cases, during the heated term of summer.

Though the average "run" of an ambulance in a city like New York is seldom over twenty minutes, in hot weather, owing to the heat-absorbing qualities of the body of the vehicle, and, too, the black color may be added as a factor, though the polished surface will reflect heat to a degree, the ambulance becomes an oven and ill adapted for a patient who has dropped in the street with a heat-stroke.

A lining of felt, asbestos, or any of the various fillings used in refrigerator construction, placed within the sidewalls, ceiling, and floor of the ambulance, with due regard for side ventilators, would in a short summer's season demonstrate the value of the procedure.

An electric fan might well be attached to each ambulance and a supply of ice-bags filled for immediate service, to be placed beside the patient after removal of his clothing (that form of sunstroke known as heat exhaustion, which requires opposite treatment to other varieties, must be always borne in mind in handling these cases) would enable the accompanying physician to be of real service to his patient beyond that of mere clerical work involved in the filling out of lengthy report blanks, which takes most of his time on the way.

805 MADISON AVENUE.

PUERTO RICO; ITS CLIMATE AND ITS DISEASES.*

By C. H. ALDEN, M. D.,

U. S. A. (RETIRED), LATE ASSISTANT SURGEON GENERAL.

The history of Puerto Rico has been comparatively uneventful. From the discovery of the island by Columbus in 1493, on his second voyage, and its

*Read before the American Climatological Association.

settlement by the Spanish, beginning in 1508, it remained continuously under Spanish rule, and, though attacks were made by the Dutch, by the French, and twice by the English, none of these nations effected more than a temporary lodgement. For more than three centuries the island was governed as a colony under a captain-general, but the rule was, for the most part, mild and conciliatory, the revenues were expended within its own borders, and there was, in consequence, no serious revolutionary uprising. In 1870 Puerto Rico was made a Province of Spain and granted representation in the Cortes, and in 1897, in common with Cuba, it was given autonomy. These concessions were, however, more nominal than real. The landing of General Miles's army in July, 1898, and the withdrawal of the Spanish authority a little later, were like an awakening from the torpor of centuries, and were welcomed by the inhabitants as harbingers of progress and prosperity under the "Great Republic." The military control of the United States under General Brooke, General Henry, and General Davis, successively, lasted from October, 1898, to May 1, 1900, when the first civil governor, Charles H. Allen, of Massachusetts, was inaugurated, and a partly representative government established. It was fortunate for the welfare of the people, as we shall see, that the island remained for a considerable period under the exclusive jurisdiction of the military authorities, for through such an agency only could the prompt action and thorough measures that the existing conditions demanded have been carried out.

Puerto Rico is the smallest of the four larger West Indian islands which are known as the Greater Antilles. It lies about a hundred miles south and four hundred miles east of Cuba, having Haiti on the west and St. Thomas, the Danish island the United States proposes to purchase, on the east. San Juan, the capital, is about a thousand miles from Havana, and the same distance from Key West, the nearest point of the United States, and about fifteen hundred miles from New York city. The island is of about three-fourths the size of the State of Connecticut, and of the same general shape, forming an irregular parallelogram about a hundred miles long and thirty-six miles wide.

The coast is low, with few good harbors, San Juan on the north and Juanica, where General Miles landed, and Ponce on the south being the most important. Extending along the length of the island from east to west, but nearer the southern coast, is a broken chain of mountains from 2,000 to 3,000 feet high, which trends to the north at the eastern end and there culminates in the peak of El Yunque, 3,600 feet in altitude. From the crest of the mountain ridge the land slopes northward and southward, and is deeply cut by streams, giving most of the interior

of the island a very broken surface, which becomes more level as it nears the coast. The southern slope is shorter and steeper than the northern, with a narrower coast plain. Numerous rivers drain these slopes, but they are short and not navigable except near their mouths.

Puerto Rico lies within the tropics, and has a tropical climate modified by its insular position and physical features. The mean annual temperature of San Juan on the north coast, ranges in different years from 78° to 82° F., and the monthly mean from 75° in January to 82° in August, while the highlands in the interior have a mean annual temperature of 72°. The maximum temperature observed on the island is 99°, and the minimum 57°. The relative humidity is very high, averaging nearly 80°, and the annual rainfall ranges from 60 inches on the north coast to 100 in the interior elevated region. The south coast is dryer, as the rains are intercepted somewhat by the central range of mountains. Rains begin to increase in April or May, but the rainy season proper extends from August to December. The average number of clear days to the month, from June, 1899, to May, 1900, was fourteen; of partly cloudy, nine; and of cloudy, seven, December to March having the most clear days and being the best in which to visit the island. The northeast trade winds blow with great regularity, and the sea-breeze by day and the land-breeze by night moderate the temperature. The island is subject to serious storms, and to occasional slight earthquakes. Hurricanes, sometimes of great severity, occur, there being a record from 1493 to 1846 of one hundred and twenty-seven, of which number sixty-eight were in the months of August and September. The great hurricane of August 8, 1899, which caused the death of 2,300 persons, the destruction of many towns and villages, and the ruin of crops upon which the food and labor of the poor depended, and resulting in the destitution of 250,000 people, is a matter of recent history. It will be seen later how generously the United States responded to this call upon its humanity.

The census of 1899, taken under the direction of the United States government, gives some interesting facts about the island, which have a bearing on its health conditions. Its 3,600 square miles of area contain almost 1,000,000 inhabitants (953,243 exactly), being an average of 264 to the square mile. In one department, Aquadilla, with no large towns, it is 415 to the square mile. This density of population exceeds that of Cuba seven times, is about equal to that of Massachusetts and New Jersey, and is twice that of Pennsylvania. Not only is the population dense, but it is evenly distributed throughout the island, being chiefly rural. There are no large cities. The largest, San Juan, on the north coast,

has 32,000 inhabitants; the next, Ponce, on the south coast, 28,000; Mayaguez, on the west, 15,000; and Arecibo, in the northwest, 8,000.

About 590,000, or a little more than three-fifths of the entire population, are pure white and almost entirely of Spanish descent. This proportion of whites exceeds that in the coast States of our country from Virginia to Louisiana inclusive, except in North Carolina. Of the remaining two-fifths, about 304,000 are of mixed blood, and about 60,000 only pure black, or negroes.

The sexes are reported in nearly equal numbers, with a slight excess only of females, showing that when the census was taken there had been but little immigration or emigration.

This is also shown by the small percentage of foreign-born inhabitants, numbering 14,000 only. More than one-half of the foreign-born came from Spain. The United States contributed but 1,069.

The aborigines of Puerto Rico were a feeble race and not numerous. Under the hardships of enslavement by the Spaniards they disappeared entirely, it is said, in less than fifty years after the settlement of the island. The present negro population represent the African slaves imported from time to time to supply the place of the aborigines in the cultivation of the soil. In 1873 slavery was abolished by law, but in order to prevent disastrous results to both planters and negroes the ex-slaves were required to enter into contracts for labor for not less than three years.

The industries of Puerto Rico are almost exclusively agricultural, those of manufactures, trade, and transportation being of trifling importance. It is an interesting fact, shown by the census, explaining in some degree the greater tranquillity of Puerto Rico as compared with Cuba, that much the larger part, 91 per cent. of the cultivated area of the island is occupied by its owners. In Cuba 43 per cent. only is so occupied. There result consequently in Puerto Rico few large estates and many small farms, agriculture being carried on in a much smaller way than in Cuba. Coffee was formerly the most important crop, 41 per cent. of the cultivated area being devoted to it, but since the destruction of the coffee trees by the recent hurricane, sugar has taken its place. Tobacco is a much less important crop. Bananas and sweet potatoes are extensively cultivated, and these, with Indian corn, yams, malangas (a farinaceous root), rice, and other vegetables, and the many native fruits, such as cocoanuts, mangoes, pineapples, oranges, melons, etc., form the chief subsistence of the people. In the eastern part of the island stock-raising is an industry of some importance.

The lack of means of communication is a great drawback to agriculture. With the exception of the so-called military road constructed by the Spanish

government, extended across the island from San Juan to Ponce, and three more short pieces, there is not a good road on the island. Even those in the immediate vicinity of the cities are in poor condition, and during the rainy season all of them, with the exceptions noted, are almost impassable for vehicles. A narrow-gauge railroad was planned some years ago to extend along the coast around the island, but so far three short detached sections only have been built, about 159 miles in all, and none penetrate the interior. Since the United States took possession, considerable work has been done on the roads, partly for the purpose of giving employment to the poor.

The degree of illiteracy is high, for, leaving out of account children who are less than ten years of age, 22.7 per cent. only of the remaining population are able to read and write.

Owing largely, it is supposed, to the expense attendant upon the celebration of the marriage rites, a large number of persons are living together as man and wife without the sanction of the Church, in the so-called consensual union, the bonds of which are in general faithfully observed. More than 84,000 of the population are sustaining this relation, and consequently the number of illegitimate children is very large, over 148,000. Reports show that over 45 per cent. of the total births are illegitimate, but this is believed to be under the true ratio.

The houses of the better class are substantially built of stone, usually of one story, roofed with tiles, and have an interior court. In the country the habitations of the poorer people are generally mere huts thatched with palm, and often overcrowded by large families. There are reported to be over 109,000 persons living in families of eleven or more.

It appears from the census statistics that about one-third of the Puerto Rican houses are supplied with rainwater from cisterns, and more than one-half with water directly from streams. About one-seventeenth of the dwellings are supplied with water from aqueducts, these being confined to the four largest cities. One-twentieth only of the houses depend upon wells.

Three-fourths of all the dwellings in Puerto Rico are entirely without any arrangement for the disposal of excreta. In the strictly rural districts this is true of nearly four-fifths of the habitations. In the towns most houses have pits, or cesspools, some disinfected with earth, lime, or ashes, and occasionally emptied. Modern waterclosets are almost unknown, though some have been introduced by the United States military authorities into the buildings occupied by them. Sewers are, of course, equally rare.

The better class of Puerto Ricans is composed of highly intelligent, refined, and well-educated people, many having been educated abroad; but, as a large part of the population is living in poverty and ig-

norance, and amid unsanitary surroundings, the annual death rate cannot be a low one. It appears from the Spanish records that the death rate for the eleven years from 1888 to 1898 was a little over 30 in a thousand. It is known that these records are imperfect, and it is believed that the true death rate was considerably greater. In 1899 the death rate was 41.5 in a thousand, being higher than for several years, owing to the deaths from injury and disease due to the hurricane of that year. The mortality among infants is, of course, great. Recent reports show that in the month of July, 1900, there were 1,753 deaths of children under five years of age, out of 4,690 total deaths.

The highest death rate is from anæmia, or "tropical chlorosis," as it has been called. For the ten years beginning 1890 there was a yearly average of 4,513 deaths from this cause out of a yearly average of 27,915 total deaths. In 1899, the year of the hurricane, there were 8,977 deaths from anæmia out of 39,918 total deaths, a rate of 22.5 per cent. Affecting chiefly the lower classes, it was generally supposed to be due mainly to insufficient and poor food, and in the low lands to chronic malarial infection. In 1899 Assistant Surgeon B. K. Ashford, United States Army, an alumnus of the Army Medical School, made a special study of this affection, and found in nineteen out of twenty cases in the hospital at Ponce that the diseased condition was due to the presence in the intestine of the *Ankylostomum duodenale*. He seems to have been the first to note this in regard to the Puerto Rican anæmia, though the agency of this parasite in tropical anæmia elsewhere was well known. Dr. Ashford's interesting report on this subject may be found in the *New York Medical Journal* for April 14, 1900. Such cases can no doubt be promptly relieved by anthelmintics and nourishing food, and, were it possible to apply these remedies extensively to the population of the island and to prevent the use of contaminated water and food, this disease might be largely abated. Unfortunately, most of the people are too ignorant to take the necessary sanitary precautions and too poor to purchase the needed medicine and food, when attacked by the disease.

Intestinal diseases are common, and dysentery is the cause of many deaths. For the ten years beginning with 1890 the annual average death rate from dysentery was 1,183, or 3.83 per cent. of the total deaths. During the last three years of that period there was a large increase in the number of deaths from dysentery, there being, in 1899, 3,568 deaths, or 8.94 of the total mortality. Lieutenant-Colonel J. Van R. Hoff, formerly chief surgeon of Puerto Rico, attributes the large increase in this year partly to the fact that the usual food supply of the poor, bananas, yams, etc., being cut off by the hurri-

cane, the government issued quantities of beans, rice, and codfish which were eaten improperly cooked. Diarrhoeal diseases naturally affected largely the troops from the United States, and it is reported that in 1898 there was a ratio of 768 cases in 1,000 of mean strength, with a mortality of 1.41, and in 1899 543 cases and 2.68 deaths in a thousand. The pathology of Puerto Rican dysentery does not seem to have been so fully studied as that in the Philippines, where it has been ably investigated by Professor Flexner and Professor Barker, and Dr. Strong and Dr. Musgrave, of the army, but Colonel Hoff considers that it is probably not due to the *Amæba coli*, from the absence of liver abscess.

I have been unable to find reports as to malarial fevers covering an extended period. Colonel Hoff states that reports made to the Superior Board of Health for the seven months ending April 30, 1900, give 1,514 deaths from these fevers during that period, being 6.32 per cent. of the total deaths, but intimates that the diagnosis was probably incorrect in many cases. The quartan and tertian organisms were found chiefly in the cases examined, the æstivo-autumnal rarely. The troops from the United States suffered severely. In 1898 the admission rate for malarial fever was 772 in 1,000, and the death rate 3.86. The admission rate fell in 1899 to 458, with no deaths. Malarial fevers are much less prevalent in Puerto Rico than in Cuba, but chronic malarial infection is believed to be an important factor in lowering the vitality and stamina of its people.

Yellow fever is not endemic in Puerto Rico, though cases have been reported annually for some years. In 1895 it was almost epidemic and caused 360 deaths. The number of deaths fell in 1897 to nine, and in 1899 there were no cases, due no doubt to the careful quarantine of our authorities, for there were numerous cases in Cuba in that year.

Typhoid fever gives for the ten years beginning with 1890 an average of 383 deaths annually, or 1.43 per cent. of the total deaths, with very little annual variation. It is said to have been specially prevalent in the city of San Juan. In 1898 there were numerous cases of typhoid fever among the United States troops, who brought the disease with them from the infected camps they had occupied in this country. From July to December of that year there were among our troops in Puerto Rico 464 cases and 44 deaths, representing an admission rate of 295 and a death rate of 34.6 in a thousand.

Among the fevers of Puerto Rico of irregular course and indeterminate origin, it is probable that Malta fever is responsible for many cases and that it is endemic in Puerto Rico. Assistant Surgeon Walter Cox, of the army, reported a case in July, 1899, in a member of the Hospital Corps, and there is an interesting report by Professor Musser in one

of the December, 1898, issues of the *Philadelphia Medical Journal*, in an officer who contracted the disease in Puerto Rico. These cases were marked by fever of a low type and long-continued course, with intervals of apyrexia, were not influenced by quinine, and did not show the malarial parasite. They did not exhibit the characteristic symptoms of typhoid, or respond to the Widal test. Neuralgic and rheumatic symptoms are prominent, with general glandular hyperplasia. The cases reported showed the presence of the *Micrococcus melitensis* in the blood.

Tuberculosis, presumably almost entirely pulmonary, gave an average of 1,824 deaths yearly for the decennial period referred to, a percentage of 6.78 of the total deaths. There is very little annual variation in these rates. Cases are most numerous in the three largest cities, where the tenements are crowded. Pulmonary tuberculosis occurred among the United States troops in 1899 at the rate of 5.1 cases in 1,000, with a death rate of 0.8 per cent. Such cases did badly in Puerto Rico, and the patients had to be sent back promptly to the United States.

Tetanus is frequent and fatal. For the ten years beginning 1890 there was an annual average of 952 deaths, or 3.57 per cent. of the total deaths. There was but little annual or monthly variation. Colonel Hoff states that it is estimated that 90 per cent. occur in new-born infants, through the filthy dressing of the umbilical cord, a physician being rarely employed as accoucheur among the lower classes.

Venereal diseases, especially syphilis, are very common, and the lower classes are said to be syphilized to a large extent. For the last ten years of the occupation of the island by Spanish troops, they had an annual average admission rate of 455 in 1,000. The surgeon-general's reports shows that the admission rate for United States troops in Puerto Rico in 1899 was 286 in 1,000, being considerably larger than the rate in Cuba or the Philippines, and still larger than that for the United States, which was 127 only. The reports of the British army show the same disproportion between the cases occurring at home and on foreign service.

The large number of blind in Puerto Rico, some 2,000, or one to every 480 persons, is largely due to the ravages of ophthalmia neonatorum, though smallpox is also a cause. In the United States in 1890 there was one blind person to every 1,212 of the population.

Puerto Rico is, or has been, no exception to the rule that smallpox is endemic in tropical countries. All classes seem to regard its presence with indifference or take but feeble measures against it. For the ten years prior to 1900 there had been an average of 623 deaths annually, the highest number being

2,362, in 1890, the lowest 11, in 1893. In the fall of 1898 the disease was so general that a quarantine had been declared by other countries against its seaports. The report of the surgeon-general for 1899 states that from December 15, 1898, to February 11, 1899, 554 cases were reported from sixteen towns and villages. The chief surgeon of the Department of Puerto Rico, Lieutenant-Colonel J. Van R. Hoff, who arrived in October, 1898, only, saw at once the importance of taking measures to stamp out the disease, and set about it with promptness and energy. At his instance the commanding general, on January 27, 1899, ordered the vaccination of the entire population of the island, an immense task and possible only through military agency. A detailed history of this remarkable achievement would be interesting, but an outline only can be given. Vaccine virus obtained from the United States was unreliable, as it did not keep well in transportation, and was too costly in the large quantities needed, and therefore a vaccine farm was established on the island at Coamo Springs, the necessary cattle being generously furnished by a native gentleman, Señor Simon Moret. The island was divided into five districts, each under a medical officer as director of vaccination, with inspectors, vaccinators (generally Puerto Rican physicians) and Hospital Corps men as assistants, orderlies, and recorders. The actual vaccinating was performed at each municipality, and the work was systematically and rapidly carried out. Colonel Hoff states that he is specially indebted for assistance to Major George G. Groff, and Major Axel Ames, surgeons, U. S. V., Assistant Surgeon Reynolds and Acting Assistant Surgeon Leary, U. S. A., Dr. Ames and Dr. Reynolds being in charge of the vaccine-producing station. By June 30, 1899, the work was finished; 1,038,000 vaccine points had been produced, and 786,290 persons had been vaccinated, at a cost of \$28,536, which was paid from the insular funds. The disease rapidly diminished, and almost entirely disappeared, as there was but one death from smallpox in 1899 after June, there having been 272 deaths in the six months before that date. The production of virus and vaccination of the unprotected was continued, and, though some cases have appeared in the last few months, there is no fear of an epidemic.

Cerebrospinal meningitis is the cause of considerable mortality, there having been 305 deaths annually on the average from 1890 to 1899, a percentage of 1.12 of the total deaths.

Leprosy exists in the island, but to the extent of about 100 cases only. Under Spanish rule no attempt had been made to isolate these unfortunates, but recently the authorities have taken steps for their separation from the community and for their proper treatment and care. The tubercular form is the usual

one. Elephantiasis, which is quite common, has often been mistaken for leprosy.

It is not to be understood from what has been said that there was no provision under the Spanish régime for the sanitary and medical supervision of the island. Sanitary laws did exist, but they were inadequate and imperfectly executed. There were quarantine officials at the principal seaports, but one quarantine station only, that at San Juan. Puerto Rico was divided into seven departments and seventy-one municipalities, each one of the latter having its board of health, the reports of disease and death being made by the Alcalde to the Secretary of State at San Juan. A royal sub-delegation of medicine and surgery at the capital was charged with the licensing of medical practitioners, though some were also licensed by the governor-general. Physicians from the medical schools of Spain seldom had the doctorate degree, but were styled "licenciados." A few physicians had the degree of doctor of medicine from European and American schools. Another class of practitioners were licensed as "practicantes," these being assistants to the physicians proper or doing the rough work of the profession in the mountains and among the poor. Midwives were also licensed as "comadrones." Each district had at least one physician to the poor, employed by the government at a salary of from \$400 to \$500 gold. In 1900 there were but 125 physicians in the whole island, or one to nearly 8,000 of the population. Naturally quackery does not flourish. There are a few pretenders who profess to be the direct representatives of celebrated deceased physicians, and who practise and prescribe in their name. "Christian Science" is said to have been recently imported.

The advent of the United States authorities found sanitary affairs in a very demoralized state, due partly no doubt to the confusion incident to the change of jurisdiction. The medical departments of our services were not slow to see the necessity for systematic organization. The Marine Hospital Service at once established efficient quarantine, and the commanding general, again at the instance of Lieutenant-Colonel Hoff, the chief surgeon, ordered in June, 1899, the establishment of a Superior Board of Health, composed of one officer from each of the three services, the Army, Navy, and Marine Hospital, and two native physicians, with Colonel Hoff as president and Major George G. Groff as secretary. This board was charged with the supervision of the municipal boards of health, and of all the various interests affecting public health, such as the licensing of medical practitioners, dentists, druggists, and nurses, the collection of vital statistics, the investigation of the causes of disease and recommendation of preventive measures, the sanitary inspection of hospitals, schools, and prisons, the inquiry into the

purity of the water supplies, food, drinks, and medicines, the establishment of a laboratory for their examination, and the supervision of municipal sanitation, of sewers, plumbing, etc. This list gives but the principal duties committed to the board, which was armed with powers to act efficiently. The Superior Board of Health organized under the civil government has taken up the work of the military board.

Not only did the Medical Department of the Army during the military occupation of the island have in charge the important duties already inadequately sketched, but under the chief surgeon, Colonel Hoff, as president of the board of charities, it was the principal agent of the government and the people of the United States in relieving the victims of the great hurricane of 1899. The 2,300 deaths and widespread destitution and disease which followed that great calamity have been referred to. Colonel Hoff reports that an average of 183,000 persons were fed daily from September 16, 1899, to January 22, 1900, chiefly with food supplied by the government. About \$115,000 was contributed for food and clothing in the United States. It is estimated that the total relief extended reached a cost of over a million dollars, with practically no expense for personal service.

The island has not yet recovered from the effects of the hurricane, and nothing speaks more eloquently of the sad condition of the poor than their willingness to emigrate in large numbers to Hawaii, as they are now doing. But we may confidently hope that the new government, under the wise leadership of Governor Allen, continuing the good work already begun, will ultimately bring about great changes for the better. The sanitary measures instituted under Colonel Hoff and Major Groff cannot fail to be important factors in improving the health conditions of the people, in spite of climatic and racial hindrances.

The facts and statistics embodied in this paper have been derived from the official records of the census of 1899, the reports of the surgeon-general of the army for 1899 and 1900, those of the chief surgeon of the Department of Puerto Rico, those of the Superior Board of Health of the island, and published letters from medical officers who have been on duty there.

The North Missouri Medical Association has elected the following officers: President, Dr. S. M. Brown, of Monroe City; first vice-president, Dr. W. S. Thompson, of Armstrong; corresponding secretary, Dr. W. B. A. McNutt, of Monroe City; treasurer, Dr. Robert Holly, of Brookfield; recording secretary, Dr. L. W. Dalas, of Hunnewell; executive committee: Dr. J. D. McAdams, chairman, of Prairie Hill; Dr. W. T. Rollins, of Bevier; Dr. J. C. Ridings, of Cairo; Dr. George N. Lantz, of Brookfield; Dr. Oliver McEwen, of Shannondale.

Correspondence.

LETTER FROM TORONTO.

*The Medical Council and Unpaid Assessments.—
Small-pox.—Tuberculous Disease in Canada, etc.*

TORONTO, June 15, 1901.

Those practitioners throughout the province of Ontario who were in arrears to the Medical Council for their annual assessments have had extended to them a month of grace. They are not to be proceeded against as unregistered practitioners until after the 19th of June. Dr. Pyne, the registrar, has stated that all but three or four hundred of the seven hundred who had failed to pay have since made a settlement of their indebtedness. In the mean time the government has promised to submit a case to the courts to test the legality of the assessment tax, which action will stay the hand of the Council until such time as the validity of the tax is established.

Small-pox has again appeared in the city, and three persons have been removed to the pest-house. The health officer has requested that \$5,000 be immediately put at his disposal in order to enable him to meet any emergency promptly, as the disease still exists in several sections of the Province. So far, the present outbreak in Ontario has amounted to something over six hundred cases; but, out of this number, only seven have succumbed to the disease. A new centre has but recently appeared in Hamilton, where five cases have been discovered. A general vaccination will take place there without delay.

It is quite apparent that some one is preaching and spreading a good deal of rant with regard to the prevalence of tuberculosis throughout Canada. An editorial appears in the *Journal of the American Medical Association* for the 25th of May, in which reference is made to the recent Canadian Conference on Tuberculosis, held at Ottawa, where our Governor-General, Lord Minto, is said to have made the statement that this disease caused one-fifth of the deaths in Canada. Whether Lord Minto did or did not make this statement, there is certainly no ground for such an elaborate estimate of the Canadian death rate from tuberculosis; and the extravagant and alarming campaign of education set on foot by extremists will certainly do more harm than good. The returns from the Province of Ontario are generally nearer one-tenth, and the other Provinces can produce as good figures as this. The *Journal* may well ask who is the medical man who has supplied this balderdash to his Excellency. The statement that Canada is permeated with tuberculosis to the extent of one-fifth has certainly no foundation in fact.

The profession in Toronto, Montreal, Ottawa, and other places in the Dominion has recently proved how it can stand by a brother practitioner in times

of trial and stress. For something over two years Dr. J. H. Conerty, of Smith's Falls, Ontario, has been the defendant in a suit for alleged malpractice which has cost him no end of trouble and considerable financial loss. The financial sympathy which fellow practitioners have offered Dr. Conerty is certainly proof of the belief they entertain of his entire innocence of any neglect in the treatment of one of those accidents which have on many former occasions been the starting point for a suit for damages for alleged malpractice, viz., Colles's fracture. The statement was recently circulated that Dr. Conerty had compromised the case at a stated sum, as he was financially crippled, and that he could not afford to fight the case any longer. It is satisfactory to know that this is incorrect, and that the suit will be fought to a finish so far as Dr. Conerty is concerned. It is sincerely to be hoped that, as a result of this case, the formation of a strong medical defense union will be hastened in Canada.

The bill for the incorporation of the Canadian Nurses' Association has been given the six months' "hoist." The Dominion Parliamentary session is over; and this is the last to be heard of this pressure for some time. When it came before the House, objection was taken to it on the ground that it entirely ignored the western hospitals, and that it ruled out the Sisters of Charity and English and Welsh nurses now practicing in the west. Another legislator from New Brunswick objected on the ground that it encroached on the rights of the Provincial legislatures, and that that Province would not approve of the measure. As there was a good deal of difference of opinion with regard to the merits of the bill among the medical men of the country, it was thought that a year's delay in passing it would be advisable, so the measure received its quietus for the present session.

Mont St. Jean de Dieu, the splendid new institution provided by the sisters at Longue Pointe, Quebec, for insane patients, has been completed and the work of removing the patients from the old to the new asylum accomplished. It has taken four years to erect this immense structure. The building of this new asylum was rendered necessary by the burning of the old building about eleven years ago. At that time there were over a thousand patients in the building, and all of them were got out alive, but five of the Sisters perished in the flames. The asylum has accommodation for 2,000 patients and 200 nurses. Dr. George Villeneuve is the medical superintendent, and he has associated with him a competent staff. The cost of the new structure is assumed by the Sisters. They have had to borrow the money to put up the buildings, the interest on which is guaranteed by the government of the Province of Quebec.

The regular meeting of the board of governors of

the Winnipeg General Hospital was held on the 20th ult., when Dr. Gordon Bell, the provincial bacteriologist, was appointed bacteriologist and pathologist to the General Hospital. He will provide an assistant, who will be present at the hospital daily for stated hours. Dr. Chestnut, the medical superintendent, has resigned, and Dr. Jasper Halpenny, who has been acting as his assistant since February last, has succeeded him; his term is to last for a year. He will have associated with him as his house surgeons, beginning June 1st, and serving for a year, the following named gentlemen, recently graduated from the Manitoba Medical College: Dr. C. H. Vrooman, Dr. R. H. Richards, Dr. C. Woollam, Dr. C. McLellan, and Dr. J. R. Thompson. Nine nurses recently passed their final examinations and have been graduated from the training school of this hospital.

The Dominion government has recently adopted new regulations with regard to infectious diseases occurring among persons employed on the construction of government works. A short time ago an inspector was appointed and these regulations define his duties. He is to act as chairman of the health boards on these public works, which health boards are to consist of the inspector, the medical officers, and the government engineer. For every five hundred employees there is to be a medical officer, supplied with medicines and a means of conveyance. When there is no hospital or proper accommodation within reasonable distance of the work, the contractors must establish one or more hospitals at such places as the inspector or health board may determine. Where such are established, they must also provide suitable hospitals for isolating cases of infectious diseases. The regulations also provide for fines for breach or non-observance of the rules.

The annual meeting of the Western Hospital, Montreal, was held on the afternoon of the 28th of May, when Dr. J. B. McConnell read the medical report. It showed that the debt of the institution had been reduced from \$10,000 to \$8,000 during the year, that improvements had been made in the buildings, and that new operating rooms had been fitted up with electricity and all modern appliances. New and improved quarters had also been provided for the nurses. At the outdoor department 3,500 patients received treatment, compared with 2,457 during the previous year; in the indoor department, 396 were treated, against 380, and 133 private patients, against 162 in the preceding year. The treasurer's report showed that the receipts had amounted to \$9,381.91, and the expenditure to \$8,944.79. Twenty-four deaths occurred in the institution during the year, eight within forty-eight hours of the patients' admission.

The annual meeting of the Montreal General Hos-

pital was held about three weeks ago. Dr. John McCrae was appointed resident assistant pathologist, and the engagement of Dr. von Eberts was extended to the 1st of May, 1902, as medical superintendent. Dr. Finley, the secretary, reported that the expenditure had been \$84,280, and the receipts \$75,994. This hospital now has a deficit of \$25,000. The report of the medical work showed that the number of indoor patients treated to a conclusion had been 2,823, a decrease of one as compared with the previous year. Two hundred and fifty had died in the hospital, 105 deaths occurring within three days of the patients' admission. In the outdoor department there were 41,606 consultations, being an increase of 4,233 over the previous year. The average daily costs for a patient had been \$1.37, against \$1.35 for the preceding twelve months.

Word comes from Ottawa that Sir James Grant, president of the Canadian Tuberculosis Association, has expressed concurrence in the action of Superintendent Powderly, of the United States Immigration Department, in refusing admittance into the Republic of immigrants affected with tuberculosis. It is understood that, as president of the association, Sir James has brought the matter to the attention of the Canadian government and recommendations have been made along the same lines. All good hospitals in Canada which have not provided a special department for the treatment of patients suffering from this disease have adopted the policy of declining such patients; and it is thought that the government will accede to the recommendations of the Tuberculosis Association.

The annual convocation of the Medical Faculty of McGill University took place on the afternoon of the 14th of May in Windsor Hall; and in the presence of a large audience upwards of ninety-one graduates presented themselves for the degree of M. D., C. M., the present being one of the largest classes in the history of the faculty. The address to the graduating class was delivered by Dr. William Gardner, while Dr. Harold Kar, B. A., read the valedictory on behalf of the graduates. Mr. James Bruce, B. A., was the winner of the prize for the best examination, written and oral, while H. M. Little, B. A., and L. F. Robertson, B. A., were the winners of the McGill Medical Society's prize, and the Clemensha prize, respectively, the two latter being graduates in arts of Toronto University. Dean Craik presented a lengthy annual report, carefully reviewing the year's work, and making special reference to the establishment at McKill of research work in connection with the Rockefeller Institute, at the same time expressing the opinion that it would result in untold good. On the evening of convocation day, the members of the graduating class held their annual banquet.

At a meeting of the medical board of Notre Dame Hospital, Montréal, held last week, Dr. F. Fleury was appointed medical superintendent to replace Dr. A. Ethier, who, after a service of five years in the hospital, has resigned to pursue post-graduate work in Europe. Dr. A. Brosseau and Dr. V. Chapdelaine, of last year's staff, were reappointed. Dr. A. St. Pierre and Dr. J. Edouard Grenier, who graduated from Laval University last week, were appointed to the vacant positions on the staff.

The women physicians are coming to get a foothold in Canada so far as appointments in hospitals are concerned. The new appointments on the staffs of the Toronto General Hospital and the Victoria Hospital for Sick Children, include the names of a lady doctor on each, which, along with the appointment of Dr. MacMurchy as assistant medical superintendent of the new asylum for the female insane at Coburg, Ontario, is the first instance of the ladies' receiving official recognition in the domain of medicine in this country.

The Medical Department of Toronto University is indeed making splendid strides. Three years ago the number of matriculates in the department of medicine ranged about sixty; two years ago it had jumped to a trifle over a hundred, and last year the number reached a hundred and fifteen. It is expected that when the new science building is completed larger accommodation will be provided for the growing needs of the medical faculty.

The Ontario Medical Council has been in session in Toronto during all of the past week, and it has proved a very interesting session. President Dr. William Britton, of Toronto, in delivering his annual address, dealt at considerable length with the annual two-dollar assessment. He pointed out that at the present time one thousand eight hundred and twenty-five were clear on the books, and that since names were erased in December last for non-payment of the tax four hundred and one practitioners had been reinstated in consequence of having paid up, which left only about two hundred and eighty to be dealt with. In the city of Toronto there are about four hundred and fifty medical men, of whom only eighteen are in arrears. Dr. Britton also pointed out that the university and school appointees on the Medical Council having no vote in this matter, the profession taxed itself through its representatives, duly elected, and every year the by-law was carried in council by an overwhelming majority. Dr. Sangster, of Port Perry, the champion of the Medical Defense Association, so-called in this matter, immediately took up the cudgels on behalf of those who objected to the tax, and stated that what they attacked and always would attack was the composition of the Council. There would be no objection if the taxation was borne in proportion to the repre-

sentation on the Council, letting the profession at large pay seventeen-thirtieths; the educational institutions eight-thirtieths, if they insisted on eight representatives, and the homœopaths five-thirtieths, if they insisted on having five representatives. Time and again this question was debated, and on the re-introduction of the annual by-law it was carried by a large majority, only three voting against it.

Those students who served for their country and empire in South Africa were all granted relief from their examinations, two their matriculation and two their primary examination, and six were registered as practitioners. Dr. T. G. Roddick, M. P., was present at one of the sessions, and addressed the Council on the question of Dominion registration. The committee appointed on this matter brought in a report suggesting a change in the scheme of representation as contemplated in Dr. Roddick's bill, which was before Parliament at the last session. As this report was adopted by the Ontario Medical Council, it may be as well to know where they stand on this important question. In each Province the first 100 or fraction of 100 practitioners shall be entitled to one representative. The second 100 or fraction of 100 over 50 per cent. shall be entitled to one representative, and for each subsequent 600 one representative shall be allowed. One representative from each Province shall be appointed by the Governor-General in Council, and there shall also be three representatives elected by such practitioners in Canada as are now recognized by the laws of any Province as forming a particular and distinct school. There shall be one representative for each university having a teaching faculty in medicine, or a medical college in affiliation with it.

The report of the treasurer estimated the revenue for the coming year at \$25,136, comprising cash in bank, \$3,936; assessment dues, \$4,400; registration fees, \$1,800; rents, \$4,000; and fees from professional examinations, \$11,000. The estimated expenditure is \$17,885, leaving an estimated balance of \$7,251.

The election of officers resulted in the choice of Dr. Brock, of Guelph, for president; vice-president, Dr. Emory, of Toronto; registrar, Dr. R. A. Pyne; treasurer, Dr. H. Wilberforce Aikins; auditor, Dr. Patton, the three latter all of Toronto. One practitioner in Toronto was struck off the rolls for unprofessional conduct.

Therapeutical Notes.

Brewer's Yeast in Diabetes.—Catlaert (*Nord médical*, December 15, 1900; *Lyon médical*, May 12th) reports four cases in which yeast acted favorably. It was given in daily amounts of three coffeespoonfuls.

A Laxative Electuary for Children.—A contributor who signs himself "A. G." contributes the following to the *Journal des praticiens* for June 1st:

℞ Manna in tears.	25 parts;
Calcined magnesia.	50 "
Washed flowers of sulphur.	50 "
Cassia pulp.	25 "
Honey.	25 "

M. S.—One or two soup-spoonfuls, in a cup of warm milk, for habitual constipation.

Three or four spoonfuls may be given for a purgative effect.

A Lotion for Urticaria.—The *Journal des praticiens* for June 1st attributes the following formula to Gaucher:

℞ Alcohol,	} each. 300 parts;
Sulphuric ether,	
Chloroform,	
Menthol.	1 part.

M.

An Application for Varicose Ulcers.—The *Gazzetta degli ospedali e delle cliniche* for May 7th attributes the following formula to Schwartz:

℞ Iodoform,	} all in powder, equal parts.
Salol,	
Bismuth subnitrate,	
Charcoal,	
Quinine,	
Benzoin,	

M.

For Specific Mucous Patches where Mercurials are not Tolerated.—M. Lutaud (*Journal des praticiens*, June 15th) recommends the following lotion for application to vulvar mucous patches when mercurials are not tolerated:

℞ Chloral hydrate.	150 grains;
Tincture of eucalyptus.	300 minims;
Water.	5 ounces.

M.

Quinic Acid in Gout.—Sternfeld, of Munich (*Münchener medicinische Wochenschrift*, No. 7, 1901; *British Medical Journal*, May 18th), strongly recommends quinic acid as a remedy for gout, owing to its strong solvent action on uric acid in the blood. It has none of the disagreeable effects of quinine, and when in the body is converted into benzoic acid, which, united with nitrogenous waste products, gets excreted in the urine as hippuric (amido-benzoic) acid. The combination of quinic acid with an alkali, as, for example, lithium quinate, has been found effective both in dissolving uric acid and in promoting diuresis and the excretion of uric acid. The author gives it in the form of tablets of half a gramme each (8 grains), and administers from six to ten tablets a day. As the result of treating a considerable number of cases, he concludes that quinic acid is a specific for gout, as are the salicylates for acute articular rheumatism and quinine for malaria. The only drawback at present as regards lithium quinate is its high price, a tube

of twenty-five tablets costing about 3.50 marks (80 cents). The results, however, are so gratifying that in private practice at least this treatment should be preferred to that by other drugs.

The Treatment of Snake Bite.—C. B. Lall, of the Rajputana Medical Service (*Indian Lancet*, May 20th), reports the case of a native who was bitten by an *Echis carinata* snake, three feet long. He was seen an hour after the bite and was suffering from constriction of the throat, thirst, deafness, noises in the ears, vertigo, partial blindness and muscæ, heaviness and loss of sensation in the legs with a feeling of heat all over the body. Temperature, 98.2° F. The leg was cold, swollen and purplish. A binder was at once applied above the bite and the wound incised, squeezed, and filled with potassium permanganate and the following draught given:

℞ Liquor strychninæ.	8 minims;
Spirit of chloroform.	15 "
Water.	1 ounce.

M.

The patient was forcibly kept awake all night. The binder was loosened after an hour. A speedy recovery ensued.

To Allay Thirst in Fevers.—According to the *Medical Brief* for June, *Clinica Moderna* recommends the following mixture as beneficial in allaying thirst and fever:

℞ Pure glycerin.	7½ drachms;
Citric acid.	½ drachm;
Distilled water, enough to make.	25 drachms.

M. Sig.—From one to two tablespoonfuls at one dose to allay thirst and fever.

For Hepatic Colic.—To Chauffard (*Revue médicale de Normandie*, May 10th) is ascribed the following formula:

℞ Olive oil.	from 4½ to 12 ounces;
Cognac.	½ an ounce;
Yolks of 2 eggs;	
Menthol.	7½ grains.

M.

To be taken in two doses at half an hour's interval.

For the Bites of Bedbugs, Fleas, etc.—Brocq and Jacquet (*Revue médicale de Normandie*, May 10th) are credited with the following formulæ for local application:

1. ℞ Camphorated oil of chamomile.	100 parts;
Storax.	20 "
Essence of mint.	5 "

M.

Or 2. ℞ Olive oil.	20 parts;
Ointment of storax.	25 "
Balsam of Peru.	5 "

M.

Or 3. ℞ Naphthol.	from 75 to 150 grains;
Ether.	sufficient to dissolve;
Menthol.	from 4 to 15 grains;
Vaseline.	1,500 "

M.

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CHRONIC FLUORINE POISONING.

Dr. Schwyzer's article on this subject, published in this issue of the *Journal*, while it may serve as a model for the investigation of obscure cases of chronic disease, should also be taken as a warning against the use of fluorine compounds as preservatives of articles of food or drink that are likely to be used freely and continuously, especially beer, and against prescribing such compounds for prolonged medicinal use. We do not suppose there is any great danger of a wide prevalence of chronic fluorine poisoning due to the consumption of such a beer as Dr. Schwyzer's patient drank on so large a scale—certainly not of anything comparable to the recent English "epidemic" of chronic arsenical poisoning from beer-drinking. Nevertheless, we believe that the legislation recommended by Dr. Schwyzer—prohibition of the use of fluorine compounds as preservatives of beverages and articles of food, especially those that are consumed regularly and in large quantities, such as beer, canned vegetables, milk, and meat—should be enacted.

It is not alone as an example in pathological investigation and as pointing to desirable sanitary legislation that Dr. Schwyzer's article is of value; it is an important contribution to toxicology, and possibly it may lead to a considerable extension of the therapeutical employment of fluorine. It may be imagined that a substance which so conspicuously heightens the coagulability of the blood is destined to play an important part in the treatment of serious conditions characterized or to a great extent brought about by impaired or originally defective coagulability, such as recurrent hæmorrhages and especially

the hæmorrhagic diathesis. This suggestion, of course, is largely speculative, but many an advance in therapeutics has sprung from sheer speculation. It is plain that, to keep within the bounds of safety, experiments with fluorine as a remedy must not extend over a long period of time in any individual case.

Although, of course, not so important as his study of the cumulative action of fluorine on the system, Dr. Schwyzer's brief account of his experience with calcium compounds in the treatment of pulmonary hæmorrhages is of considerable significance, certainly deserving to be rated higher than as "a rather important observation," as he modestly terms it.

THE CRAIG COLONY FOR EPILEPTICS.

The seventh annual report of the board of managers, including the report of the medical superintendent, Dr. William P. Spratling, is a highly satisfactory document. Within the short period of seven years the colony, for the existence of which we are practically indebted to Dr. Frederick Peterson, who as president of the board is still active in the direction of its affairs, has attained a most exalted rank among institutions for the relief of persons more or less disabled. It appears that 845 epileptics have been admitted since the colony was actually opened, on February 1, 1896, and that at the date of the board's report, September 30, 1900, there were 612 beneficiaries. It is stated that on the completion of additional buildings then in course of construction the colony will have a capacity of 840 beds, but even this is deemed inadequate, inasmuch as there are still numbers of epileptics in various other State institutions or partly supported by the State. On the other hand, as we learn from Dr. Spratling's report, it happens frequently that sufferers for whose relief the colony was never intended are referred to it, simply because they happen to have epilepsy as a minor ailment. "Do they forget," asks Dr. Spratling, "that the colony was not designed for idiots and imbeciles?"

An ample property has been set apart for the purposes of the colony, and to good account has the board of managers turned it; the institution may now be confidently expected to grow and develop *pari passu* with the needs of the State. There is one important desideratum, not, however, directly

affecting the efficiency of the institution—the nearest hotel is four miles away, and in consequence of this fact colonists' friends who visit them are put to great inconvenience, get ruffled, and speak ill, says Dr. Spratling, of what they choose to term the "parsimony" of the State. "Poor people travelling from remote parts of the State, hundreds of miles away, to visit an afflicted child, having spent much money in transportation," he continues, "naturally desire to stay here some time. At present they are unable to do it. Facilities should be provided that would make it possible for them to do it." "What possible harm," he asks, "could come from the State's leasing a piece of land on the colony premises, selected and approved by the managers, for the erection on it of a public house, the same to be always subject to the powers of restriction and regulation by the managers?" We presume that Dr. Spratling does not mean to recommend that the State should actually go into the inn-keeping business. For our part, we are decidedly of the opinion that the provision of hotel facilities had better be left to private enterprise, which never fails to scent the prospect of financial success.

OPODELDOC.

Old Dr. James, in his bulky *Medicinal Dictionary*, gives the following as the formula of the plaster to which Paracelsus seems to have given the quasi-Oriental name of opodeldoc: A plaster made by melting together two ounces each of bdellium, ammoniacum, galbanum, sagapenum, and opopanax, adding a pound and a half of Strassburg turpentine, four ounces of bay oil, and two ounces of amber, and stirring well together over a gentle fire; or a pound of litharge, a pound and a half of calamine, two pounds of olive oil, and a pound of linseed oil, and, after mixing with the preceding, adding a pound each of yellow wax and colophony, boiling again and stirring till all are incorporated, and adding gradually an ounce each of astringent saffron of Mars, loadstone, colcothar, olibanum, myrrh, amber, mastich, sarcocolla, dragon's blood, and camphor, and two ounces of round birthwort root, letting the whole stand over a slow fire till the proper consistence is acquired.

Thus we see that, even in Dr. James's time, the formula was not constant. Indeed, as we are told

by Dr. Paul Fabre (*Janus*, May), there were in old times the opodeldoc of Wurtzcius, that of Mindererus, that of Nuremberg, and that of Jungken. Like many of the other terms coined by that prince of fakirs, Paracelsus, opodeldoc took the fancy of the multitude, and, although the plaster long ago lapsed into oblivion, a liniment of the same name, essentially nothing more than camphorated soap liniment, still holds a high place in the esteem of thousands of good old dames the world over, and in so recent a work as Raige-Delorme and Dechambre's *Dictionnaire encyclopédique des sciences médicales* we find the formula of baume opodeldoch, or baume opodeldoch liquide, namely, a solution of fifty parts of white soap and fifteen of camphor in five hundred of alcohol, to which are added four of oil of thyme, eight of oil of rosemary, and thirty of ammonia water.

In pharmacy, as in the other arts, the tendency of the times is toward simplicity, and the linimentum saponatocamphoratum of several of the European pharmacopœias amply takes the place of the old opodeldoc liniment; so, indeed, does the linimentum saponis of the United States and British pharmacopœias, of still simpler constitution. But laymen are apt to spurn simplicity in medicine, preferring to look upon the science as occult; consequently, in prescribing soap liniment it is judicious to speak of it as opodeldoc.

THE REMARKABLE TRAVELS OF A FOREIGN BODY.

Among the noteworthy accounts of the migrations of foreign bodies within the organism we may include the following, by Dr. Capurro, of Genoa (*Clinica chirurgica*, 1899, No. 11; *Centralblatt für Chirurgie*, June 15): "A girl baby, seven months old, fell ill and made painful efforts at swallowing. In the course of a few days there were cough and fever, and in two week an abscess formed in the right tenth intercostal space, in the posterior axillary line. The next day there was a suffocative attack, which subsided on the child's vomiting a considerable quantity of yellowish-green pus. The abscess, which was opened at once, contained similar material. It healed, but two weeks later a new abscess pointed above and in front of the first. When it was opened, a head of *Brachypodium vulgare* (a forage grass of the tribe *Festuceæ*) more than an inch long was extracted.

News Items.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending June 29, 1901:

Small-pox United States Cases.

California.....	Los Angeles.	June 15-22.....	1 case.	
District of Columbia	Washington.	June 15-22.....	1 case.	
Indiana.....	Evansville.	June 22.....	1 case.	
Louisiana.....	New Orleans	June 15-22.....	3 cases.	1 death.
Kentucky.....	Lexington.	June 15-22.....	1 case.	
Massachusetts.....	Fall River.	June 15-22.....	6 cases.	
"	Fitchburg.	June 1-8.....	1 case.	
"	New Bedford	June 15-22.....		1 death.
"	Quincy.....	June 15-22.....	1 case.	
Michigan.....	Detroit.....	June 15-22.....	2 cases.	
"	Grand Rapids	June 1-22.....	8 cases.	
Missouri.....	St. Louis.....	June 8-16.....	34 cases.	
Nebraska.....	Omaha.....	June 15-22.....	5 cases.	
New Hampshire.....	Manchester.	June 15-22.....	1 case.	
New Jersey.....	Newark.....	June 15-22.....		2 deaths.
"	Jersey City.	June 16-23.....	2 cases.	
New York.....	Buffalo.....	June 19.....	1 case.	
"	Elmira.....	June 15-22.....	1 case.	
"	New York.....	June 15-22.....	60 cases.	20 deaths.
Ohio.....	Cincinnati.	June 14-21.....	4 cases.	
"	Cleveland.	June 14-21.....	24 cases.	
Pennsylvania.....	Lebanon.....	June 15-22.....	9 cases.	
"	Philadelphia	June 15-22.....	2 cases.	
Rhode Island.....	Providence.	June 15-22.....		1 death.
Tennessee.....	Memphis.....	June 14-21.....	8 cases.	
Utah.....	Salt Lake City	June 15-22.....	2 cases.	
West Virginia.....	Wheeling.....	June 15-22.....	1 case.	
Wisconsin.....	Green Bay..	June 16-23.....	1 case.	

Small-pox—Foreign

Canada.....	Stanbridge.	June 6, Present.		
Colombia.....	Panama.....	June 10-17.....	6 cases.	24 deaths.
France.....	Paris.....	June 1-8.....		
Germany.....	Hamburg.....	June 1-8.....	2 cases.	
Great Britain.....	Glasgow.....	June 7-14.....	18 cases.	1 death.
"	Liverpool.....	June 1-8.....	1 case.	
"	London.....	June 1-8.....	1 case.	
Greece.....	Athens.....	June 1-8.....	1 case.	
India.....	Bombay.....	May 21-28.....		8 deaths.
"	Calcutta.....	May 18-25.....		25 deaths.
"	Karachi.....	May 19-26.....	10 cases.	6 deaths.
Italy.....	Messina.....	June 1-8.....	16 cases.	1 death.
Russia.....	St. Petersburg	May 24-June 1..	11 cases.	6 deaths.
"	Warsaw.....	May 18-25.....		7 deaths.
Spain.....	Corunna.....	June 1-8.....		1 death.
Straits Settlements.	Singapore..	May 4-11.....		1 death.

Yellow Fever.

Costa Rica.....	Port Limon.	June 13.....	1 case.
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Cholera.

India.....	Bombay.....	May 21-28.....	3 deaths.
"	Calcutta.....	May 18-25.....	65 deaths.

Plague.

China.....	Hongkong..	May 11-18.....	122 cases.	113 deaths.
Egypt.....	Miniet.....	June 3.....	2 cases.	
"	Zigazag.....	June 3.....	1 case.	
India.....	Bombay.....	May 21-28.....		192 deaths.
"	Calcutta.....	May 18-25.....		47 deaths.
"	Karachi.....	May 19-26.....	112 cases.	107 deaths.
Japan.....	Formosa.....	May 21.....	41 cases.	29 deaths.

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine-Hospital Service for the seven days ending June 27, 1901:

BANKS, C. F., Surgeon. Granted leave of absence for two days.
 HASTINGS, HILL, Assistant Surgeon. To proceed to San Diego, California, for special temporary duty.
 ADAMS, F. B., Acting Assistant Surgeon. Granted leave of absence for three days from June 23d, on account of sickness.
 BAILEY, C. W., Acting Assistant Surgeon. Granted leave of absence for ten days from June 21st.

Board Convened.

Board convened to meet at Washington, June 27, 1901, for the physical examination of applicants for the position of engineer officer in the Revenue Cutter Service. Detail for the Board—Passed Assistant Surgeon H. D. GEDDINGS, chairman; Passed Assistant Surgeon J. B. GREENE, recorder.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending June 29, 1901:

ATKINSON, R. T., Assistant Surgeon. Appointed assistant surgeon from June 22d.
 BALCH, A. W., Assistant Surgeon. Appointed assistant surgeon from June 22d.
 BLAKEMAN, R. S., Passed Assistant Surgeon. Ordered to the Naval Hospital, Norfolk, Virginia.
 BUCHER, W. H., Assistant Surgeon. Appointed assistant surgeon from April 15th.
 GROVE, W. B., Passed Assistant Surgeon. Detached from the Naval Hospital, Norfolk, and ordered to the *Michigan*.
 SHIPP, E. M., Passed Assistant Surgeon. Detached from the *Michigan* and ordered to the Asiatic Station.
 SMITH, G. C., Assistant Surgeon. Detached from the *Vermont* and ordered to temporary duty on the *Alvarado*.
 TAYLOR, J. S., Assistant Surgeon. Detached from the *Manila* and ordered to the Naval Hospital, Yokohama, Japan.
 TOLFREE, H. M., Assistant Surgeon. Ordered to the *Vermont*.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending June 29, 1901:

DISEASES.	Week end'g June 22		Week end'g June 29	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever.....	60	4	33	10
Scarlet Fever.....	362	34	376	30
Cerebro-spinal meningitis.....	19	2	0	3
Measles.....	271	9	274	10
Diphtheria and croup.....	239	42	251	54
Small-pox.....	60	20	97	15
Tuberculosis.....	255	155	230	149

A Census of the Consumptives in New York State is soon to be taken by Dr. Daniel Lewis, commissioner of the State Board of Health. It will be the first census of the kind ever undertaken by this State.

Dr. S. Weir Mitchell's Tour Around the World.—Dr. S. Weir Mitchell, of Philadelphia, arrived at San Francisco on June 23d on the steamer *China* from a trip around the world. He was accompanied by his wife and daughter and Mr. and Mrs. P. Schuyler, of New Hampshire.

The Annual Commencement Exercises of the College of Physicians and Surgeons of Boston were held on June 19th. There were nine graduates.—Class day exercises of the Tufts College Medical School, Boston, were held on June 18th. There were thirty-three graduates.

Dr. Senn on a Globe-girdling Tour.—Dr. Nicholas Senn, Dr. Jacob Frank, and Dr. D. R. Brower, of Chicago, with Dr. Mastin, of Mobile, Ala., are now on the ocean bound for Europe. They will make a tour of the world, holding clinics in various cities, and returning home about October 1st.

Faith Healer Dowie Summoned to Court.—John Alexander Dowie, the Chicago faith healer, was to have appeared before Justice Gibbons on July 5th to answer a charge of violating the city

ordinance regulating and licensing hospitals. The maximum penalty prescribed is \$100 and the lowest \$50.

The Dallas Medical College.—At this institution, which was recently made the medical department of Trinity University, eight students graduated in medicine and two in pharmacy on June 18th. The acting president of the university, Rev. P. M. Riley, conferred the degrees and issued the diplomas.

Resignation of a Member of the State Commission in Lunacy.—William Church Osborn, of New York, one of the three members of the State Commission in Lunacy, forwarded his resignation to Governor Odell on June 29th, to take effect at once. Pressure of private business is said to be the reason for the resignation.

A Medical Library as a Memorial to an Indianapolis Pioneer Physician.—Dr. J. Ewing Mears, of Philadelphia, has given to the Marion County (Ind.) Medical Society property in Indianapolis, valued at \$25,000, on which to establish a medical library and found a home for the society as a memorial to his father, who was a pioneer physician in Indianapolis.

The Enno Sander Gold Medal for Military Surgeons.—The Association of Military Surgeons of the United States this year will offer the Enno Sander gold medal, valued at \$100, for the best essay on The Most Practicable Organization of the Medical Department of the United States Army for Active Service. The competition is open to all persons eligible to membership in the association.

The Degree of Master of Surgery Conferred on Dr. Nicholas Senn, of Rush Medical College.—Dr. Nicholas Senn, professor of surgery at Rush Medical College, Chicago, had the honorary degree of master of surgery conferred on him on June 22d. Dr. Frank Billings acted for the faculty and Dr. James Nevins Hyde decorated the eminent surgeon with the official insignia of the degree.

No Modification of the Yellow Fever Regulations.—There will be no modification of the sanitary regulation which detains in quarantine travelers from Cuba to this port for the present. Health Officer Alvah H. Doty returned on June 25th from Washington, where he had been in consultation with Surgeon-General Wyman on the subject, and held that it was not possible under existing circumstances to allow travelers from Cuban ports to pass through without detention.

The Rockefeller Institute for Medical Research Incorporated.—There were filed on June 13th at Albany, N. Y., with the Secretary of State articles incorporating the Rockefeller Institute for Medical Research. Its principal office is to be in New York city. The society's objects are to promote medical research, with special reference to the prevention and treatment of disease. The directors are: Dr. William H. Welch, of Balti-

more; Dr. T. Mitchell Pruden, Dr. C. A. Hester, Dr. L. Emmett Holt, and Dr. Hermann W. Biggs, of New York; Dr. Simon Flexner, of Philadelphia, and Dr. Theobald Smith, of Boston.

Insects as Factors in Conveying Diseases.—Surgeon-General Wyman, at Washington, D. C., has issued a general circular to medical officers of the Marine-Hospital Service calling special attention to the importance of insects as factors in conveying diseases. The circular says that there is no longer doubt as to the relation of the mosquito to malarial diseases and to filariasis. "According to Simond," it says, "plague is transmitted from the rat to man by the flea. The infection of typhoid fever and, to a certain extent, cholera may be conveyed by flies. Medical officers are directed to place mosquito nettings over the beds of communicable diseased patients." Hospitals are to be thoroughly protected by fly screens at all openings, particular attention being paid to the kitchen, dining room, and protection of the food. Sulphur fumigation is recommended as the best method of killing insects in a large room.

Manhattan State Hospital Officials Blamed for Insane Man's Death.—The jury in the Wadman inquest has handed a verdict to Coroner Zucca, blaming Manhattan State Hospital officials for the man's death. The verdict is as follows: "We find that the said Herbert C. Wadman came to his death on the fifth day of March, 1901, at the Manhattan State Hospital, Ward's Island, New York city, from chronic nephritis and acute mania, aggravated and hastened by broken ribs and injuries to chest and head, and we exonerate the Bellevue Hospital authorities from all blame. We find that the said injuries were inflicted at the Manhattan State Hospital by Attendant John Foley, and that Keeper Michael Carroll was a party thereto. We also censure the authorities of the Manhattan State Hospital for neglect of duty, and especially censure Dr. Louis C. Pettit for neglecting the patient, who, he testified, was suffering from chronic nephritis, and for failure to treat the patient for the said disease." After the verdict was handed in the papers in the case were sent to the District Attorney's office. Mr. Philbin assigned Assistant District Attorney Keith to investigate and to prepare the papers for presentation to the grand jury.

The Vermont School for Health Officers.—The third annual meeting will be held in Burlington, Vt., from July 8 to July 11, 1901, inclusive, under the direction of the State Board of Health. The programme contains the following titles: Address of Welcome, by Mayor D. C. Hawley; Address, by Governor W. W. Stickney; Address, by the Hon. J. A. DeBoer, of Montpelier; A Sketch of the Life of Dr. John H. Linsley, by Dr. C. S. Caverly, president of the State Board; Laws Relating to Public Health, by Colonel Joel C. Baker, of Rutland; Health Officers, their Duties and Responsibilities, by Mr. H. L. Stillson, of Bennington; Sanitary Legislation, by Dr. W. N. Platt, of Shoreham; The Relation of Animal Diseases to Public Health, by Dr. Don D. Grant, of Water-

bury; Milk Supplies, by Mr. Edgar B. Moore, of Rutland; Small-pox versus Chicken-pox, by Dr. E. S. Darling, of Hardwick; Small-pox Eruptions in Various Stages, by Dr. J. H. McCollum, of Boston; Plumbing, by William P. Gerhard, C. E., of New York; Vital Statistics, by Dr. Cressy L. Wilbur, of Lansing, Mich.; Value of a Blood Examination, by Dr. B. H. Stone, of Burlington; Prophylaxis in Contagious Diseases, by Dr. J. H. McCollum, of Boston; Value of our Laboratory to the People of Vermont, by Dr. M. J. Wiltse, of Burlington; History of a Peculiar Outbreak of Disease in Windsor, by Dr. J. D. Brewster, of Windsor; Drinking Water and Disease—Disposal of Sewage, by Professor W. T. Sedgwick, of the Massachusetts Institute of Technology; School House Sanitation, by Dr. W. L. Hoisington, of Weathersfield; and An Outbreak of Measles in Shaftsbury, by Dr. F. E. Dean, of Shaftsbury.

Measles.—An epidemic of measles is reported from Chicago and its suburbs.

Diphtheria.—Several cases of diphtheria are reported from Easthampton, L. I.

Smallpox.—New York has had its usual quota of cases, while the rapid spread of the disease at Yonkers, N. Y., and at Newport, R. I., has occasioned alarm. Other places from which the disease has recently been reported are Cleveland, Ohio, and a number of points in Massachusetts. At Cleveland a case of hæmorrhagic smallpox is noted.

Leprosy in the United States.—Scientific investigations have been going on at Washington for several months, with a view to learning the extent of leprosy in this country. It reveals that there are about 275 reported cases in the United States. It is thought probable that the real number may be nearer 1,000. Seventy-four of the known cases are in New Orleans, chiefly among the Italian population. There are twenty-three in Minnesota, mostly among Scandinavians in the rural settlements. There are fifteen cases in North Dakota and two in South Dakota. Chicago has five cases and New York six. It is noteworthy that nearly all the 275 reported victims are foreigners. The Scandinavians seem peculiarly susceptible. They either had it when they landed in America, or contracted it shortly after landing. Every one of the cases in the Dakotas and Minnesota is located in the country, in localities rather remote even from small towns. The disease seems to be spreading most rapidly in Louisiana, and for several years there has been an agitation there in favor of efficient supervision and control of all leprosy patients, either by the State or by the general government.

The Eclectic Medical Society, at its recent session in San Francisco, elected the following officers: President, Dr. F. G. Fay, of Sacramento; first vice-president, Dr. P. L. Hamilton, of Chico; second vice-president, Dr. J. Harding-Mason, of San Francisco; recording secretary, Dr. B. Stet-

son, of Oakland; corresponding secretary, Dr. H. S. Turner, of Pomona; treasurer, Dr. H. W. Hunsaker, of San Francisco.

The American Medico-psychological Association has elected the following officers for the ensuing year: President, R. J. Preston, Virginia; vice-president, G. Alder Blumer, Rhode Island; secretary and treasurer, C. B. Burr, Michigan; auditors, William M. Edwards, Michigan, and N. H. Beemer, Ontario; councillors for three years, John B. Chapin, Pennsylvania; Henry M. Hud, Maryland; P. L. Murphy, North Carolina; E. C. Runge, Missouri.

The Marysville (Ohio) Medical Association.—The following are the officers of the newly organized Marysville Medical Association: President, Dr. D. W. Henderson, of Marysville; first vice-president, Dr. McCune, of Unionville; second vice-president, Dr. Smith, of Pottersburg; secretary and treasurer, Dr. Stanley Brown, of Clai-bourne; executive committee, Dr. C. D. Mills, Dr. J. E. Wood, and Dr. George H. Rodebaugh, of Marysville.

Members of Atlanta (Ga.) Medical Society Sued by a Physician.—Alleging that he has been damaged to the extent of \$10,000 by the Atlanta (Ga.) Society of Medicine, Dr. S. E. Bryan, of that city, has brought suit in the city court against individual members of the society for that amount. The suit is the outgrowth of the action of the grand jury last year in reporting the names of a number of physicians as being illegal practitioners of medicine. Dr. Bryan's name was among those so reported.

The Chicago Electro-Medical Society is the name of a new association organized in that city on June 27th, with the following temporary officers: President, Dr. S. V. Clevenger; first vice-president, Dr. E. J. Farnham; second vice-president, Dr. John E. Gilman; secretary, Dr. Richard H. Street; treasurer, Dr. G. G. Burdick. The object of the society is to encourage the interchange of opinion among the medical fraternity on the science of electro-therapeutics. The first regular meeting will be held on July 30th.

The Wisconsin State Medical Society has elected the following officers for the ensuing year: President, Dr. W. H. Nielsen, of Milwaukee; first vice-president, Dr. A. J. Hodgson, of Waukesha; second vice-president, Dr. L. H. Pelton, of Wau-paca; secretary, Dr. C. S. Sheldon, of Madison; assistant secretary, Dr. A. T. Holbrook, of Milwaukee; treasurer, Dr. S. S. Hall, of Ripon; censor, Dr. Wallbridge, of Milwaukee; delegate to American Medical Convention, Dr. Sarles, of Palmyra; alternate, Dr. B. M. Caples, of Waukesha. The society has decided to meet at Milwaukee next year.

The International Railway Surgeons' Association has elected the following officers: President, Dr. Rhette Good, of Mobile, Ala.; vice-presidents, Dr. Walter M. English, of London, Can-

ada; Dr. Lester Keller, of Ironton, Ohio; Dr. J. A. Baar, of McKees' Point, Pa.; Dr. Bacon Sanders, of Fort Worth, Tex.; Dr. S. R. Miller, of Knoxville, Tenn.; Dr. Benjamin Thompson, of Tampa, Fla.; treasurer, Dr. James A. Duncan, of Toledo, Ohio; secretary, Dr. J. L. Mitchell, of Chicago; members of the executive board, Dr. C. R. Dixon, of Toronto; Dr. L. Woosham, of Evansville, Ind.; Dr. J. N. A. Schinkle, of Freyer's Point, Miss.

The Ontario Medical Association, at its recent annual meeting at Toronto, elected the following officers for the ensuing year: President, Dr. N. A. Powell, of Toronto; first vice-president, Dr. R. Ferguson, of London; second vice-president, Dr. R. W. Garrett, of Kingston; third vice-president, Dr. L. C. Prevost, of Ottawa; fourth vice-president, Dr. J. L. Turnbull, of Clinton; general secretary, Dr. H. C. Parsons, of Toronto; assistant secretary, Dr. George Elliott, of Toronto; treasurer, Dr. A. R. Gordon, of Toronto.

The National Locomotor Ataxia League has been organized, with an office at 150 Fifth Avenue, New York. The object of the league is to promote research for a permanent cure for the disease. It is the intention of the league to offer a reward of \$10,000 for the discovery of a guaranteed cure. It is believed that there are from 18,000 to 20,000 sufferers from locomotor ataxia in this country, all of whom, it is hoped, will become members of the league, and by contributions from them and others and with government aid it is expected to secure the money to build a sanatorium.

The West Chicago Medical Society.—A number of physicians and surgeons met recently in Chicago and organized a new society, to be known as the West Chicago Medical Society. This body is to be non-partisan and non-sectarian, and has been primarily organized for the consideration of scientific subjects. It is expected to affiliate with the American Medical Association. A constitution was adopted and the following officers elected: President, Dr. E. D. St. Cyr; vice-president, Dr. O. G. Wernicke; treasurer, Dr. G. M. Silverberg; secretary, Dr. G. M. Blech; executive board, Dr. A. M. Shabad, Dr. F. W. Henkel, Dr. J. M. Aleclio, and Dr. S. Brownstein.

The Colorado State Medical Society, at its annual convention in Denver recently, elected the following officers: President, Dr. R. W. Corwin, of Pueblo; first vice-president, Dr. J. W. Grant, of Denver; second vice-president, Dr. P. J. McHugh, of Fort Collins; third vice-president, Dr. L. J. Forhan, of Trinidad; corresponding secretary, Dr. J. M. Blaine, of Denver; recording secretary, Dr. Minnie C. T. Love, of Denver, re-elected for the fifth term; assistant recording secretary, Dr. J. T. Melvin, of Saguache; treasurer, Dr. William J. Rothwell, of Denver. Board of trustees, Dr. Hubert Work, of Pueblo; Dr. S. E. Solly, of Colorado Springs; Dr. J. T. Eskridge, Dr. A. Stedman, Dr. W. E. Wilson, Dr. E. J. A.

Rogers, and Dr. J. N. Hall, of Denver. Committee on admission, Dr. C. K. Fleming, chairman; Dr. C. A. Powers, Denver; Dr. N. B. McDowell, of Longmont; Dr. M. Ballin, of Leadville; Dr. F. R. Coffman, of Minturn. Delegate to the house of representatives of the American Medical Association, Dr. C. K. Fleming, of Denver; alternate, Dr. P. L. Gildea, of Colorado Springs. Pueblo was chosen as the place of meeting in June, 1902.

Births, Marriages, and Deaths.

Married.

CURTIS—WHITELEY.—In Philadelphia, on Thursday, June 27th, Dr. Ralph G. Curtis and Miss Whiteley.

DORN—MCCKEY.—In San Francisco, on Thursday, June 20th, Dr. Gustavus W. Dorn and Mrs. Sarah McConkey.

GREEFF—CRABBE.—In New York, on Wednesday, June 26th, Dr. William Greeff and Miss Marguerite Blanche Crabbe.

KNAPP—HUBERT.—In Baltimore, on Tuesday, June 25th, Dr. Hubert C. Knapp and Miss Margaret R. Hubert.

LE WALT—BULLARD.—In Elmira, N. Y., on Wednesday, June 26th, Dr. Leon T. Le Walt, of New York, and Miss Mary Olive Bullard.

MCBURN—WHITE.—In North Sewickley, Pennsylvania, on Wednesday, June 26th, Dr. M. R. McBurney and Miss Mary White.

MCKERNON—WITTMAYER.—In New York, on Wednesday, June 26th, Dr. James Francis McKernon and Miss Anna Madeline Wittmeyer.

MILLER—COLEMAN.—In San Francisco, on Wednesday, June 19th, Dr. John J. Miller, of San José, California, and Miss Sara Coleman.

RANDLES—PRICE.—In Kansas City, Kansas, on Thursday, June 27th, Dr. Herbert Randles and Miss Luella Price.

SIMMONDS—FEBREY.—In Falls Church, Virginia, on Tuesday, June 25th, Dr. S. J. Simmonds, of Lynchburg, Virginia, and Miss Elsie Febray.

TIMME—HAAR.—In New York, on Thursday, June 27th, Dr. Walter Timme and Miss Ida Helen Haar.

ZEIGLER—KNIGHT.—In York, Pennsylvania, on Tuesday, June 25th, Dr. C. Henry Zeigler and Miss Sara T. Knight.

Died.

EHLER.—In Lancaster, Pennsylvania, on Saturday, June 29th, Dr. J. Augustus Ehler, in the eighty-first year of his age.

FOSTER.—In St. Paul, on Sunday, June 23d, Dr. Alson J. Foster, in the twenty-third year of his age.

FUSSELL.—In Chester Springs, Pennsylvania, on Saturday, June 29th, Dr. Morris Fussell, in the eightieth year of his age.

GALLOUPE.—In Beverly, Massachusetts, on Tuesday, June 25th, Dr. Abbott Galloupe, in the twenty-ninth year of his age.

GARDNER.—In New York, on Saturday, June 29th, Dr. John Gardner, in the seventieth year of his age.

LEWIS.—In Waukegan, Illinois, on Monday, June 24th, Dr. Aaron Lewis, in the eighty-third year of his age.

MAGNESS.—In White Plains, N. Y., on Tuesday, June 25th, Dr. George Hosmer Magness, in the fiftieth year of his age.

ROBY.—In Brooklyn, on Tuesday, June 25th, Dr. James W. E. Roby, in the thirty-eighth year of his age.

SAUNDERS.—In New York, on Thursday, June 27th, Dr. Charles C. Saunders, of Maidsville, West Virginia.

THACKER.—In Defiance, Ohio, on Thursday, June 20th, Dr. L. G. Thacker, in the forty-eighth year of his age.

WHEELER.—In Hudson, N. Y., on Saturday, June 29th, Dr. John P. Wheeler, in the eighty-fourth year of his age.

WHITEHEAD.—In Crosswick, N. J., on Saturday, June 29th, Dr. John G. L. Whitehead, in the seventy-third year of his age.

Pith of Current Literature.

Medical News, June 29, 1901.

The Importance of a Recognition of the Significance of Early Tuberculosis in its Relation to Treatment. By Dr. E. L. Trudeau.—The results obtained at sanatoria have demonstrated not only that the disease is curable, but that it is curable in direct proportion to the stage at which the treatment is applied. Our standard as to what constitutes a truly incipient case should be made more rigid. Persistent slight cough with loss of flesh and strength, a slight afternoon rise of temperature of from one half to three quarters of a degree, and constant lassitude are symptoms which, even without any appreciable signs on physical examination, point in many cases to incipient tuberculosis, but which are too often disregarded. The author foresees that, although the open-air method and sanitarium treatment have given renewed hope, the results will be disappointing unless the all-important bearing of an early diagnosis is more generally realized.

A Study of some Complications and Sequelæ of Typhoid Fever. By Dr. H. A. Hare and Dr. H. R. M. Landis.

Treatment of Diabetes Mellitus. By Dr. Abraham Mayer.—The treatment of this disease, until we find the exact ætiological factor or factors in its production, must be influenced by the symptoms of individual cases. As to diet, the author refers to the tables of Rubner, showing that individuals of different weight and occupation require a different number of calories to the kilogramme. As an aid to memory, the author notes that one egg represents about eighty calories; lean beef or fish, as many calories as its weight in grammes; very fat beef or mutton, three times as many calories as its weight in grammes; butter, eight calories to the gramme; wheat bread, two and a half calories to the gramme; gluten bread, two or three calories to the gramme. Of drugs, the author mentions opium, arsenic, and the bichloride of mercury. He uses opium for its beneficial effects on thirst and for its general effect on the patient's physical and mental condition. In severe cases which show Gerhardt's reaction, it should never be used, on account of the danger of impending coma. Arsenic frequently increases the limit of assimilation for carbohydrates, diminishes the glycosuria, and acts as an excellent tonic. For the bichloride of mercury the author alleges "a certain, perhaps a specific action" in the reduction of sugar and in the amelioration of symptoms. It is always safer to anticipate coma than to treat it when it arises.

Cutaneous Manifestations in Diabetes. By Dr. S. Sherwell.

Diabetes in Surgery. By Dr. Robert T. Morris.

Philadelphia Medical Journal, June 29, 1901.

Some Trophoneuroses and their Relation to Vascular Disease of the Extremities. By Dr. B. Sachs and Dr. Alfred Wiener.—Whatever name is given to the series of symptoms, it is very cer-

tain, in the opinion of the authors, that erythromelalgia, Raynaud's disease, acroparæsthesia, and even scleroderma, often merge into each other or are associated with one another; and whether these various types are due to nerve disease or not, the fact stands out clearly for the present that marked forms of arteriosclerosis and phleboscrosis occur in association with those so-called trophoneurotic diseases. The authors refer to a number of cases of vasomotor and trophoneurotic disturbances in which the condition of the nerves, arteries, and veins of the affected extremity has been carefully studied, and they express the opinion that the lesser stages of the disease are, in all probability, responsible for many cases of vague "rheumatoid" pains in the arms and legs, for paræsthesia in cases of diabetes, and for conditions resembling those of local syncope in pronounced cases of arteriosclerosis.

The Freezing Point of Urine; its Determination and the Inferences which may be Drawn from it. By Dr. J. H. Huddleston.—The theory of urinary cryoscopy is based upon Raoult's law, that "one molecule of any compound, when dissolved in one hundred molecules of a liquid, lowers the freezing point of the liquid by an amount which is nearly constant," and on Koranyi's theory of molecular exchange in the convoluted tubules of the kidneys. The method described in detail by the author is distinctly a laboratory method, requiring time and care. It represents a notable advance in the application of physico-chemical methods to clinical work. The author believes urinary cryoscopy to be preeminent as a test of function quite independent of structure. Startling revelations in gross or microscopical investigation of the pathological anatomy of an organ, in his opinion, are hardly now to be expected, but intimate studies of the constantly varying capacity of an organ to do work have the merit of rarity and novelty and inspire the hope which springs from a new field.

A Preliminary Report upon a Case of Uncinariasis (Ankylostomiasis). By Dr. Thomas A. Claytor.

The Rôle of Infection and Intoxication in Diseases of the Spinal Cord. By Dr. Alfred Gordon.—The object of the author is to plead for a more thorough investigation into the ætiology of diseases of the spinal cord and apply the same principles in treatment as in diseases of any other organ of an infectious nature. Serum therapy has accomplished a great deal in therapeutics, and, according to the author, the day is not far distant when it will be applied in diseases of the nervous system. It is not sufficient to treat the symptoms; one must ascend to the initial cause.

Journal of the American Medical Association, June 29, 1901.

Oral Manifestations and Allied States. By Dr. E. S. Talbot (*concluded*).—Considering the ætiology, the author divides the causes into local and constitutional. The local may be due to irritation about the border of the gums. The constitutional causes are self-intoxication and drug poisoning. These act by direct irritation through

the peripheral nerves and the blood streams, setting up inflammation in the capillaries extending throughout the alveolar process and gum tissue. Enderteritis obliterans results, cutting off the blood supply. The question, raised by Galippe, as to whether there exists a specific bacterium which bears the same relation to the pyorrhœic stage that the streptococcus does to streptococcus diphtheria, must, in the light of careful research, be regarded as settled in the negative. The pathological evidence demonstrates that bacteria play the very subordinate rôle in this disease that they do in ordinary wound infection.

Report of a Case of Puerperal Eclampsia, with Recovery. By Dr. James E. Davis.

Cæsarean Section Three Times in the same Person in Six and One Half Years. By Dr. J. W. Coakley.

Boston Medical and Surgical Journal, June 27, 1901.

A Study of the Food Consumed and Digested by Four Members of the Harvard University Boat Crew in June, 1900. By W. O. Atwater and F. G. Benedict.—The four men ate on the average 154 grammes of protein, 139 grammes of fat, and 473 grammes of carbohydrates, with a fuel value of 3,925 calories to a man each day. It appears that the four men ate about as much as the Harvard and Yale crews in 1898, and that their food had about fifty per cent. more protein and sixteen per cent. more energy than that of the men at ordinary occupations in the United States whose dietaries have been studied. The four athletes, on the average, digested their food just about as completely as the average man does. There were, however, such marked differences in the amount and composition of the fæces of the different men as would imply a wide diversity in their capacity to digest their food. No special studies were made of the composition of the fæces. Comparisons of the urea and uric acid in the urine failed to yield any such results as to warrant conclusions regarding the effect of severe muscular exercise upon their amounts. A notable feature was found in the fact that the nitrogen excreted by the kidneys and intestines was considerably less in amount than the total nitrogen of the food, indicating that there was a considerable storage of nitrogen in the body. The amount was such as to correspond to an average of not far from twenty-four grammes of protein daily, if no allowance is made for the excretion of nitrogenous compounds in perspiration through the skin. This gain is so noticeable as to suggest the queries whether men who are storing nitrogen to such an extent are in the best physical condition, and whether the amount of protein in the diet was the most appropriate for the purpose. Further and more detailed investigations are needed to show what diet is best for men under such severe muscular strain as that of oarsmen in training for races.

Some Forms of Intestinal Obstruction Due to Adhesions. By Dr. A. T. Cabot.—The author refers more particularly to certain chronic conditions in the intestinal canal, consequent upon

partial twists and kinks in the bowel, which are prevented from untwisting themselves by adhesions which tie them to the parietal peritonæum. The symptoms of obstruction are not constant, for if the bowels are in good order they are able to pass their contents comfortably through the partially obstructed coil. In all the author's cases the seat of obstruction has been either in the ileum, close to its entrance into the cæcum, or in the sigmoid flexure; at both points we have a movable portion of the intestine running into a more fixed part—a relation favorable to this form of obstruction. Simple separation of the adhesions is sufficient for the relief of such cases.

Catharsis in Abdominal Surgery. By Dr. L. R. G. Crandon.—The author considers that in acute pelvic peritonitis both enemata and drugs by the mouth should be used to produce catharsis before an operation; drugs by the mouth and oil enemata after operation. In all acute inflammatory conditions of the abdomen in which the alimentary tract is involved, the bowels should be moved by enemata alone, before and after an operation, the enema of salts, turpentine, and glycerin being the best.

A Case of Measles Complicated by Appendicitis. By Dr. Harold Williams.

Medical Record, June 29, 1901.

Clinical Annotations on Five Cases of Right-side Abdominal Disease. By Dr. A. A. Berg.—The author cites cases that well illustrate the difficulties that may be encountered in establishing a diagnosis in disease of the right side of the abdomen. Pain over the classical McBurney's point is not, by any means, always appendicular in origin; and the author suggests that before appendicitis is diagnosed, the other organs in the abdominal cavity be investigated.

Tonometric Examination in Chronic Diseases of the Heart. By Dr. Theodor Schott.

Chronic Gonorrhœa and Postgonorrhœal Urethritis—A Sketch of their Modern Treatment. By Dr. Ferd. C. Valentine.—In these conditions, as in all others, the cause of the perpetuation of the disease must be sought. No remedy exists or can exist which will meet all the causative indications. The cause of a chronic urethral discharge is easily found, and when found, can be successfully treated. The majority of chronic urethritides can be successfully treated by the general practitioner; the services of the specialist are required only in exceptional cases. The physician's duty is to warn all his patients of the dangers of gonorrhœa to themselves, their family, and the public.

The discovery of gonococci in either husband or wife, or in both, is no proof of infidelity in either. So long as either husband or wife harbors gonococci, the other is not safe from infection while marital relations are maintained. Resumption of marital relations must not be permitted until it is proved beyond peradventure that neither of the couple harbors gonococci.

Tuberculous Mastitis. By Dr. R. A. Giuliana.

American Medicine, June 29, 1901.

The Treatment of Abdominal Aortic Aneurysm by a Preliminary Exploratory Cœliotomy and Peritoneal Exclusion of the Sac, Followed at a Later Sitting by Wiring and Electrolysis, with the Report of Two hitherto Unpublished Cases. By Dr. Rudolph Matas (*concluded*).—In the light of present experience, the author would restrict his recommendation of the combined method to that small group of comparatively favorable cases in which the aneurysms are confined to the infra-mesenteric portion of the aorta, and then follow it only after other safer methods of treatment had been tried and failed. In aneurysms situated in the upper part of the aortic tract, the boundaries of which cannot be even approximately determined, he would regard this procedure in the light of a pure experiment which would be justified solely by the imminent danger of death from rapid progress of the disease with threatened rupture of the sac, and associated with great suffering. Even then the operation could not be recommended, but should be undertaken solely at the urgent solicitation of the patient after a thorough understanding that the chances would be no less than seventy per cent. against his recovery from the operation.

Persistence of the Thyreoglossal Duct. By Dr. David Riesman.

Myomectomy of Nine Myomas during Pregnancy and Delivery at Term. By Dr. John Duncan Emmett.

Subtrochanteric Osteotomy for the Deformity Following Hip Disease. By Dr. E. H. Bradford.—In this operation, advised by the author, it is important not to operate on too young or on rapidly growing patients. The operation may be considered as most satisfactory to both patient and surgeon, and the demand upon the surgeon consists simply in the exercise of judgment and a skill easily acquired.

The Hallucinations of Digitalis—Does Digitalis Cause Hallucinations, Delirium, or Insanity under Certain Conditions? By Dr. Harry Orville Hall.—The author's instances answer the question in the title affirmatively, but he reserves decision, and lays stress upon the need of a more careful observation of all the symptoms attendant upon the administration, for a protracted period, of this most valuable drug.

The Treatment of Congenital Dislocation of the Hip Joint. By Dr. Leonard W. Ely.

Prevention of Disease Infection by Micro-organisms Through the Mouth and Nasal Cavities. By Dr. Robert Reyburn.

British Medical Journal, June 22, 1901.

An Address on Midwifery and Midwives. By Dr. E. Malnis.

Military Surgery of the Time of Ambroise Paré and that of the Present Time. By C. H. Milburn, M. B.

A Case of Purpura Rheumatica. By Dr. R. Stockman.—Rheumatic purpura is probably a

specific infection accompanied by arthritis and purpuric eruptions, but we have no knowledge as to any specific microbe or the toxins which are responsible for the symptoms. It is readily distinguished from acute rheumatism by the comparative mildness of the arthritis, by the absence of serious febrile disturbance, by the absence of acid perspirations, by its chronic course, by the purpura, and by the salicylates having no effect.

Hæmorrhagic purpura is probably a totally different disease, the cause of which is also unknown. The case here reported is that of a man, aged thirty-nine years, who complained of swelling of some of the joints and of a purpuric eruption over the legs. The spots were of about the size of a pea, and appeared in successive crops every few days. Fresh spots were of a bright purplish-red color, while the older ones were faded. They did not disappear on pressure, and were not followed by desquamation. Each outbreak of spots was preceded by pains in the large joints. Blood examination showed a decrease in the hæmoglobin to 60 per cent. His temperature was usually subnormal. Treatment consisted in confining the patient to bed and keeping him on an easily digested diet.

The Chemical Side of Nervous Activity. By Dr. W. D. Halliburton.—The third and fourth of the Croonian Lectures. For a complete abstract, see summary of the *Lancet* for June 22, 1901, in this number of the *Journal*.

Transplantation of Ureters into Rectum by an Extraperitoneal Method for Exstrophy of the Bladder, and a New Operation for Procidencia Recti in the Same Patient. By G. A. Peters, M. B.—The author reports the case of a boy, aged two years and seven months, suffering from extreme procidentia recti and exstrophy of the bladder, who came under his care some four years ago. The procidentia recti was operated upon first as follows: The abdomen was opened in the median line and the prolapsed portion drawn within the abdominal cavity. The anterior wall of the dilated gut was then folded in and sutured, in this way narrowing its lumen and making it practically impossible for the original apex of the protrusion to fall into it, and at the same time converting the part doubled in into a strong vertical fleshy column. The lower end of this column was supported by the peritonæum, and its upper end supported the original apex of the protrusion. The operation was most successful, and no relapse has occurred in four years.

Two years and a half after the first operation, a second one was performed for the relief of the condition of exstrophy of the bladder. Catheters were passed into the two ureters and tied in place, and the whole of the remaining bladder tissue was remorselessly ablated, and the lateral aspects of the rectum exposed. The sphincter ani was then dilated and a sponge passed up into the rectum, to cut off any fæces. A slender forceps was then passed into the rectum and its tip forced against that point in the rectal wall to which it was desired to transplant the ureters. The wall of the bowel was incised upon the tip of the forceps through the anterior wound; the forceps was

passed through, and, seizing the catheters which were tied into the ureters, was withdrawn. In this way the ureters were implanted into the rectum, one on each side. It was not necessary to stitch the ureters in position. The catheters came away in a few days. The abdominal wound was packed and allowed to heal by granulation. The operation proved perfectly successful, and the child is healthy in every way. The cloaca seems to act habitually as a bladder, and only performs the functions of a rectum at regular and normal intervals. There is no evidence of reabsorption of urine from the rectum.

For this extraperitoneal operation the following advantages are alleged: 1. There is no danger of peritonitis. 2. A prominent natural papilla is secured. 3. The ureters are protected against infection or sloughing by lying undisturbed in their natural environment to the point of implantation. 4. The operation is easy of performance and practically free from shock and exhaustion.

Case of Meningo-encephalocele Treated by Excision of the Mass. By Dr. A. Fullerton.—The author reports a case of meningo-encephalocele, occurring in a female infant aged eight days, which he treated by excision of the protruding mass. The child did very well at first, but died four weeks later of acute bronchitis. The excised portion of brain was found to be from an occipital lobe.

A Note on the Surgical Treatment of Spina Bifida. By Dr. L. Marshall.—In the author's experience, the success or failure of an operation for spina bifida depends upon the retention of the cerebrospinal fluid. The first incision into the tumor should be small, so as to allow the fluid to escape slowly. The child's buttocks should be raised at the time of operation, and kept so for a week afterward. The inner lining of the sac should be turned inward, and a Lembert suture applied, the whole being covered by the external skin.

Lancet, June 22, 1901.

The Croonian Lectures on the Chemical Side of Nervous Activity. By Dr. W. D. Halliburton.—*Lecture I—The general composition of nervous structures.* Nervous tissues contain quantities of water; highest in the gray matter (85 per cent.), less in white matter (70 per cent.), and least in nerves (63 per cent.). The solid materials of nervous tissues are extremely numerous; the most important and the most abundant are the proteids and the phosphorized fats. In gray matter the proteid comprises over 50 per cent. of the solids. The proteids are three in number, the most abundant being nucleoproteid. The two other proteids are globulins, coagulating respectively at 47° C. and 70° C. Protagon, the phosphorized fat, yields two substances on decomposition—lecithin and cerebrin. Cerebrospinal fluid plays the part of the lymph of the central nervous system. It is characterized by its low specific gravity, its clear watery character, its paucity in proteid, and the presence in it of an unknown substance giving the sugar reaction. The products of brain katabolism are to be found in the

cerebrospinal fluid. In pathological conditions the amount of proteids is much increased.

Lecture II—Metabolism in nerve tissues. Nervous action stands apart from the action of most other tissues in the extraordinary economy of wear and tear which is noticeable. The signs of action are to be found mainly at the beginnings and endings of the fibres; the statement is usually made that nerve fibres are not capable of exhaustion. The centres are richly supplied with blood vessels, the nerves very poorly so. The brain demands an abundant supply of oxygen. The normal reaction of nervous tissue is alkaline; there is little evidence that acid is formed on activity. Evidences of fatigue products can be found by examining cerebrospinal fluid. Choline is the best known of these, it being derived from lecithin. Microchemical methods are of the greatest importance, the most useful being those of Golgi and Nissl. Nissl's granules are an evidence of excessive activity, and are composed of nucleoproteid. The lecture concludes with a review of the various theories as to the nature of sleep and of the effects of anæsthetics on nerve cells. It is by no means certain that the two processes are similar.

Lecture III—The chemical pathology of hyperpyrexia. The author's experiments confirm the hypothesis that the physicochemical cause of death from hyperpyrexia is heat coagulation of cell-globulin. The temperature at which such coagulation is most readily produced is 47° C. Such a temperature is unknown in man. Some varieties of "cloudy swelling" are without doubt instances of coagulation necrosis.

The chemical pathology of general paralysis of the insane. The cerebrospinal fluid in general paralysis of the insane is much increased in amount, rich in proteid material, and contains choline. Injections of choline into animals produce a fall of blood pressure. Its other physiological effects, together with those of neurine, are carefully described.

Lecture IV—The chemistry of nerve degeneration. The tests for choline are two: 1. A chemical test—the obtaining of the characteristic octahedral crystals of the platinichloride from the alcoholic extract of the blood. 2. A physiological test—lowering of blood pressure produced by a saline solution of the residue of the alcoholic extract. Our chemical knowledge of the process of Wallerian degeneration is mainly limited to what occurs in lecithin, the main consistent of myelin. The products of disintegration of lecithin are four in number: 1. Choline, which is removed first. 2. Phosphoric acid. 3. Fatty acid. 4. Glycerin.

The Practical Points in the Treatment of Threatened Asphyxia. By Dr. R. L. Bowles.—The first of three lectures upon this subject; they will be abstracted upon their completion.

On the Agglutinating Property of Blood Serum in Cases of Plague. By Dr. L. Cairns, M. B.—In this article the author describes in detail his method of obtaining the agglutinating reaction of the blood serum in cases of plague, and gives tables showing the results obtained in a number of cases. The great difficulty is to obtain a good

emulsion of the plague bacilli. His method is to cover agar cultures of the bacillus with salt solution, rubbing the growth off into the salt solution with a sterile pipette. Both the microscopical and sedimentation methods were used, the latter yielding more reliable data. The possibilities of serum diagnosis are much greater in the severer forms of the disease. During the early stages the reaction is liable to be missed altogether, but the agglutinative power of the serum progressively increases up to the six or seventh week. Thereafter it declines, but may be present four or five months after the primary illness in well-marked cases. It is therefore during and subsequently to the stage of convalescence, when the possibility of a bacteriological diagnosis is more or less remote, that the diagnostic value of the reaction becomes most apparent.

Sugar-free Milk as a Food for Diabetics. By Dr. R. Hutchison.

The Value of Antitoxine in the Prevention of Diphtheria. By Dr. A. E. Porter.—The author gives an account of certain cases of diphtheria which have come under his notice. In twenty-four families in which one or more cases of diphtheria had occurred prophylactic injections of antitoxine were given to the other members of the families, with the result that not a single fresh case of the disease developed. The injections were refused in eight instances; among these were three subsequent cases of diphtheria. In another series of twenty-four families, one sixth of the individuals contracted diphtheria in the absence of prophylactic injections.

The prophylactic dose used was 500 units. It is important to bear in mind that where antitoxine is used as a prophylactic in persons who are actually harboring the diphtheria bacillus, although the clinical symptoms may be averted, the throats are none the less infective. Such persons are still liable to become foci of infection.

The Röntgen Rays in South Africa. By J. Hall-Edwards, L. R. C. P.—The author calls attention to the great value of the Röntgen rays in military surgery, and their great superiority to all forms of probing as a method of diagnosis. He gives a list of 193 cases which were radiographed, in 65 of which foreign bodies were found. By far the larger majority of bullets retained in the tissues are found between the ankle and abdomen.

A Note on a Case of Fibroma of the Small Omentum. By J. J. Clarke, M. B.

Meat Preparations; the Possibilities of Myosin Albumin. By Dr. F. W. F. Ross.—By myosin albumin the author means the mixed albumins of meat. These are omitted from all the so-called concentrations of meat, yet they form the most valuable of its constituents. Many fields of utility are open to such an albumin in food problems of the future, whether as emergency ration, general meat extract, or specific preparations for invalids or young persons. It yet remains to devise a suitable, cheap, and economical process for its extraction.

Aneurysm of the Subclavian and Axillary Arteries: Ligature of the Second Part of the Subclavian. By G. A. Wright, M. B., and P. R. Wrigley, M. R. C. S.

Indépendance médicale, June 5, 1901.

Pain of the Female Genitals.—M. Archambault says that, in women, pain of the genital organs is either spontaneous or provoked. It is spontaneous in all acute and in some chronic ailments, such as metritis, salpingitis, pelvic peritonitis, neoplasms, etc. Walking sometimes aggravates it, as does coitus. In coitus, the beginning is painful in elytritis or later from pressure against a prolapsed ovary in Douglas's cul-de-sac. Walking or sitting may be painful, depending upon the condition and the amount of congestion. The examination may cause pain, especially in inflammatory conditions. The author next considers some gynecological ailments and their relation to pain, stating in each case the character and situation.

Gonorrhœa of the Lacrymal Canal.—M. Morisot advises the use of oxygenated water for this condition. It has the advantages of complete antiseptis, of mechanical drying of the canal, and of not irritating the parts like the mineral salts.

Presse médicale, June 1, 1901.

Gynecology. By Professor S. Pozzi.—An opening lecture.

Syphilis and the Fusiform Bacillus.—M. H. Vincent draws attention to the fact that mucous patches of the mouth and throat may show, on microscopic examination, the presence of fusiform bacilli characteristic of angina, just as the colon bacillus and the streptococcus can thrive upon luetic ulcers. He urges, therefore, a careful clinical examination in all such cases as may be of doubtful origin.

Presse médicale, June 5, 1901.

The Typhoid Bacillus in Potable Water.—Professor A. Chantemesse describes in detail his method of searching for the typhoid bacillus in water. [This should be studied in the original.]

The Treatment of Non-valvular Asystole in the Aged.—M. E. Guihal recommends rest in bed, an absolute milk diet, and the administration of digitalis for five consecutive days. The dyspnoea, œdema, and oliguria will then rapidly disappear. Other symptoms are to be treated as they arise.

Wiener klinische Wochenschrift, May 30, 1901.

Iodoform Plugs.—Dr. Nikolaus Hackmann gives an historical résumé of the use of iodoform for the filling of cavities caused by disease. He says that iodoform is especially useful in heteroplastic operations upon bones, where cavities following caries and necrosis exist. The duration of healing is much shortened owing to the possibility of securing primary union, wound secretion is inhibited or absorbed, and the resulting scar does not become adherent to the bone. Hitherto no entirely satisfactory iodoform plug

has been used. He has used one of the following formula with great success in a number of cases:

R Iodoform. 450 or 900 grains;
Oil of sesame. 300 "
Spermaceti. 600 "

M.

Before injection, this mass must be liquefied.

Cocainization of the Spinal Cord.—Dr. Rudolf Trzebicky says that, in its present form, this method of anæsthesia is not capable of replacing inhalation narcosis, and is not suited to private practice, on account of the dangers of infection or of intoxication by cocaine. In well-equipped institutions it may be used in a purely scientific spirit. For laparotomies, it should be used only when the procedure does not extend higher than the umbilicus. Appendectomy and non-adherent herniæ are suited to this form of anæsthesia, but no abdominal operation should be undertaken under its influence in which prolapse of the intestines is a possible factor. Sepsis, endocarditis, and myocarditis are contraindications to its use.

Subcutaneous Rupture of the Ligamentum Patellæ. By Dr. F. Pendl.

Centralblatt für Chirurgie, May 25 and June 1, 1901.

Limits of Pupillary Reaction in Chloroform Narcosis.—Dr. Adolf Flockemann has observed that a patient under chloroform will show no reaction of the pupil which is thoroughly contracted when only one eyelid is opened. If, however, both eyelids are suddenly widely forced open, a still further contraction will be noted. He calls this symptom the "limit of pupillary reaction," and says that it constitutes the first sign of reaction from the chloroform. In other words, more of the anæsthetic may then be given.

Ether Narcosis.—Dr. Ernst Becker has had excellent results in 500 ether administrations, by the addition to the ether of twenty drops of pine oil. Even in the aged with bronchitis no untoward effects were noticed.

Medicinische Woche, May 28, 1901.

Gonorrhœa in Women.—By Professor R. Kossmann. (*Continued article.*)

Resorcin in Lupus Vulgaris.—Dr. Max Joseph reports most favorably upon the use of resorcin in lupus vulgaris. He uses this formula:

R Resorcin. 1 ounce;
Zinc oxide. 300 grains;
Starch. 300 "
Vaseline. to 3 ounces.

M.

The affected parts are smeared with this ointment twice daily, and are then covered with cotton and a bandage. After three days the bluish-red lupus areas become greyish-black. These little necrotic masses are washed off with cotton, and Burrow's solution (liquor aluminii acetatis) is employed for two or three days. Recurrences have not been observed so far. The same treatment is used in verrucous tuberculosis of the skin.

Silver as an Aseptic in Gynæcology. By Dr. Credé. (*Continued article.*)

Treatment of Uterine Myomata. By Dr. Karl Abel.—A review of the operative and non-operative methods of treatment.

Centralblatt für Gynäkologie, June 8, 1901.

Typhoid Bacilli in Purulent Ovarian Cysts.—Dr. Fritz Engelmann reports a case in which typhoid bacilli were found. The Widal reaction was positive and the cultural development proved the germs to be typhoid germs of typical character. He believes the infection to have taken place by the vascular route, the patient having had the disease. He cites the case as convincing proof of the pyogenic properties of the Eberth bacillus.

Case of Uterus Biforis Subseptus Unicornis. By Dr. L. Siebourg.

Puerperal Inversion of the Uterus. By Dr. L. Schumacher.

New Method of Treatment of Dysmenorrhœa.—Dr. T. Alexandroff excises a crescentic piece from the vaginal portion of the cervix in cases of dysmenorrhœa with ante flexion. This incision extends up to the internal os. The mucous membrane of the cervix is then incised and the muscular layer split diagonally on either side. The cut surfaces on each side are then sewed together with catgut, the sutures beginning just below the internal os, the muscular tissue on the right side being joined to the mucosa of the same side. The wound is closed above with a few deep sutures. By this method the cervical canal is quite increased in diameter. Clinically, the results in ten cases have been excellent, other operations having been performed on some of the patients with no result whatever.

Münchener medicinische Wochenschrift, June 4, 1901.

Mortality of Gall-stone Operations.—Professor Hans Kehr says that the open-wound treatment with tamponing has greatly diminished the mortality of this operation. The mortality is low when a timely operation is performed and rises with the complications of carcinoma and suppurative cholangiitis. While by surgery from ninety-five to ninety-eight per cent. of all cases are cured, by internal treatment only forty-one per cent. are cured.

Barlow's Disease and Infant Feeding. By Professor von Starck.

Spondylitis Typhosa. By Dr. A. Kühn.—A casuistic article.

Alcohol Distillation and Disinfection. By Dr. Georg Frank.—An historical article.

Vaporization of the Uterus. By Dr. Lachmann. (*Conclusion.*)

Causes and Treatment of Dysmenorrhœa. (*Conclusion.*)—Dr. A. Theilhaber says he firmly believes that the cause of menstrual colic lies in the contraction of the sphincter of the internal os. The treatment may be local and general. Under the latter head come limited use of spirituous liquors, coffee and tea, and restriction of masturbation. Massage, exercises, rest in bed, hot drinks, sitz baths, are all of use. Antipyrine is used by the author during the attack. The em-

ployment of cocaine in the nose is advised. Multiple incisions of the internal os are employed by the author to overcome its sphincteric action. Other measures for dilatation are also recommended.

Riforma medica, May 20, 1901.

The Surgical Treatment of Tubal Pregnancy with Hæmatocele. By Dr. Leonardo Cantelli.—The author reports five cases of extra-uterine pregnancy with more or less extensive hæmatoceles. In four of these cases the hæmorrhage was not extensive enough to demand immediate intervention, and the operation was, accordingly, delayed for a few days. In the fifth case there was an effusion of blood into the general peritoneal cavity, and the operation was performed immediately. The appendages were found to be diseased on the opposite side in one case, and they were removed. All the patients recovered without any complications.

May 21, 22, and 23, 1901.

Intestinal Obstruction Due to Movable Spleen. By Dr. Antonio Mori.—While movable kidneys, movable spleens, and displaced uteri are known to have been causes of obstruction of the intestines, medical literature contains but very few references to these classes of cases. The author therefore offers the account of one case which he had under his observation as a contribution to the question of movable spleen. The patient was a woman, aged twenty-nine years, who entered the hospital with grave symptoms of intestinal obstruction. She had suffered from malarial disease three years before, and since then her spleen had become gradually so enlarged that it presented a distinct tumor on the left side of the abdomen. A year ago she began to feel a bearing-down sensation as though there was a prolapse of the uterus. This sensation became more marked when she remained standing for a long time, and finally a tumor appeared in the hypogastric region. On examination the spleen was found to extend from the costal arch to the anterior superior spine of the ilium, and internally to the middle line of the abdomen. The organ was movable and responded readily to changes in the posture of the body. The diagnosis was, therefore, movable hypertrophic spleen. This examination had been made some time previously, when there was no intestinal obstruction, and, when the patient was admitted, the swollen abdomen and the distended intestines prevented satisfactory examination of the spleen. After the patient had received repeated doses of morphine, however, the author was able to feel a solid, soft, heavy body, situated transversely, occupying the entire hypogastric region. From the presence of the characteristic incisures, the mobility of the body, and the previous history, this was believed to be the spleen. The woman was placed in the genupectoral posture and the spleen so manipulated by the surgeon that it gradually returned to its original place. The patient felt relieved at once, the symptoms of in-

testinal obstruction, which had been desperate, vanished, and the patient was discharged, improved in every way, after a few days.

May 24, 1901.

An Unsuccessful Attempt at Treatment of Tetanus by Bacelli's Method. By Dr. Gilberto Salvioi.—Bacelli's method of treatment for tetanus consists of the subcutaneous injection of from 2 to 4 centigrammes of pure carbolic acid in solution, increasing the frequency of the injections until from 32 to 72 centigrammes are given in twenty-four hours. The theoretical deductions of Bacelli have been amply confirmed by clinical evidence, in the form of over forty cases treated in this manner by Zeri in Rome. It has been asserted that better results can be obtained with this method than by serum-therapy (Ascoli). Two or three unsuccessful cases have been recorded in literature and carbolic acid is far from being a specific in tetanus. In the present case the disease was present in its most severe form, and the patient was a weak and debilitated subject, so that the failure of the treatment cannot be wondered at. The period of incubation lasted for over a month, the symptoms were at first mild, but then became rapidly progressive and violent. The patient received forty-five injections of carbolic acid, equivalent to 1.81 grammes of phenol, in five days.

May 25 and 27, 1901.

Gubler's Syndrome, with Aphasia of Traumatic Origin. By Dr. Silvio Genta.—The patient was a boy, aged three years, who had fallen, while playing with a wooden stick which was sharpened at one end, in such a manner that the sharp end entered his mouth and penetrated through the soft palate. Attempts at extracting this piece of wood, which were finally successful, showed that it had penetrated for some distance "into the bone," as the child's parents stated. A profuse hæmorrhage followed, but this ceased after a while, and the child, after speaking and moving in a normal fashion, fell asleep. When he awoke, his face was distorted and he could neither speak nor move his feet. A physician who was called found that the boy had a right hemiplegia with a complete paralysis of the facial of the left side. On exploring the wound it was found that the wooden splinter must have penetrated the cranial base between the yet incompletely ossified portion of the occipital and sphenoid bones. The paralysis came on late and was probably due to a hæmorrhage within the cranium. The lesion was probably located in the postero-inferior portion of the pons varolii on its left side, and the paralysis was probably due to hæmorrhage from some artery branching off from the basilar which supplies the pons. Under electrical treatment the child gradually and slowly recovered both speech and motion, thus showing that the hæmorrhage had become absorbed.

May 28, 29, 30, and 31, and June 1, 1901.

Some Observations on Cutaneous and Tendi-

nous Reflexes. By Dr. Ettore Tedeschi.—The author's conclusions, based on the careful observation of a number of cases, are as follows: 1. In diseases accompanied by lesions of the pyramidal tracts there is generally exaggeration of the tendinous reflexes and depression of the cutaneous reflexes. 2. In some forms of chorea and (motor) epilepsy, particularly after the attacks, the antagonism between the cutaneous and the tendinous reflexes is quite frequently marked. 3. In distinguishing between functional and organic nervous affections, the examination of the cutaneous reflexes is of the greatest value. 4. Babinski's sign is an almost constant accompaniment of lesions of the pyramidal tract. In the production of this phenomenon, however, the state of the flexor and extensor muscles of the fingers plays a prominent part.

June 5, 1901.

A Case of Diplococcus Infection. By Dr. Carlo Pagani.—In this case there was a diplococcic angina, lobar pneumonia, and empyema, and, in addition, a general infection with Fraenkel's diplococcus, attested by the presence of the germ in the blood as well as by the clinical signs. The tonsils were probably the primary seat of the infection. The patient recovered after a protracted illness.

Vratch, May 5 (May 17, New Style), 1901.

More Arguments on the Question of Special Congresses of Physicians. By Dr. D. N. Jbankoff.—The author takes the view that "special congresses," *i. e.*, meetings of specialists, take away from the value of general medical meetings, particularly when they coincide with the latter in date. The article was inspired by the fact that recently there were in Russia three medical congresses within the same week, the Congress of Russian Surgeons, the Pirogoff Congress, and the Congress of Russian Physicians and Naturalists.

On Genu Recurvatum. By Dr. A. A. Vorobieff.—The author reports two cases of genu recurvatum in which there were no signs of pre-existing rickets, and five cases of this deformity in which there was a more typical history. (*To be continued.*)

On the Influence of Sodium Chloride in the Results of Organic Analyses according to Kubel's Method. By Dr. N. J. Schmidt.—The author emphasizes the inaccuracy of Kubel's method, a process which is often employed in sanitary chemistry. In the method in question potassium permanganate is decomposed by the organic substances in the water to be analyzed. The author has found, however, that salt also contributed to the decomposition of the permanganate. In testing the ground water of one of the islands in the delta of the Volga, for example, he was surprised at the great amount of potassium permanganate required to oxidize the organic matter present, and, on further investigation, found that the water which was examined was very rich in so-

dium chloride. He found that this was due to the mutual reaction between the sodium chloride, the sulphuric acid, and the potassium permanganate. The method of Schultze has the advantage in that the presence of salt does not affect the result of the reaction for organic materials in water. According to this method, the fluid to be tested is first rendered alkaline, thus counteracting the effect of salt on the oxidizable substances.

Haffkine's Lymph and other Remedies against the Plague which Produce Active Immunity. By Dr. A. F. Vigur (*concluded*).—The author sums up his findings as to the comparative value of Haffkine's antibubonic serum as follows: The faults of Haffkine's serum are: It confers immunity upon the majority, but not upon all the persons inoculated. No inoculated individual can regard himself as insured against infection. The immunity conferred by it depends to a certain extent upon the individual, so that one cannot predict the duration or the intensity of the immunity in any given instance. It cannot be estimated according to the quantity of fluid injected. Haffkine's lymph deteriorates with age, but in India it has been kept in good condition for at least four months. There are no recorded observations as to the reaction which takes place in persons who die in spite of the inoculation. The virtues of Haffkine's lymph are as follows: It has diminished the mortality among the victims of plague to from one tenth to one fifteenth of the former figures. It can inhibit or even prevent an epidemic of plague. It has been employed in India on human beings in large numbers. Any substance that is destined to replace it must prove efficient in a similar number of cases. It is not difficult to prepare, and its preparation requires little and inexpensive apparatus.

The faults of the "other substances used against the plague" are: They have scarcely any statistics to substantiate their value as prophylactics and as curative agents in man. Their preparation is more difficult and more complicated than that of Haffkine's serum. The virtues of these substances, however, are as follows: They (the "killed" agar cultures of the German commission, and the serum of Lustig and Galeotti) give highly gratifying results in the laboratory, and the proportion of the active principle in the substances in question may be determined accurately by weight, especially in the case of Lustig and Galeotti's serum. The author, in conclusion, calls attention to two facts which developed in the present investigation: First, the difference in the reaction to the serum of Haffkine in man and in monkeys, so that it is necessary to give monkeys a larger amount of serum than has been heretofore the custom in order to immunize them, and, second, the fact that the substance of Lustig and Galeotti, when introduced subcutaneously in quantities larger than those used for immunization, produces gangrene of the tissues at the site of injection.

A New Apparatus devised by Engineer Jagn for Obtaining a Continuous Stream of Boiled and Cooled Water. By S. J. Liubimoff.

Proceedings of Societies.

AMERICAN MEDICAL ASSOCIATION.

Fifty-second Annual Meeting, Held in St. Paul, on Tuesday, Wednesday, Thursday, and Friday, June 4, 5, 6, and 7, 1901.

Section in Materia Medica, Pharmacy, and Therapeutics.

(Concluded from Vol. lxxiii., page 1011.)

A Report on Medicines Used by One Hundred St. Louis Physicians.—By Dr. H. M. Whelpley, of St. Louis. Read by title.

A Plea for More Uniformity and Strength in Our Armamentarium. By Dr. C. F. Wohrer, of Fort Madison.—The author pointed out the inconsistency between the laborious and exhaustive methods in use for making physical examinations in order to establish a correct diagnosis, and the carelessness of physicians generally with regard to the filling of prescriptions. The paper concluded with a plea for standardization. Congress should be memorialized to give us laws to protect the consumer of drugs, similar to those which protect the butter-eater from oleomargarin.

Standardization of Crude Drugs and Galenical Preparations was the title of a paper read by Dr. A. B. Lyons, of Detroit, a member of the Committee on Revising the Pharmacopœia. Vegetable drugs, he said, varied greatly in medicinal activity. Scientific therapeutics required that these preparations should be brought to some uniform standard of strength. Methods in use varied in their results, but an imperfect method was better than none, and improvement would follow. The *Pharmacopœia* of 1890 furnished standards and assay processes for opium, cinchona bark and nux vomica. In the revision of 1900 this list would be greatly extended, and the assay processes rendered more precise. Standardization by physiological experiment had not been adopted. The physician was vitally interested in the adoption of standards which would give him preparations that were identical therapeutically with those he had been accustomed to, when these were prepared from an average sample of good drug.

Dr. Hallberg, of Chicago, while in sympathy with the objects sought to be attained, the greater accuracy of dosage and certainty of result, by the standardization of remedies, yet recognized difficulties in the way of applying this principle to all remedies in the present stage of our knowledge. The work was still in progress. Whether it could be applied to every drug containing an alkaloid or glucoside of active character was a question. For instance, to aconite preparations, for which no perfectly satisfactory process of determining the proportion of active principle, or the principle itself, had yet been determined. The same remark applied to digitalis and other drugs. It was a difficult problem to attempt to fix any definite value to these drugs in the *Pharmacopœia*, that would be of practical application. The principle of standardization could therefore be applied in only a limited way at present.

Dr. F. J. Walling, of Chicago, called attention to

the neglect of the *Pharmacopœia* by physicians, and urged that it be used as a text-book in the medical schools. He thought that medical students were not sufficiently instructed in pharmacy, and graduated without personal acquaintance with drugs and medicinal preparations. If the *Pharmacopœia* prescribed certain tests and a standard quality of remedies, he knew that the leading pharmacists would be able to make the tests themselves.

Dr. Willis, of Kansas City, emphasized the need of better instruction of students in pharmacy and materia medica.

Dr. Dickerson, of St. Louis, said that the study of materia medica, instead of being discontinued early, should continue through the whole of the four years' medical course. He thought that the new revision of the *Pharmacopœia* should further extend the principle of standardization.

The Chairman said that standardization was desirable of attainment so soon as possible, but at present it could not be carried very far. He urged that the *Pharmacopœia* should be made of more interest to physicians by containing information about new remedies, whether tested or not.

The members of the American Pharmaceutical Association sent as delegates to this Section were received, and on motion made members for this meeting.

Indication for and Utility of Altitude Treatment of Pulmonary Tuberculosis was the title of a communication by Dr. S. E. Solly. He said that the subject had already been discussed thoroughly, but the recent appearance of a number of papers upon the home treatment of tuberculosis of the lungs, made it important to recall the attention of the profession to the great advantages of great altitudes for suitable cases on account of the diminished air density, the prevalence of sunshine, and the freedom from dust and moisture. The climate of Colorado Springs corresponded with that of the greater altitudes of southern Europe, such as Davos Platz. Some cases did better at a lesser altitude, especially those where the tuberculous process was active, where there was a marked tendency to inflammatory reaction, cases in which there was an excess of uric acid with faulty metabolism, and cases of recent hæmorrhage. The fact that a patient had suffered with hæmorrhage should not keep him from Colorado, but it would be better for him to remain for a time in a sanitarium or at a lesser altitude, if the hæmorrhage was recent. Social condition must be taken into consideration, the rich could supply themselves with many comforts that the poor must go without. Then the individual tastes of the sick man must be consulted. If he disliked travel and was much attached to his own home surroundings, he should not be sent away from them to be made miserable by their absence. Incipient cases, especially in young persons, were generally greatly benefited by the purity and dryness of the air and the abundance of sunlight of great altitudes.

Southern California as a Resort for Consumptives was the subject of a communication by Dr. Norman Bridge, of Los Angeles, Cal. He said that, in speaking of the climate of Southern California, a distinction was to be drawn between that of the coast and that of 25 or 30 miles from the coast among the foothills, the latter being much drier and at a greater al-

titude. Some consumptives did well immediately upon the sea coast and even on Catalina island, out at sea, in spite of the fact that moist climates were not thought best for this class of cases. Nevertheless, many were cured at these places. He thought the climate of the foot hills preferable, and dwelt upon the advantages of localities in the neighborhood of Pasadena, especially of Strawberry Valley, at an altitude of 5,000 ft.

Nineteen Years' Experience with Creosote in Tuberculosis was the title of a paper by Dr. A. Burroughs, of Asheville, N. C. The author regarded creosote as specific in the treatment of pulmonary tuberculosis, and administered it in large dose by the stomach and also by inhalation, combined with some bland oil.

Specific Therapeutics in Pulmonary Tuberculosis. By Dr. Arnold C. Klebs, of Chicago.—The author reviewed the methods employed in manufacturing the old and new tuberculins, and dwelt upon the importance of systematic treatment, with regulation of diet and control of the patient, afforded by the sanitarian regime.

The Proper Management of the Tuberculous Lung. By Dr. Norman Bridge, of Los Angeles, Cal.—The author advocated rest for the diseased structures. He spoke highly of intrapleural injection of nitrogen gas, and when this measure was declined, of the employment of adhesive straps, two inches in width, encircling the affected side. The relief to cough and pain was marked after strapping the chest.

Discussion.—Dr. De Lancey Rochester, of Buffalo, approved of the remarks of the lecturers on the value of climatic treatment in consumption, and said that all the patients he had sent to Colorado had improved. He had used creosote with marked benefit, and referred to five cases that had been cured that he had treated with this drug. He also approved of bandaging the chest to keep the lung at rest as much as possible.

Dr. Benney said that when the straps were removed from the chest they should not be taken off all at once, but after taking one off a day or two should be allowed to elapse before taking off another. He mentioned a case of a lady who developed a pneumothorax from coughing shortly after removal of the straps.

Dr. Miner, of Asheville, thought that cases should be distinguished; many patients would not be benefited by putting the lung at rest or strapping the chest. He also took exception to the remarks made with regard to the remarkable curative effects of creosote. Drugs had little or no effect upon the disease; the great remedy was pure air, and climate was only an incidental factor.

Dr. More, of Nebraska, said that drugs and specific treatment were of no benefit; the best remedies were pure, fresh air and strychnine in small doses as a tonic.

Dr. Halberg criticised the creosote treatment, and denied that it had special curative effect.

The discussion was closed by Dr. Solly, Dr. Klebs, and Dr. Bridge.

The Treatment of Lobar Pneumonia. By Dr. De Lancey Rochester, of Buffalo.

The Abortion Treatment of Pneumonia, a Plea for the Use of Cardiac Depressants in the Treatment of

the Congestion Stage of Pneumonia. By Dr. W. L. Dickerson, of St. Louis.

Dr. Rochester's paper insisted upon the necessity of looking upon lobar pneumonia as a toxæmia, the result of infection by the pneumococcus, the disease passing through regular well-marked stages and ending by crisis. The chief cause of death was failure of the circulation through occurrence of heart degeneration, itself due to toxæmia, and the increased work thrown upon the organ; or the poison might principally attack the brain, the kidneys, or the gastro-intestinal tract. The first aim of the treatment was to get rid of the toxins by acting upon the excretions. An initial dose of calomel should be followed by a saline laxative, and this should be repeated when regarded as necessary. The importance of an eliminating and supporting treatment was insisted on, and early use of strychnine. Digitalis early in the disease was condemned, but it might be useful in small doses later, especially after bleeding (by wet cups or venesection). Oxygen inhalations, normal salt solution hypodermically, were approved of. Anti-pneumococcic serum had not yet been supplied of reliable character, but when produced of proper quality would probably be of as much use as antitoxine in diphtheria.

The second paper called attention to the great value of small doses (from one to two grains) of tincture of veratrum viride given every two hours, during the congestive stage of pneumonia, which, the reader asserted, produced in many cases a great abbreviation of the course of the disease and rendered the symptoms milder.

In the general discussion which followed, decided scepticism was expressed as to the power of veratrum viride to shorten the course of pneumonia, and the majority declared that it was really out of place, and that all cardiac depressants were contra-indicated. The treatment outlined in the first paper was generally approved.

The Influence of Certain Common Remedies upon Gastric Functions. By Dr. Boardman Reed, of Philadelphia.—The author showed by the results of experiments made upon five healthy young men that the administration of small doses of tincture of nuxvomica and of hydrochloric acid was followed by injurious consequences in many cases. He concluded that these commonly used agents should not be given indiscriminately, and that they were really only suited to a small class of cases. They should not be prescribed unless examination of the stomach secretions had shown that hyperchlorhydria did not exist.

The Treatment of Gastric Ulcer.—By Dr. Gustav Fütterer, of Chicago. The author had come to the conclusion that the prognosis of gastric ulcer was not so favorable as was generally supposed. The lesion did not heal for a long time, and in many cases eventually became carcinomatous. He advocated rest in bed and the administration of the juices expressed from five pounds of beef to be given each day. The administration of small doses of morphine quieted the motions of the stomach, relieved pain, and hastened creatrization.

The Treatment of Gastric Hyperæsthesia.—In this paper Dr. Charles G. Stockton, of Buffalo, directed attention to a condition of exalted sensibility of the nerves of the stomach, causing uneasiness and

distress, but less severe than gastralgia. These cases were often treated for dyspepsia, which was not present. They could be diagnosticated from hyperchlorhydria only after chemical examination of the stomach contents. On account of the hyperæsthesia, increase of distress occurred during digestion, and, in this account patients ate sparingly and therefore were apt to be undernourished. Ulcer, erosions, and food-stagnations must be excluded. The condition of gastropnoia was a frequent cause of hyperæsthesia. In treatment milk and easily digested foods, meat-juice, eggs, were given for diet, with rest after each meal. Electricity was of signal service (either galvanic or faradic) with the negative pole in the stomach. Hydrotherapy, and cold to the spinal column or the Scotch douche could hardly be dispensed with. The regular chemical examination of the gastric secretions should be kept up in order to guide the diet intelligently. The patient often needed the treatment that was appropriate for neurasthenia.

Discussion was opened by Dr. James B. Herrick, of Chicago, who spoke of the great importance of the treatment of gastric ulcer, which was too often underestimated, and he insisted upon the value of rest and rectal feeding.

Dr. Tompkins, of West Virginia, protested against the advice to subject cases of pyloric stenosis to early surgical treatment, which he regarded as a crime. He referred to a case which he had sent to a noted specialist for examination, and he gave the opinion that it was a case of cancer of the stomach. The patient returned home and afterward recovered and had been well ever since, and that was eleven years ago. The discussion was continued by Dr. Osborne, of New Haven; Dr. Heinrich Stern, of New York; Dr. McCoy, of Duluth; Dr. Westbrook, of Minneapolis; Dr. McCrae, of Baltimore, and closed by the readers of the papers. The general discussion was strongly in support of the position taken by the authors of the papers.

The following papers were read in a Symposium on Serum and Organotherapy with the Section in the Practice of Medicine:

The Theory and Practice of Organotherapy.—In the absence of Dr. S. Solis Cohen an abstract of his paper on this subject was read by the secretary.

Acromegaly Treated with Pituitary Body was the title of a paper by Dr. Sydney Kuh, of Chicago, in which he dwelt upon the close association clinically between acromegaly and lesions existing in the pituitary body. The fact was significant that in nearly all acute cases of acromegaly a sarcoma had been found affecting the hypophysis. He gave clinical reports of these cases of acromegaly, in which he ordered powdered pituitary bodies, in doses of five grains three times a day. Improvement, or a non-progressive condition of the malady was observed, with decided relief from headache, in two of the cases; the other one derived little, if any, benefit. These results, he said, warranted further observation in this direction.

The Treatment of Graves's Disease with Thymus Extract. By Dr. John M. Dodson, of Chicago. The author reported favorable results from this remedy.

In the *discussion* which was opened by Dr. O. F. Osborne, of New Haven, much interest was shown in the possibilities of organotherapy. Dr. Board-

man Reed called attention to the claims made for suprarenal extract as a cardiac tonic, which should be looked into. Dr. Frank Woodbury pointed out the fact that the use of fresh beef juice for gastric ulcer was a form of organotherapy. Dr. Victor C. Vaughan, of Ann Arbor, referred to the great value of the work that had been done on the thyroid, and the marvelous results from its use in the treatment of cretinism. The recent investigations into the composition of the suprarenal gland and its physiological effects were highly important and significant. Dr. Heinrich Stern took exception to a statement that suprarenal extract had been of great use in the treatment of diabetes mellitus. He had used *adrenaline* without the slightest effect upon the excretion of sugar, or the occurrence of diacetic acid, or acetone in the urine.

The Pharmacology of the Suprarenal Gland and a Method of Assaying its Products.—By Dr. E. M. Houghton, of Detroit. The author gave the results of physiological work which he had recently done. He also showed *kymographic* tracings of the pulse, demonstrating the positive effect upon the heart of *adrenaline*.

The Active Principle of Suprarenal Glands.—By Dr. Jokichi Takamini, of New York. The author reviewed the history of the introduction of suprarenal glands into medicine and referred to previous attempts to isolate the active constituent. He also presented a specimen of the product which he had discovered and which he had named "*adrenaline*." It was a white crystalline powder, consisting of prismatic, rhomboid and other forms of small crystals. The mode of preparation was explained, and various color tests were made, which showed that it was basic, but not alkaloidal, in character. Finally, the physiological activity and therapeutic uses were reviewed.

Discussion on these papers was opened by Dr. Vaughan. Dr. Stein inquired if *adrenaline* was cumulative in its action, and also how long did the effect of a single dose continue? Dr. Boardman Reed inquired with regard to the poisonous action. Most new remedies were introduced with the recommendation that they were not poisonous, but their use was frequently afterward followed by accidents. He thought that physiological experiments should be made to determine what the effects would be after the administration of the remedy over a considerable length of time. Dr. Osborne asked as to its absorption by the stomach, and whether its hypodermic use caused any irritation or not? Dr. Vaughan replied that he could not positively say whether or not any ill effects might ultimately be caused from suprarenal extract. But he had given it in one case for three months, then twice a day, without any bad results in a case of hæmorrhages. It would be necessary for the physiologists to take up this matter of toxicity and decide it, after prolonged administration to animals.

Dr. Dodson said that many of our most powerful agents were given for long periods without organic injury, such as nitroglycerine and strychnine. The discussion was closed by the readers of the papers.

The Nominating Committee reported the candidates for next year: Dr. George F. Butler, of Alma, Mich., for chairman; Dr. C. S. N. Hallberg, of Chicago, for secretary.

On motion these gentlemen were duly elected.

Section on Obstetrics and Diseases of Women.

The Chairman's Address.—By Dr. Henry P. Newman, of Chicago.—In a brief review of the year's progress in gynecology and obstetrics, the chairman called attention to some of the most noteworthy events only.

Of anæsthesia by lumbar puncture, he said that testimony as to its usefulness was of the most conflicting nature. The procedure originated in theory with Dr. Leonard Corning, of New York; was first taken up in practice by Bier, of Germany, and now found its warmest supporter in Guffier, of France, although strongly opposed by his countryman, Reclus. Our own writers seemed to agree in preferring general anæsthesia by chloroform or ether, and would limit the use of spinal cocaine to the few cases where the general anæsthetic was absolutely contra-indicated.

The reputed discovery by Gaylord of the protozoic parasite of cancer in the circulation of patients dying of this disease or exhibiting the cancerous cachexia, should stimulate us to greater zeal in palliative efforts and in the endeavor to recognize and eliminate the local nidus before the period of circulatory contamination. If further research established the truth of Gaylord's assumption, the necessity for early diagnosis would become even greater than at present. Only the early recognition of suggestive symptoms by the patient and of the first pathological changes by the physician could give hope.

The removal of the whole lymphatic system of the pelvis, as advocated by some, was said by others to be impossible, and partial removal had no object. The operation of ovarian grafting had grown in favor with the best authorities, and careful experiment had demonstrated its value.

It had been established that transplantation of the ovary was possible by auto-grafting and hetero-grafting, and would be successful if properly performed, and if the ovary was aseptic; the transplanted ovary would continue to functionate in its new situation, and pregnancy and childbirth were possible after the operation.

Mention was made of the work of Voinot, of Nancy, who had reported some interesting studies of the modifications of the tubal epithelium during the life of the woman. Further experimental and laboratory work mentioned was that by Gersung and Halban, with injections of paraffin for incontinence of urine due to traumatism, and cystocele, and by Moisseney on the permeability of the amnion.

Cæsarean section for placenta prævia and for eclampsia was being advocated in some quarters. The conservative Cæsarean section became more popular as perfection of technique and asepsis lessened its dangers in comparison with other elective operations which endangered the child. According to Cestan and Peyran, to operate quickly, simply, and cleanly, was the most certain method of preventing hæmorrhage, shock, and infection—the three dangers possible to Cæsarean section. The disappearance of fœticide as a therapeutic measure was predicted.

For the relief of the nervous symptoms and debility in women suffering from lax abdominal walls and the splanchnoptosis, many devices had

been proposed. There was an awakened interest in the theories of Glénard and an attempt to remedy the condition called by his name. Gymnastic exercises, abdominal supports, and suturing of the relaxed muscles had been proposed.

Much had been done to improve the treatment of uterine fibroids. The employment of saline solutions by endemic or colonic injections in bleeding fibroids or in shock incident to the radical operation for their removal was a distinct advantage. There was necessity for improved methods of hæmostasis, and for conservative surgical intervention in view of the dangers of the exsanguinated condition due to hæmorrhages at or near the menopause. Waiting for bleeding fibroids to atrophy and disappear at the climacteric was hazardous, the hæmorrhages often producing such anæmic conditions as to imperil the after-health of the patient.

The address closed with a reference to the advancement in obstetrical science, urging more consideration for the obstetrical specialty as such, and with some observations upon the rightful place of gynecology in medicine and in surgery. Nothing could be more disastrous to the worth and dignity of the specialty than to allow it to be considered as merely "one of the surgical specialties." Surgery was a very brilliant department of the specialty, but relatively unimportant when compared with the wider possibilities of gynecic science. Only gynecology could rightly determine the importance of the developmental period and the relations between education, social habit, and environment, and the diseases from which so many women suffered. It was in itself too broad a specialty to be merged into any other, and along the same lines it must grow, perfecting its knowledge of pathology and ætiology and its curative methods, and working to eliminate from modern life the causes of disease in women.

Electrothermic Hæmostasis in Abdominal and Pelvic Surgery.—Dr. A. J. Downes, of Philadelphia, defined the ideal hæmostasis as that method by which the blood vessels were occluded, not only certainly, but so that no complications resulted, either immediately or remotely. No usual method fulfilled these indications. He called attention to Keith's method of hæmostasis by heat and pressure, and gave Skene credit for originating the more exact application of the principles involved and the introduction of electrothermic hæmostatic instruments. He called attention to many imperfections in Skene's instruments and exhibited those originated by himself.

Dr. Downes's instruments gave greater pressure, a more rapidly heating medium, and had the poles emerging from the compressing blade. It was easily possible to dispense with all ligatures by their use. He reported all varieties of abdominal operations without ligature, including hysterectomies, ovarian cysts, ovarian abscesses, tubo-ovarian abscesses, salpingo-phorectomies and eleven appendectomies. The ideal indication for its use in appendectomy was in non-ruptured cases.

The essential requirements in electrothermic hæmostasis were, first, the requisite amount of pressure between the blades, for without pres-

sure, even more than enough heat would not control bleeding. Secondly, the proper degree of heat, not under 212° F.; and, thirdly, a measurable source of electricity. He condemned operating without a meter in the circuit, for only with it was exactness possible.

(*To be continued.*)

Section in Diseases of Children.

(*Continued from Vol. lxxiii., page 1156.*)

Gonorrhœa in Boys.—By Dr. A. L. Wolbarst. The frequency of this disease in young boys has of late attracted some attention, the author having seen twenty-two cases in subjects ranging from eighteen months to twelve years of age. In order to be accurate, the secretions were stained by the Gram method and the specific Neisser gonococcus was demonstrated in every case. The clinical symptoms were also carefully noted and, with the microscopic findings, left little room for doubt in the diagnosis.

The history of these cases has been commonly attributed to infected water closets, soiled linen, etc., but a very careful inquiry into the prevailing social conditions leads to the belief that the cases under observation were infected in the usual way. This is especially true in the districts where the poor are crowded together in tenement houses, where the children are alive to the enjoyments of sexual gratification at an extremely early age, and where the dark cellars, the waterclosets, and the roofs, afford splendid opportunities first for experiment and later, for enjoyment. It is not at all uncommon to learn that boys and girls who have not yet reached the age of puberty indulge in sexual gratification. In some of the cases there was no history of this sort, but the infection was traced to the child sleeping in the same bed with some one admittedly suffering with gonorrhœa. A number of cases were traceable to pæderasty, which is not uncommon among those overstimulated children.

The period of incubation, the general characteristics, and the history of the disease, were not different from those manifestations in the adult. The incubation from one to seven days, the pain and burning sensations, frequent desire to micturate, and other symptoms, were as seen in the usual adult gonorrhœic. The discharge was usually profuse, but the pain seemed out of proportion to the clinical picture presented. This hypersensitiveness was, however, coincident with contracted prepuce or meatus, which served to dam back the secretions and, by preventing proper drainage of the urethral canal, caused retention of inflammatory products. Other children, however, suffered very little pain.

The author speaks in this connection of the great value and importance of circumcision. Every case of gonorrhœal urethritis, he says, offers a most eloquent plea for the circumcision of all male infants, when the possibility of future gonorrhœal infection is thought of.

Complications occur in young boys similar to those of adult patients, after the disease has lasted several days. Posterior urethritis, prostatitis, and epididymitis, have occurred in these cases. There is a total inability to pass urine in one case. The disease also lasts from four to six weeks, as in the adult, though the prognosis as to complete recovery seems usually

to be better in children. There does not seem to be that tendency to the chronic form and to strictures, and slight traces are left of the disease after recovery.

Prophylaxis consists in the education of the people to the dangers of the disease, and care to see that those suffering from it do not allow children to sleep with them or come in contact with the discharges in any way. Stringent laws should also be passed for the protection of children. Cleanliness is a primary requisite in treatment, and, if thoroughly carried out, will prevent some of the painful complications. The prepuce and glans must be frequently bathed with mild antiseptic solutions in warm water. Injections of protargol for anterior urethritis, irrigations of potassium permanganate, one to six thousand solution, or of Thiersch's solution, will be of decided benefit. This may be accomplished with a very fine catheter.

Alkaline mixtures containing hyoscyamus, oil of wintergreen in doses of five or ten minims, in milk or water will be found valuable. Complications should receive appropriate treatment when they arise. For epididymitis applications of a ten-per-cent guaiacol ointment is recommended. Gonorrhœa bags must be used so as to collect the discharge and prevent the possibility of it being conveyed to the eyes of the little patient.

Discussion.—Dr. Edwin Rosenthal said that gonorrhœa was seen so frequently that he began to look for it as an epidemic. Where the gonococcus was present, we could positively determine the existence of the disease and often place the guilt of the crime where it occurred, in the young child. The overcrowding in tenement districts was responsible for perhaps the most of it in the poor.

Dr. Clinton Scott did not think that the condition was confined to tenement houses. There was a great need for education; even among men and women of the better classes. When people came to understand that there were not only vicious men, but also vicious women, these questions would be looked at in a different light than they were now. For the dissemination of gonorrhœa in young boys, servant girls and maids who forced connection with the boy in the absence of his parents and gave him his first lesson in vice, were largely responsible. Formerly it was not thought unsafe, when sleeping accommodations were limited by reason of visitors or for other causes, to allow the young boy of ten or twelve years of age to sleep with the maid, often with the result that he innocent boy had been infected with this vicious disease.

Dr. G. F. Wahrer referred to the fact that it was not such an unusual matter for children under the age of puberty to indulge in sexual gratification. A case had come under his notice in which a boy of thirteen was invited by one of his companions to meet a certain girl, sixteen years of age, at a barn where he was shown how by his companion and was then given his first lesson. When the matter was traced up the girl confessed with unblushing effrontery that she had been engaged at this sort of thing for a long time, and spoke of the special enjoyment it was to instruct the new subject.

Dr. A. C. Cotton referred to the astonishing ignorance of the laity, even well-informed people, upon this subject. The number of alleged assaults upon little girls was remarkable, and it was astonishing

how many causes of gonorrhœa occurred in small children. One source of this in the cases of the little girls was where some brutal man, while he did not lacerate or cause an injury to the little child, seemed to get a peculiar gratification on the contact in rubbing his organ against the little one's thighs. The girl, of course, developed gonorrhœa. He had seen so many cases that he believed that sort of thing was not so rare. Copulation among children before the age of puberty oftentimes occurred. In the speaker's dispensary service there was a string of eighteen or twenty little girls who, he found on investigation, had come from the same neighborhood. They were of a variety of nationalities. On tracing the matter up it was found that a ten-year-old boy, with one of those mature and vicious faces and, of course, with complete ignorance of what he was doing, had been infecting these eighteen or twenty little girls. Mothers and fathers, especially the latter, with an old gleet, not uncommonly infected the innocent child by allowing it to use the same chamber that they had previously used themselves.

Dr. Cook thought that the time had arrived when the public should be educated on these matters, and when they should all know the life history of the gonococcus outside the human body. Prophylaxis and a thorough knowledge of the dangers of the disease should be taught thoroughly to every patient who came for treatment. Many persons spread the disease by innocently laboring under the delusion that they were cured themselves when, as a matter of fact, latent germs existed within their own bodies.

(To be continued.)

Letters to the Editor.

THE ELIMINATION OF CYTOTOXINES.

KENNETT SQUARE, PA., June 7, 1901.

To the Editor of the New York Medical Journal:

Sir: Some months ago, under the heading Making Air Work, there appeared in one of the magazines a timely article upon liquid air; so I think an interesting and instructive contribution to medical science might be headed Making Cells Work.

The suggestion is prompted by your reference (*N. Y. Med. Jour.*, June 1st, p. 962) to the recent investigations of Professor Metchnikoff, of the Pasteur Institute, relating to cytotoxines, the name applied to poisons produced by the cellular structures of the body, cell poisons. These discoveries are especially interesting to me, first, because of the persistent efforts which I have made to establish the physiological basis of cellular therapeutics, and, second, because they explain away the only apparent obstacle to the clinical adaptation of my contentions on this subject. In an article published in 1898 I referred to abnormal conditions of the system arising from derangements of digestion with retention of waste products and evidences of poisoning as a result of "reversion" in the cells. Even now I am not so sure but that cytotoxines do actually arise from cell reversion, meaning by that a form of retrograde metamorphosis.

Perhaps comparatively few physicians realize how well the profession is prepared to accept this

modern theory of cell poisons, and next in logical sequence, in my judgment, is the question of cell medication. By way of illustration, let me cite the quotation from the teachings of Vidal (*N. Y. Med. Jour.*, May 4th, p. 782), as follows: "The so-called antitoxic serum acts neither upon the germ nor upon the toxine developed by it, but upon the cells of the organism which carry on the fight against the bacterial enemy. The serum of immunized animals has not therefore a specific action, but a tonic influence which is exerted generally throughout the body."

I should like to put my own interpretation upon Vidal's statement as follows: The cellular structures resist bacterial invasion because of the presence in the body of so-called "defensive proteids," of which nuclein is the chief, a non-toxic antiseptic. When produced by the action of multinuclear white blood-corpuscles in a normal condition, this substance is appropriated as at least a part of the pabulum of protoplasm, enabling it with the assistance of its contained oxygen to functionate; that is, to take up and appropriate nutrients and eliminate waste products, including cytotoxines. The effect of serum treatment, therefore, is merely a restoration of function; practically, there is but slight difference between serum medication and nuclein medication. Serum treatment depends for its success upon the presence of nuclein produced in the animal inoculated with a specific irritant, while nuclein is a normal product artificially produced (extracted from the healthy structures of the animal body).

In the same number, p. 779, you have an abstract of a paper by Dr. T. D. Crothers, on auto-intoxication, in which he contends, and with reason, that, "alcohol in any form, taken into the body as a beverage is not only a poison, but produces other poisons, and associated with other substances, may develop toxins. . . . It increases the waste products of the body and diminishes the power of elimination. . . . Where disturbance and derangements of the nutrient and functional activities of the body [cellular structures] are associated with the use of alcohol, their transient character and disappearance by the removal of spirits suggests the causes. . . . The treatment of all such cases, in which alcohol is used in any form, should be by antiseptic and eliminative measures, and the supposition should always include the possibility of poison by chemical products formed in the body."

To show that Dr. Crothers is scarcely warranted in making alcohol responsible in general for the production of cellular poisons, and to give this communication a practical turn, let us take as illustrations of defective metabolism debility with impairment of the muscular tonus from lack of exercise; convalescence from acute diseases, when it is said the patient fails to "respond" to the proper nutrient stimulus; or, we may take a case of pneumonia, when medication is apparently useless. In these instances the intelligent physician realizes the serious obstacles with which he has to contend. If the patient possesses sufficient latent vitality or, to be more definite, if the cells can be made to work, im-

provement will follow. The cells are sometimes unable to work, however, owing to exhaustion from long-continued lack of nutritive pabulum, in which case the normal salt solution should be employed as a temporary expedient.

Then comes up the question of medicating the cell (cellular therapeutics), and a number of remedies suggest themselves, such as strychnine as a cerebrospinal stimulant, arsenic as a catalytic cellular reconstructive, and caffeine as a cardio-arterial tonic and diuretic, and, while each is useful within certain limitations, the entire list will but imperfectly supply the pabulum requisite for normal physiological cell function. Of course, it will be designated a paradox to say that the right medicine when given to produce medicinal effects defeats its purpose, yet it is a fact that in practice it is frequently the case that when the system is subjected to proper medication the cells refuse to work. It is thus a fact that medicines destroy the normal physiological equilibrium (of cell function) on account of their mechanical action.

It is in these conditions, or rather to avert these conditions, that true nuclein from animal sources may be introduced with advantage, since it is the connecting link between sickness and health, because it enables the cells to work. Judging from the letters received, I am convinced that physicians connected with hospitals and sanitariums have discovered in this product a remedy which bids fair to occupy an important place in those cases where the patient fails to "respond" to routine methods, cases in which it is fair to assume that the patients are suffering from the reversion of cell function.

By no means, however, should I be understood to disparage the merits of the medicaments just mentioned, as, on the contrary, I appreciate their intrinsic value, and beg to introduce here molecular vibration as a new working hypothesis. For example, Dr. Andrew H. Smith (*N. Y. Med. Jour.*, June 1st, p. 938) contributes a suggestive paper entitled *Muscular Action of the Arteries*, in which occurs this expression: "Each pulsation is produced by a wave of muscular contraction beginning in the left auricle and passing through the ventricle into the aorta and along each subdivision until the capillaries are reached." And he says further: "The importance to the circulation of this muscular action in the vessels can scarcely be overestimated."

Dr. Smith simply tells us that these waves of muscular contraction constitute an important factor in maintaining normal conditions in the blood-vascular system. Suppose we say that these contractions are due to molecular changes in the sympathetic nervous system, then it follows that innervation is a manifestation of molecular changes (vibrations). Hence, in the treatment of disease, we must endeavor to master the complicated relations bearing upon cell innervation, else we shall be unable to take advantage of the medicaments which serve to create and maintain molecular vibrations. In other words, the physician should be able to select remedies which make cells work—through their dynamic activities as well as through the medium of their

physiological function. In this respect a study of the remedies mentioned will prove of more than passing interest, since it gives the practitioner a wide knowledge of the properties of the drugs best calculated to eliminate cytotoxines because of their ability to make cells work. During the past year I have worked up the clinical adaptation of upward of thirty, and feel that my task is but well begun.

JOHN AULDE, M. D.

Book Notices.

Nursing Ethics: For Hospital and Private Use.

By ISABEL HAMPTON ROBB, Late Superintendent of Nurses and Principal of the Training School for Nurses, Johns Hopkins Hospital, Baltimore, etc. Pp. 9 to 273. Cleveland: J. B. Savage, 1901.

The conduct of nurses in their various relations and in the constantly changing environment in which they find themselves is the keynote of Mrs. Robb's book. Here we find chapters on the physical and mental requirements of the trained nurse, her health and how to maintain it, her sleeping hours, rest, recreation, a description of her duties in hospital and private practice, and sound ethical principles for the behavior of the nurse toward her sister nurses, toward physicians, and toward her patients and their families. If all trained nurses could be compelled to read this book and to follow its rules of conduct it would be a blessing to them as well as to the harassed physician. We commend the book most heartily, well-written and interesting as it is, to the medical profession and the ever-extending sisterhood of trained nurses. It deserves a wide circle of readers.

Heart Disease in Childhood and Youth. By

CHARLES W. CHAPMAN, M. D. (Durh.), M. R. C. P. (Lond.), Physician to the National Hospital for Diseases of the Heart, Soho Square, W., etc. With an Introduction by Sir SAMUEL WILKS, Bart, M. D., F. R. S., Physician Extraordinary to H. M. the Queen, etc. London: The Medical Publishing Company, Limited, 1900. Pp. 101. [Price, 3s. 6d.]

This little volume has for its object, as the author states, the presentation of a brief outline of the more usual varieties of heart disease as they occur in young persons. Acute cardiac affections are only incidentally touched upon. The first part of the book is devoted to the consideration of the causes, prognosis, hygienic management, and treatment of heart disease in children. The education, exercises, and sports of these cases are discussed. The remainder of the volume is given up to the consideration of cases—thirty-two in number—with remarks on their prognosis, diagnosis, and treatment. The author has spent many years in the careful study of the subject which he treats here, and the outcome of it all is of great interest and value.

The Use of the Röntgen Ray by the Medical Department of the United States Army in the War with Spain (1898). Prepared, under the

Direction of Surgeon-General GEORGE M. STERNBERG, United States Army, by W. C. BORDEN, Captain and Assistant Surgeon, United States Army. Pp. 5 to 98. Washington: Government Printing Office, 1900.

The skiagraphs shown in this volume are exceedingly creditable to the medical gentlemen who had charge of our soldiers during the Spanish-American war, and especially to the foresight of Surgeon-General Sternberg, who supplied the apparatus. There are thirty-eight skiagraphic plates, all very clear and distinct. They show superficially the clean-cut wounds made by the Mauser bullet. In some of the pictures the minutest fragments of fractured bones can be distinctly seen. The volume marks a distinct advance in our government medical publications.



Miscellany.

Fat and Politics, a British Warning to Americans.—The *British Medical Journal* for April 20th humorously points out for our edification the dangerous alliance between corporeal substantiality and imperialism. Says the *Journal*:

"Cæsar wished to have about him men that were fat and slept o' nights; and looked upon those who, like Cassius, had a lean and hungry look as dangerous. The typical Yankee is still, like Coleridge's Ancient Mariner,

Long, and lank, and brown,
As is the ribbed sea sand.

This makes him dangerous to tyrants, and has doubtless had a good deal to do with his success in establishing the greatest democracy of which there is record in history. It may therefore be a fact of considerable political import that, at least in New York, the national type seems to be changing. Some observers of a statistical turn of mind have lately been taking stock of the man in the street as he is seen in New York. Among 1,000 New Yorkers, from the age of twenty upward, over 28 per cent. showed an abnormal development in the abdominal region. In a poor quarter the percentage of fat men was about 14, but in Broadway, where the well-to-do most do congregate, it was 35. In the corridors of a high-class residential hotel the number of obese individuals in a total of 100 was 70, while in a humbler caravanserai the percentage sank to 11, the lowest point anywhere noted. Altogether, among 1,500 adults, taken at random, 447 were corpulent to the degree of deformity, giving an average of 29.8 per cent. Among the effete monarchies of the Old World there is a stream of tendency to fat, which may account for the slowness and sleepiness with which we are constantly reproached by our go-ahead cousins on the other side of the Atlantic. Perhaps it is on the principle "who drives fat oxen should himself be fat" that so many European rulers are men of weight

as well as authority. From some interesting statistics on this subject that have recently been published, it appears that the King of Portugal is, in one sense, the greatest sovereign in Europe, for, though he is short of stature, he turns the scale at 13 stone 2 pounds. It would be indelicate, if not indiscreet, to give particulars of the weight of some other exalted personages. It may, however, be noted as an interesting fact that the *Reise Kaiser*, whose meteoric appearances in different parts of the globe in rapid succession, with his winged words and impulsive telegrams on all manner of subjects, used to keep the world in a state of what Lord Salisbury (or an ingenious reporter) called 'animated expectancy,' has for some time past become almost a 'heavy father' in the comedy of politics. It is a tempting subject of speculation how far this comparatively reposeful attitude may be dependent on increasing bulk. If Louis XVI had been less protuberant in the paunch he might have kept his head on his shoulders. The leaders of the Revolution were, as may be seen from their portraits, mostly of the Cassius type; it is impossible to conceive a Robespierre or a Marat as fat. Napoleon, in his later years, became fat, and, according to Lord Wolseley, this contributed in no small degree to his defeat at Waterloo. Our own sovereigns have for a century and a half been what the love-sick maidens in *Patience* style fleshly men, of full habit, and Beau Brummell called, less æsthetically, 'fat,' and it is not unreasonable to believe that this fact has had some influence in preserving our glorious constitution in vigorous vitality amid the crash of falling thrones and crumbling empires. Bismarck, at the height of his power, had, like Cardinal Wolsey, an 'unbounded stomach,' which could scarce be kept within reasonable compass by the severe maceration of the flesh enjoined by Professor Schweninger. Had he been fat in his youth, it is more than doubtful whether he would have welded Germany together with blood and iron. Who can tell how far the massiveness of the Prime Minister's bodily frame may have helped to keep the peace of Europe by weighting the pushfulness of leaner politicians? The rôle of fat in political physiology cannot be summed up in a simple formula; but for practical purposes it will be found tolerably safe to assume that thinness makes for revolution and fleshiness for repose, which, expressed in terms of politics, means conservatism. The ideal demagogue is lean—*tourmenté par son caractère*, as Madame de Staël said Napoleon ought to have been. A man who has a full, round belly, with good capon lined, is by the law of his physical being a conservative, whose principle is *quieta non movere*, though he may delude himself and others with the fancy that he is a radical. Those of our American friends who think that the well-being of the United States depends on the maintenance of a republican form of government, will do well to take steps at once to repress the tendency to abdominal expansion among their citizens, or they may live to see the President transformed into an emperor."

Original Communications.

THE HOME TREATMENT OF PULMONARY TUBERCULOSIS.*

By ROBERT H. BABCOCK, M. D.,

CHICAGO.

There is no subject in the domain of therapy that is of greater interest and importance than the treatment of pulmonary tuberculosis. This applies to the rural as well as to the city practitioner, for physicians from the interior of Illinois have assured me that in their section consumption is not only frightfully prevalent, but seems to be on the increase. The family doctor encounters this disease on all sides, and I venture to assert that in undertaking its treatment he is, as a rule, hopeless of obtaining satisfactory results. Why is this? Is it because the disease is incurable, or is it because he begins treatment in a wrong and half-hearted way? The real reason for this hopelessness on the part of the practitioner, as it seems to me, lies in the fact that he depends too much on medicinal therapy. I venture to state again that if most physicians were asked what they are in the habit of prescribing for their tuberculous patients, they would answer tonics and cough mixtures, by which they mean iron, strychnine, hypophosphites, and cod-liver oil, creosote or guaiacol, chloride of ammonium, and ipecac with codeine in some expectorant syrup, such as Tolu or wild cherry bark. Of course, they will also say that they try to get the patient to eat plenty of food and take plenty of fresh air. In some instances we find that the doctor professes to get good results from some special medication as inhalations of one sort and another or from injections of some proprietary serum or other vaunted antibacillary remedy. The journals teem with reports of gratifying improvements and a few arrests from the use of some new agent, which fact serves but to confirm the truth of the statement that we possess no specific and certain cure for pulmonary tuberculosis. This should not beget a spirit of hopelessness or nihilism regarding the treatment of this disease; it should rather make us determined to combat it in the most approved manner. I do not come before you to advocate anything new or on the assumption that I am to enlighten you upon something of which you are ignorant. Not at all. I desire only to convince any who may be skeptical that it is possible in the consumptive's home to carry out effectually the plan of management which is nowadays so success-

fully employed in the best sanatoria in this country and in Europe. Those who have given this subject the most attention and have come to be recognized as masters in this field of medical work may be said to be a unit on the following points:

First. The most successful treatment of pulmonary tuberculosis lies, not in the use of medicinal agencies, but in the hygiene of the patient's daily life. Second. This includes (a) the building up of tissue resistance by superalimentation; (b) a continuous or as nearly as possible continuous sojourn in the open air under conditions that are determined by the patient's temperature; (c) hydrotherapy, and (d), the careful and methodical regulation of the patient's daily life. Third. Although these requirements can be best secured in a sanatorium, they can be obtained at the patient's home regardless of the climatic conditions there prevailing.

I do not intend to argue in favor of the first proposition, since the results obtained in properly conducted sanatoria furnish the strongest arguments in its favor. In 1893 Detweiler, of Falkenstein, Germany, told me that at his institution he obtained cures in twenty-four to twenty-seven per cent. of all cases, by which he meant in all stages. In incipient tuberculosis the percentage of recovery is very much greater, running to seventy-five or eighty per cent., and I am not sure but higher. It would be grossly inaccurate to state that at sanatoria no medication is employed, but when used it is mainly or exclusively to meet special indications and is always subordinate to the hygienic management, care being taken that medicaments shall not interfere with appetite and digestion.

All physicians recognize the necessity of improving the patient's nutrition, but the difficulty they encounter is in making him take nourishment enough and in outlining the proper kind of a diet. The essentials are, first, food at short intervals; secondly, food that is easily digested and assimilated, and, thirdly, food that is the most nutritious in the smallest bulk. Accordingly, patients should take nourishment from five to seven times a day; that is, they should have luncheons between meals and during the night in many cases. This is necessary because most tuberculous invalids eat but a small amount at a time. Yet, even when the ability to eat heartily is retained, the interval of five to six hours between meals should be broken by a light luncheon. The second and third requirements are found in good fresh milk, eggs, preferably raw, and in all forms of fresh meat properly cooked.

*Read at the Peoria meeting of the Illinois State Medical Society, in May, 1901.

Cream and butter are also essential, as are poultry, game, fish, etc., for the sake largely of variety. Vegetables, bread, and fruits may be permitted sparingly, that the more highly nutritious dietary may not become too monotonous. Specially prepared and concentrated foods are to be given only, in my opinion, when it is not possible to nourish sufficiently without them. I have obtained my best results by the use of milk and raw eggs as follows: The patient is ordered to drink a glass of heated, but not boiled, milk, the first thing after waking in the morning and thereafter every two hours during the day up to his going to sleep at night, regardless of his meals. In this manner seven to eight glassfuls, or about two quarts, are disposed of daily. If the appetite is so poor that the patient is said to eat nothing, I insist upon this hot milk and absolutely nothing else for the first one, two, or three days, and I generally find that before the second day has passed he is ready and anxious for substantial food. I then allow him raw eggs and gradually bring him to solid food in regularly ordered meals, keeping up the milk and eggs. In early cases and those in which the appetite is sufficient to admit of a continuance of regular meals from the start, milk is ordered in the manner indicated, and, when possible, it is also taken with the meals, so that not less than two and, still better, three quarts are drank daily. In addition, the patient is emphatically told he must take raw eggs, beginning with one after each meal and increasing by one daily until as many as possible are consumed. I have known a good many patients to thus take twelve and even fifteen raw eggs daily, besides three quarts of milk and three regular meals. I prefer to have the eggs dropped into a glass, sprinkled with a little salt or covered with a little sherry wine or almost anything else that is preferred, and then swallowed as one would a raw oyster. If this method is impossible, the egg is then allowed to be taken beaten up with milk, cream, or wine; but taken the raw eggs must be, in some form or other and up to the limit of the patient's capability. In addition, it is insisted upon that fresh meat shall be eaten with every meal, or at least twice a day, as well as other articles of food. Every time I see the patient he is required to give me an accurate and detailed account of what and how much he is eating and of how much he weighs. In this way I have been gratified and really astonished to find how many are able to stuff themselves in this fashion. In most instances it is found that, instead of the appetite being destroyed, it improves with the gain in nutrition. It is not uncommon for a gain of two or three pounds in weight to be

made every week for several months. One young man, on three good meals, fifteen raw eggs, and three quarts of milk daily, gained twenty-eight pounds from November 29th to the next 1st of February, and lost all his symptoms of incipient tuberculosis of the left apex. Of course, in many cases one is compelled to suggest variety if this forced feeding is to be kept up, but I wish to say emphatically that it is possible in nearly all cases, particularly early cases, to crowd the nourishment, if one will be determined and rigid in his determination, not listening to the patient's assertions that he cannot eat so much. In no disease is determination so required.

The second condition essential to the successful management of this scourge is the daily, I might say continuous, sojourn in the open air. It was once thought that consumptives should exercise out of doors without regard to their temperature, but we now know that exercise is to be permitted only when they are free from fever and a febrile reaction does not follow exercise. Or, to put it in another way, the tuberculous should remain at absolute physical rest in the open air so long as he has a temperature above 99° F. or so long as his temperature is found after exercise to be a degree or more higher than it was before the exercise. Most tuberculous individuals present an abnormally high temperature at the time they seek medical aid. In incipient disease this ranges between 99.5° and 100.5° F., while in the very active form or in mixed infection it ranges still higher. Consequently they should be emphatically told they must spend their entire day out of doors, but in a state of complete physical inactivity. This is to be insisted on, not only in pleasant weather, but in practically all weather and all seasons. That this open-air life may be enjoyed without danger or likelihood of the patient becoming chilled or without undue exposure to wind and rain, a porch is screened off by canvas curtains or a rough shed or suitable tent is to be erected in the yard, so that by lowering the curtains on the side toward the wind or rain the patient may be protected. At the same time he is to be provided with wraps and blankets with which to cover himself in case he feels chilly. If he is so feeble that he is confined to his couch an attendant should be at hand, who may cover him up, produce friction of the extremities, or supply hot bottles if necessary. For, in carrying out this open-air treatment successfully, it is absolutely necessary to protect the invalid against taking cold. At German sanatoria, for example, patients are kept outdoors winter and summer and in windy, rainy, and even snowy weather. I know a physician whose wife

slept on her porch every night for an entire year even when the thermometer registered 3 degrees below zero. In this instance she was provided with a warm mask that left only the eyes, nostrils, and mouth exposed, while an electric warming pan was placed in the bed. Even in our severe climate it is possible, by selecting a porch or constructing a shed on the south side of the house and by putting a small stove nearby to keep a patient in the open air during most of our winter days. If the individual sleeps in his bedroom in the house, then this should be the largest and sunniest apartment and its windows should be kept open all day. Even at night at least one window is to be open, and by means of a stove or fireplace and screens the patient can be kept comfortably warm.

Time forbids further details, and these must be left to the ingenuity of the attending physician. The advantages of this climatic treatment at home are numerous and readily appreciated by all. I can only mention its beneficial effect upon fever and appetite. There is no antipyretic so suitable and efficient as fresh cool air, and I have over and over again observed a pronounced reduction of the temperature under no other treatment. Coincidentally with the fall of fever the appetite and digestion generally improve, and there is usually a lessening of the cough and expectoration. I have also been impressed with the effect on the patient in other ways. Whereas previous to this plan of treatment he had been afraid to venture out lest he take cold, he soon learns to so like the open air that he dreads going into the house. So soon as his temperature, which by the way should be taken and recorded four times daily, is observed to remain persistently below 99°, the patient may be permitted to try the effect of walking for five minutes, his temperature being taken immediately before and after this exercise. If it is found to go up a degree or more, rest is again to be insisted upon, and exercise is finally to be permitted only when it is found not to unfavorably affect the body heat. Of course all other contraindications, such as aggravation of the cough, undue acceleration of the pulse, loss of weight, etc., are also to be considered in deciding this matter of exercise.

But I must pass on to the third condition—namely, hydrotherapy. This is also highly important, since it stimulates the nervous system, improves cutaneous circulation, acts as a general invigorator, and renders the person less sensitive to changes of atmospheric temperature. Beginning as a sponge bath with tepid water given by a nurse and followed by vigorous friction, it should be gradually made more and more severe,

until at length the invalid can endure a shower bath of cold water or the so-called "pail douche." Properly given, these morning baths become in time a positive physical pleasure to the consumptive. The one essential condition is that it be always succeeded by a good reaction. If this does not take place, you may depend upon it that the hydrotherapy is not properly carried out. I never permit this portion of the treatment to be omitted, and I cannot now recall an instance in which it was not possible to employ the morning bath.

Lastly, the daily régime must be faithfully and systematically persevered in. Therefore, the medical attendant should see his patient sufficiently often to keep control of him, and at each visit he must go over in detail all the requirements, that he may thus compel exact and methodical obedience and carrying out of all orders. To this end it is generally necessary also to instruct and watch the mother or nurse, for if the physician is to obtain satisfactory results, he must have a good helper who is alive to the necessity of perfect regularity.

That it is possible to carry out this régime effectively at home is well illustrated by the case of a young lady whom I saw last August. She resided in an Indiana town, and when seen by me had passed beyond the incipient stage. Her temperature was 102° F., cough was frequent, and the sputum was purulent and abundant. She had no appetite and was rapidly losing weight and strength. The upper half of the right lung was dull and filled with moist râles, and a small cavity had formed in the infraclavicular region. Both she and her parents were told plainly that her condition was very serious, but at the same time hope of improvement was held out. Considerable time was spent in explaining the advantages and method of the open-air treatment at home. There was a good-sized porch on the north side of the house, and by means of curtains this was screened off on the three open sides in such a manner that at all times she could be protected from too much wind or from rain. Here she passed her entire days in absolute physical repose. She was put upon the milk and raw egg diet and, as time went on, solid food was added, and she always received her morning bath. All the medicine she received was strychnine, pepsin, and pancreatin, a twelfth of a grain of heroine when required to control but not suppress the cough, and an occasional small dose of calomel. In six weeks she had gained eleven pounds, and by November about sixteen. Her cough and expectoration lessened gradually, and in less than three months her temperature had become per-

manently reduced to 99° F. or less and a little exercise was permitted. After the first three weeks she was able to dispose of two quarts of milk and fifteen raw eggs daily, besides three regular meals. Toward the end of November the weather grew inclement, and, as I feared I could not maintain control of her, living at a distance from me, I decided to send her to Colorado. In the beginning this would have been ill-advised, but in the light of her gratifying improvement I believed the change would prove beneficial. The result has amply justified my decision, for I am informed that her gain has been steady and pronounced. This patient is expected to make a recovery. I need only add that the nature of this case was proved by the discovery of numerous bacilli. Did time permit, I could narrate numerous other cases all going to prove the correctness of the third proposition, that when properly carried out, this home treatment yields results that compare favorably with those obtained at sanatoria.

103 STATE STREET.

ANTITOXINE AND INTUBATION IN THE TREATMENT OF LARYNGEAL DIPHTHERIA, WITH A SUMMARY OF 230 OPERATIONS.*

By BURT RUSSELL SHURLY, B. S., M. D.,

DETROIT.

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The brilliant success in the treatment of laryngeal diphtheria and its prophylaxis is a most conclusive demonstration of the contributions of bacteriology to the progress of medicine. A disease with a hospital mortality of twenty to seventy-five per cent., reduced within the last few years to five per cent. or less, is an approach to a scientific ideal for which even the most enthusiastic could scarcely hope. It is a well-recognized fact that diphtheria was considered the most fatal and treacherous of the infectious diseases of children, but the perfection of intubation and the early use of large doses of antidiphtheritic serum have so modified its course and symptoms that with proper treatment it is entirely within our control. It is not necessary to emphasize the bacteriological identity of membranous croup and laryngeal diphtheria, for ninety per cent. of membranous invasions of the larynx are of the Klebs-Loeffler variety. It is often impossible for us to make an early diagnosis, and for this reason the antitoxine treatment in the first twenty-four hours of the disease is frequently delayed. There is but one definite rule

to follow, viz., administer antitoxine in every doubtful case of tonsillar exudate in children between the ages of one and eight years, and no case thus treated in the first twenty-four hours will be fatal from laryngeal invasion of the Klebs-Loeffler bacillus. Three varieties of pseudo-membranous invasion of the larynx are recognized: First, true laryngeal diphtheria, usually caused by the Klebs-Loeffler bacillus primarily involving the larynx; secondly, a pseudo-membranous inflammation following a nasal, tonsillar, or pharyngeal exudate, most frequently of the Klebs-Loeffler variety; and, thirdly, a pseudo-membranous laryngitis secondary to the common infectious diseases of childhood, such as measles, scarlet fever, and amygdalitis, usually of the streptococcus variety.

The principal predisposing causes that influence the development of Klebs-Loeffler infection are: 1. A lowered resistance from the presence of adenoids and hypertrophied tonsils. 2. Age. Children between one and six years are most susceptible. Nineteen of the last thirty operations occurred where streets were not paved. The tendency of laryngeal diphtheria to contagion in its own peculiar type is noted by the number of children exposed developing only the laryngeal variety. Diphtheria is more prevalent when care is not taken in personal hygiene and where schools or houses are overcrowded and improperly ventilated. Quarantine regulation and supervision are not sufficiently enforced.

The initial symptoms of laryngeal invasion are hoarseness and a characteristic cough, often secondary to a tonsillar exudate. A graver stage is indicated by increasing laryngeal stenosis, accelerated pulse, and rising temperature; the struggle for air becomes rapidly worse and the clinical picture of a case rapidly approaching a fatal termination shows cyanosis, clammy skin, hyperpyrexia, semi-stupor, and all the extraordinary muscles of respiration at work. Neglected patients under three years of age usually succumb in from thirty-six to forty-eight hours.

The therapeutical problem in every case of pseudo-membranous invasion presents two prominent indications: 1. To prevent extension of the membrane to the bronchi. 2. To relieve serious laryngeal obstruction.

The discovery of antidiphtheritic serum and the perfection of intubation during the last decade have given us most successful medical and surgical methods of treatment in response to these indications. A disease with a former mortality in private practice of from twenty-five to ninety-five per cent. is reduced to one with ten per cent., and in the last forty cases I have seen to one with less than five per cent. These results are obtained in private practice for the

*Read before the Michigan State Medical Society.

most part among a class of ignorant foreigners, who give practically no care to their children in health or disease.

The methods of procedure are as follows: A tonsillar exudate with laryngeal involvement in a child of from one to eight years is treated as diphtheria, and 1,500 units of antitoxine are injected as soon as possible, and 1,000 units six to twelve hours later, if the case shows no improvement. Cases treated promptly in this manner with sufficiently large doses of serum never require surgical interference. According to the best observation, the serum is perfectly harmless, and why should we postpone treatment to confirm a diagnosis? Under the general adoption of this procedure, the practice of intubation will become exceedingly limited, and in a few years we shall expect to meet only with cases neglected by the parents or the physician.

Additional medicinal treatment is of the greatest value. The continued use of emetics, however, should be condemned on account of the prostration and discomfort they cause the patient. As a temporary measure of relief, efficient emesis may be produced by placing a spoon well back in the pharynx. The continuous inhalation of alkaline steam under a tent aids in softening the pseudo-membrane, and in intubation cases the moisture assists the expulsion of secretions. A calomel purge should be given daily, and calomel vaporization resorted to in septic cases. Strychnine and alcohol are used where respiratory or cardiac stimulants are necessary. Nasal and nasopharyngeal exudates should receive appropriate local treatment. An ice collar or iced cloths over the larynx modify the tendency to increased blood supply and inhibit the growth of the bacilli. The administration of large quantities of fluid should be enforced, and salt solution by the rectum is often valuable.

The therapeutic effect of antitoxine is most interesting. At first we observe that a curative dose slows, then stops the extension of the membrane. A line of demarkation forms, and the edges loosen and fold in. The loosening process gradually extends throughout the exudate and the membrane is exfoliated. If antitoxine has been given some hours before intubation is performed, a cast of the larynx or bronchi is usually loosened and expelled on withdrawing the tube. Under these conditions the patient usually makes a very rapid recovery.

The indications for surgical interference are determined by the diagnosis, the character and degree of dyspnoea, the age and strength of the child, the stage of the disease, the distance from the surgeon, the facilities for the care of the patient, and the intelligence of the nurse, and the factors of most importance would be the amount of antitoxine and the time when it was given. We must be careful to dis-

tinguish the dyspnoea of a retro-pharyngeal or oesophageal abscess, enlarged tonsils, foreign bodies, and oedema of the larynx or uvula from that of diphtheritic stenosis, as these conditions are usually relieved more satisfactorily by tracheotomy.

The question of surgical interference requires the most careful judgment. The competent consultant must be familiar with the therapeutic effects of antitoxine in order that he may decide when delay in operation is justifiable. A child of five years, seen in consultation in the morning, twelve hours after the administration of 2,000 units of antitoxine, although the dyspnoea was considerable, might be left under observation, while a child of two years under the same conditions and with a like amount of dyspnoea, seen in the evening, would require an operation.

The tendency is to perform intubation too late. No harm comes from tubage if it is properly done, and the high mortality of lung involvement, especially in children under three years of age, may be saved. Operations should not be delayed when the cough and expectoration are suppressed, with an increasing dyspnoea, whispering voice, and the attending phenomena of extraordinary respiration develop. Fatal exhaustion and pneumonia are the results of continued dyspnoea.

An operation that, when first introduced, was looked upon among the foreign element of our population with superstitious dread and resisted even with force, is now demanded by them. Intubation has been performed successfully on every street and every block in the Polish districts of Detroit, and the knowledge that it is not a cutting operation, and that no pain or anæsthetic accompanies it, appeals at once to this class of people. The difficulties in technique are most unfortunate, yet it is the duty of at least one physician in every good-sized community to master the operation and prepare for an emergency. Preliminary practice is essential to success. This is best obtained on the cadaver of a child or an anæsthetized dog. Two principal points must be constantly in mind. Keep in the median line. Guide the tube with your left forefinger, passing it under the tip and keeping close to the anterior wall. The position of the child and the selection of the tube are very important. Not only the age, as indicated by the scale, must be considered, but the development of the child.

The pseudo-membrane is sometimes pushed down during the operation, but removing the tube relieves the asphyxia and the dislodged membrane is expelled. Bokay reports tracheotomies necessary in three and a half per cent. from detaching the membrane. I have never seen this accident fatal. In over three hundred cases the relief of dyspnoea afforded by this method is one of the most gratifying

experiences of surgery. The stridulous breathing subsides, the cyanosed lips gradually assume the color of life, the pulse fills and steadies with the stimulated circulation, and the coma fades into a calm and peaceful sleep. One of the greatest dangers to an intubated child is the sudden occlusion of the tube. The nurse should be instructed in the removal of the tube in case of emergency. This can be accomplished by passing the left index finger into the entrance of the larynx and under the head of the tube, and raising it by upward external pressure of the right thumb and index finger along the region of the trachea.

The instrumental extraction of the tube is more difficult than the introduction. It can be performed more slowly, however. Dexterity depends on the ease and certainty with which the extractor in the right hand is directed to the tip of the left index finger against the tube in place. A great deal of practice is required to perfect this manipulation.

The After-treatment.—The question of leaving the string attached to the tube requires careful judgment, and in cases that show an extension of membrane below, this is the best method. The attending physician or nurse removed seven occluded tubes out of my last thirty operations, all of which were followed by recovery. By virtue of antitoxine the tube can be removed on the third or fourth day, and the problem of feeding is no longer difficult. Children under four years of age take nourishment readily by the Casselberry method, while with older children the catheter method, body horizontal, face down, is much more successful. Rectal feeding or lavage is seldom necessary.

The prolonged use of the tube is sometimes required, and no class of cases can be more trying to the surgeon. The conditions requiring retention are traumatism from the use of force, with resulting œdema, cartilage ulceration, cicatricial contractions, and granulations. The tube may have been too large or improperly constructed. Persistent membrane in the larynx may also necessitate retention of the tube. Nine cases in which the prolonged use was necessary have come under my observation. Twenty-three days were required before the tube could be permanently removed in one case, although the average time would be ten days. Astringents applied to the larynx on the tube are very successful in reducing œdema. The tube can be coated with gelatin-alum solution and introduced, or in an emergency alum and vaseline can be used in any strength desired.

The results of traumatism and the necessity for a retained tube are demonstrated by a case seen in consultation with Dr. M. McColl.

M. B., aged five years, had been treated for two days for spasmodic croup when the doctor was called

on January 30th. The true condition was recognized at once, and intubation performed with difficulty, as the tube used was too large. After five days the tube was extracted, again with much difficulty, and labored breathing began at once and reinsertion was necessary. On February 11th the tube was extracted for the third time. Dyspnoea increased very gradually, but on the 23d the case came under my observation, and it was thought necessary to operate. A tough ring of cicatricial tissue could be felt at the entrance of the larynx. A three-year tube was used, coated with alum and vaseline, and later a two-year tube. After the third application on the two-year tube the child was able to breathe, and on examination yesterday at Harper Hospital, the respiration was almost perfect. It is now four weeks since the tube was last extracted.

To diminish the mortality of this disease, I would strongly advocate the more general use of prophylactic doses of antitoxine, especially among children under ten years of age exposed directly to infection. Its use is without danger if ordinary care is taken in the administration; sterilization with mercurial soap or five-per-cent. carbolic acid solution is all that is necessary. Turbid serum should be returned to the manufacturer.

Two hundred operations, with fifty-one deaths, have been reported, and in thirty cases, with two deaths, I have operated since the report of my last hundred intubations. This is a mortality of six and two-thirds per cent. In the two fatal cases the patients were moribund, and had considerable lung involvement at the time of the operation. One of the cases which illustrate the possibility of saving life when the patient is moribund was seen in consultation with Dr. Tracy on September 20, 1900. A boy, aged four years and one month, had been ill for some days with diphtheria, mistaken by the physician first in attendance for amygdalitis. Proper treatment was neglected, and the case went on to the stage of asphyxia. On my entering the room, it seemed as if death was a question of only a few minutes. The jaw was relaxed and the child completely comatose, so that a three-year tube was quietly passed without disturbing the position of the child on the table where it had been placed to bring it near an open window. After artificial respiration, a mustard foot-bath, and several hypodermics the circulation revived, although consciousness did not return for half an hour. There is nothing more beautiful or gratifying in the practice of medicine than this picture of life returning to the asphyxiated child. Twenty-five hundred units of antitoxine were given, and the tube was removed on the fourth day.

Conclusion.—The results in the treatment of laryngeal diphtheria with antitoxine and intubation are most satisfactory, speedy, and certain. No method of treatment in any disease demonstrates more thoroughly the value of bacteriological and

chemical research. There can be few greater monuments to American inventive genius than the living, breathing children saved from asphyxia by the use of O'Dwyer's tubes. It is with this firm conviction of the true worth of this method, and with the hope that serum therapy and especially intubation may find the wider field their usefulness demands, that I present this subject for your consideration.

110 RIVARD STREET.

THE INFLUENCE OF MOUTH-BREATHING UPON THE DENTAL ARCH.*

By M. D. LEDERMAN, M. D.

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It is quite natural that the dental surgeon should be consulted for the correction of an increasing irregularity of the teeth in children, while other symptoms referable to the exciting cause of the existing changes are so often overlooked by the parents.

Nasal and post-nasal obstruction are the most frequent factors that bring about the mouth-breathing habit. It is during the early period of childhood that our efforts should be directed toward remedying, if possible, this faulty method of respiration, in order to avoid the evil effects which may result to the growing osseous structures of the oral cavity and neighboring tissues.

It is not unusual for the dentist to seek such cases before any attempt has been made to treat the pathological lesions in the nose or throat of our young patient. It is but natural that he should suggest some form of mechanical aid to rectify the existing deformity. He should, however, go a step further, and ascertain the predisposing causes which have started this deviation from the normal.

At his initial examination he can readily ascertain if there is a history of embarrassed nasal respiration. Furthermore, it would be proper for him to examine the child's throat by depressing the tongue, to see if there is any enlargement of the faucial tonsils. If posterior rhinoscopy is not feasible, it would be a simple matter to introduce a previously cleansed finger behind the soft palate to feel if the pharyngeal tonsil was hypertrophied, so causing mouth-breathing.

If such changes are present, it is his duty to advise the removal of such barriers to normal respiration, thus permitting his mechanical appliances to exert their corrective tendencies, without being

handicapped by antagonistic pressure through the open mouth.

We are aware that the alveolar process is developed as a special support for the teeth, and as it grows the teeth are surrounded by a firm casing. As the deciduous teeth shed their roots, the bony processes are absorbed, but are re-formed as the permanent teeth appear.

Though the alveolar process is the thickest part of the maxillary bone, it is also the most spongy portion, and we can readily appreciate the possible untoward results that faultily directed atmospheric and muscular pressure might produce. Such pressure would, no doubt, disturb the position of the advancing teeth, as comparatively slight forces may deflect the course of an eruptive tooth. The temporary teeth seldom deviate from their proper position in the alveolar arch, but irregularity of arrangement in the permanent set is not an uncommon occurrence.

The most common forms of such displacement are caused by the presence of temporary teeth beyond the proper time of shedding, owing to some disturbance in the process of absorption. This condition is frequently secondary to some defect in the general system, and the evil influences of mouth-breathing due to nasal and post-nasal growths are so common in early life, that attention to the local affection is emphatically indicated. Retarded oxidation with its consequences so often exists under such circumstances that we should certainly appreciate the necessity of getting rid of the pathological factor.

In a series of 700 cases reported by Arrowsmith (1) in which adenoid growths were found, obstruction to nasal respiration was the most prominent symptom. The majority of young children suffering from this common affection feel the effects of lowered vitality with diminished recuperative power. In such instances it is but natural that the process of absorption should be retarded, and so predispose the subjects to delayed disappearance of the deciduous teeth.

We frequently see children with carious teeth, poorly nourished, whose history shows disturbances of the alimentary canal. Nasal obstruction forces them to breathe through their mouth, and so prevents the thorough mastication of their food. This brings about inanition and anæmia, and exposes them to the infectious diseases which so quickly attack the lymphoid tissue of the upper respiratory tract.

Rhachitis is a common ailment met with in young children, especially in this bottle-fed community, and any obstacle to the normal respiratory function in this affection, would certainly leave its malign influence upon the already softened bone.

Mr. Charles Tomes (2) states that children who

*Read before Laryngological Section at the Pan-American Medical Congress, Havana, Cuba, 1901, and the First District Dental Society, New York.

are compelled to breathe through the open mouth on account of enlarged tonsils, invariably present one of the forms of V-shaped arches. Constant mouth-breathing causes an increased tension of the lips at the corners of the mouth, which is impressed upon the alveolar arch as an inward bending of the bicuspid at this point. He also remarks that a peculiar form of caries results from constant exposure to the atmosphere. In recording his personal observations, Gleitsmann (3) reports that, where nasal respiration is impeded, the growth of the nose is retarded, due to functional inactivity. The nasal chambers do not expand and the palate becomes elevated. He believes, however, that the most important factor is the lateral pressure exerted by the cheeks against the maxillary bone, when the mouth is kept open. This pressure occurring before dentition produces in long-standing mouth-breathers a narrowing and lengthening of the alveolar process, until the distance which separates the alveolar borders becoming gradually lessened, the high dome effect is produced.

When the mouth is closed, the tongue rests against the teeth, the alveolar processes, and the palate, thus equalizing the pressure of the cheeks against the lateral portion of the maxilla.

This provision of nature loses its influence when the mouth is kept open. Koerner advances the theory that the maxilla loses its firmness through the loss of the milk teeth, and becomes softer in consequence of the increased blood-supply during the growth of the permanent teeth. He adds that he never saw a deflection of the nasal septum before the second dentition, while it was present in all such cases after this period.

Harrison Allen (4) has called our attention to the association of chronic nasal catarrh with errors of development in bone and teeth. Milky opacities of the enamel occur as one form of defect accompanying the nasal disease.

Another element in the production of the high arched palate is a weakness in the anterior maxillary suture. In some bones an indistinct suture may be seen extending from the anterior palatine fossa to the space between the lateral incisor and canine tooth. In animals this separate piece exists permanently, but in the human subject it is only rarely seen in some forms of congenital malformations.

Thumb-sucking is also a factor which may be offered as an exciting cause of the dome-shaped palate. If this habit exists for any length of time, the upper teeth will be found protruding, and the lower receding, thus carrying the alveolar process with them. To prevent permanent disfigurement from this habit, prophylactic measures must be employed at an early period.

About two years ago Grossheintz (5) published

the results of his study on the human skull, and his deductions were as follows: (1) That a high, narrow, alveolar arch (hypsisstaphylia) is usually associated with a general narrowing of the upper face (leptoprosopia). (2) That narrow nasal passages (leptorrhina) and narrow orbits belong to the skull formation having high-arched palates. (3) That hypsisstaphylia depends, as a rule, upon the congenital racial characteristics of the skull, and not upon the extra-uterine influences of nasal stenosis.

Assuming that this author's conclusions are correct, would not such individuals be more liable to further changes in the dental arch, on account of catarrhal or obstructive disturbances in the already narrowed respiratory channels?

In a more recent monograph on this subject by Louis Alkan (6), of Leipsic, the assertions of Grossheintz are contradicted. Alkan has found, by actual measurements in a series of cases, that in patients suffering from nasal obstruction due to adenoid growths, the palatal arch is higher, longer, and narrower than in the normal state. After extensive and careful investigation this author arrives at the following definite conclusions:

(1) That the alveolar arch of the new-born is characterized by its shortness. Furthermore, it gradually assumes a higher and broader aspect in proportion to the growth of the adjacent structures.

(2) That in subjects where adenoid vegetations exist, he finds an arch distinctly higher, longer, and narrower, than the normal one.

(3) That the configuration of the palate is not dependent upon the skull formation.

(4) That anomalies of malposition of the teeth are very frequent in abnormal conditions of the maxillary bone and alveolar processes.

Alkan also records the facts that in three cases of atrophic disease of the nasal cavities, he found that the palatal arch was not so high as, but broader and shorter than, in the normal state. These measurements would go to prove that atmospheric influences in the nasal chambers certainly have some bearing upon the shape and height of the dental arch.

Dr. Talbot (7), of Chicago, after considerable clinical experience, comes to the conclusion that the high arched palate is due to the fact that, on account of mouth breathing the child's inferior maxilla is not brought up, so that the teeth of the lower jaw do not press against those of the upper jaw, and therefore there is a tendency on the part of the teeth of the upper jaw to grow too far downward.

Adenoid vegetations in the pharynx and enlarged faucial tonsils are the most frequent conditions that cause nasal obstruction and oral respiration. These vegetations are but a true hypertrophy of the lymphoid tissue existing in and around the pharyngeal vault. The inflammatory changes so prevalent in

early childhood readily attack this glandular tissue, and so bring about its enlargement. It is similar in structure to the faucial tonsils, except that the latter have more fibrous tissue, owing to their exposed position.

The presence of the post-nasal growth can be detected by the vacant expression on the young one's face, together with the open mouth and drooping of the eyelids and corners of the mouth. Impaired nasal resonance, restless and noisy sleep, and the high-arched palate, are frequent indications.

The treatment consists of radical removal, and to do this satisfactorily an anæsthetic should be given. My method consists in the use of the post-nasal forceps, curette, and finger. The growth should be thoroughly excised so that no obstruction retards the respiratory function.

As a rule, the patient is up and about in from thirty-six to forty-eight hours after the operation. An alkaline antiseptic nasal spray containing boric acid should be employed for the following few days. The most satisfactory results follow such intervention.

With all this clinical evidence before us, we must surely acknowledge that mouth-breathing does influence the growth and configuration of the hard plates. To avoid such malformation, we must get rid of the exciting factor in the early years of childhood.

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38 EAST SIXTIETH STREET.

One Thousand Epileptics in the State of Connecticut.—Dr. Max Mailhouse, of New Haven; Dr. Edwin A. Down, of Hartford, and Dr. F. H. Hallock, of Cromwell, comprising a committee appointed to ascertain for the Connecticut State Medical Society the number and condition of epileptics in Connecticut, have completed the inquiry. The number reported was 542, of whom 315 are males and 227 females. According to the report, 224 cases are in public institutions; 114 are capable of self-support, and 128 adult epileptics are insane. The committee reports a lack of interest in the welfare of epileptics, and says that little is done to promote their comfort and ameliorate their condition. The investigators regard the number of cases reported to them to be the minimum, and are convinced that the actual number of epileptics in the State is not less than 1,000.

A LEAF FROM THE ANCIENT HISTORY OF THE ANATOMY OF CATARRH.*

By JONATHAN WRIGHT, M. D.,

BROOKLYN.

It certainly seems fitting, meeting as we do beneath the umbrageous elms of this classic city, that some one should attempt to signalize the event by dealing with the traditional lore which, for two hundred years, has been associated with the name of New Haven and of Yale. In order, however, that none of you may be too much shocked by the intrusion of an exceptional departure from our usual routine, you have been sufficiently warned, I trust, by the title of my paper on the programme, to be prepared to depart a little from the beaten paths of modern laryngology and rhinology and to seek the more unfrequented byways pertaining to our life-work. I am sure it will be a relief to you, as it has been to me, to desert for a moment the cacophony of Rokitanski, Dmochowski, and Zuckerkandl and seek a grateful refuge in the broad bosom of Hippocrates and the catholic companionship of Plato and Aristotle.

Although it has been many times asserted, perhaps in the ardor of debate, that there is no such thing as catarrh, the records of it are coeval with those of the human race. In fact, Darwin gives us good ground for believing that we might pursue the subject even further back and into the pedigree of our simian ancestry, for he says (*Descent of Man*) that monkeys are not infrequently afflicted with it in their native arboreal habitat. But, coming down to comparatively recent times, we find a record of about the year 3500 B. C., in which it is set forth that King Sahura, of the fifth Egyptian dynasty, was grateful to his physician, Sekhet 'enanch, for having "made his nostrils well."†

To our shame and confusion, on reading further, we find that this old rhinologist requested as a reward that a tablet commemorating the fact should be set up in the ante-room of the king's palace, where all might see. Whether this suggestion of unethical advertising was carried out in its entirety or not I do not know. At least it is a fact that the slab with the inscription and the physician's portrait and that of his wife were found in the king's tomb. We can, therefore, only comfort ourselves with the reflection that there is no record of his having been a fellow in good standing of the Ancient Egyptian Laryngological Association, and we may also conjecture that perhaps after all he was nothing but a general practitioner, for the phrase "made his nostrils well" was in all probability a mere figure of

*Read before the American Laryngological Association at New Haven, May 27, 1901.

†Edward Meyer: *Geschichte des alten Aegyptens*, ii, p. 95.

speech, in Biblical language, for the restoration of the royal health.

We must therefore seek a later era for a surer indication of the beginning of the conception of catarrh of the upper air passages. It is important to note a passage in that most ancient of all old medical books, the so-called *Papyrus Ebers*:* "There are four vessels in the two nostrils, two carry blood and two carry mucus." This crude and vague conception of the old Egyptians seems the more remarkable because the nostrils were the route by which the brain was removed in the more expensive modes of the universal practice of embalming the dead. This book was supposed to have been written, or rather compiled, at least 1,500 years before the Christian era, or about 200 years before the exodus of the Israelites. When we come to search the *Susruta*,† the most accessible of the old Hindu books of medicine of immeasurable antiquity, we find not a glimmer of an idea of nasal anatomy. We find ourselves quite at home, however, when we note that their ignorance of anatomy was counterbalanced by the dogmatic assurance with which they discoursed as to disease, and especially as to its cure. There were thirty-one diseases of the nose. Although the cure for some of them was likewise applicable to "a morbid baldness and a reddish yellowness of the hair," a careful perusal of the description of the local therapy will convince the unprejudiced critic that, barring the compressed air spray, it seems to have been about as far advanced as much of our present non-operative treatment. I have, however, limited these remarks to a consideration of the anatomy of nasal catarrh as revealed in ancient medicine. As to this, we have seen the poverty of the Oriental records. This condition of ignorance is amply explained by the horror with which the Egyptians and Hindus alike regarded those who had been defiled by the contact of a dead body and by their reverence for live animals as the hosts of the transmigrated souls of the dead. This prejudice passed with their civilization into the Greek world of science. Vestiges of it still linger with us. There is a hint as to the origin of Hippocrates's idea of the source of catarrh to be found in Herodotus (Lib., iv, cap. 187):

"The Libyans, when their children come to the age of four years, burn the veins at the top of their heads, others burn the veins about the temples. This they do to prevent them from being plagued in their after-lives by a flow of rheum from the head, and such they declare is the reason they are so much more healthy than other men."

Herodotus shows great perspicacity in attempting to forestall attacks upon his veracity in this

matter, for he has not escaped charges of mendacity from historical critics. "In all this," says he, "I only repeat what is said by the Libyans." Herodotus would be astonished to-day in visiting the sublunary world to find that the application of this Libyan practice had in adults been transferred from the top to the lower surface of the cranial cavity, and that we still interfered at the age of four to prevent the flow of rheum, and that we still advanced claims for results which no self-respecting Greek could unhesitatingly accept.

Turning now to the real and the pretended writings of Hippocrates, we there find a plainer indication of that error as to the origin of nasal and other catarrhs which lingered in medicine for more than two thousand years after the death of the sage of Cos. There is, however, as we have seen, good reason for believing that the idea existed in a still more hoary antiquity, in the medical beliefs of the earlier civilizations which flourished before the birth of modern history along the banks of the Nile and the Euphrates. I refer to the doctrine which taught that the cranial cavity was the origin of catarrhal discharges. Wherever Hippocrates may have derived the idea, it takes shape in the conception of the brain as a gland which not only sucks air, odors, and moisture up through the sponge-like bones and the filter plate of the ethmoid (*The Flesh*, No. 16), but there redistills them into humors which trickle back through the cribriform plate to various localities. He names seven:* The eyes, the nose, the ears, the stomach, the throat and lungs, and the hips (*The Glands*, ii). The acrid humors were distilled to these parts by various routes, all starting from the brain. When we realize that the ancients, the Orientals, Hippocrates, Galen, and their followers knew nothing of the muciparous glands, and of course nothing of the functions of these microscopic structures, and when we realize the absolute mental necessity to every observer of finding some explanation of the origin of the secretions which bathe, not only the respiratory tract, but the whole gastro-intestinal mucous membrane as well, it is not difficult to understand the dawning intelligence of primeval man accepting the perforations on the floor of the cranial cavity in the dried skulls as having been made for the trickling of fluids to parts below. In the Norse and Lombard legends we read of savage chiefs drinking from the skulls of their enemies, and we know they must have used the upper segment, and we can easily imagine the train of thought as to the function of the holes in the lower half, unfamiliar as they were with the fresh specimen.

*Occasionally one may find in the Hippocratic writings, but especially in the fragments preserved from the rival school at Cnidos, evidences of the Hindu and Oriental origin of Greek medicine in the respect which is paid to numbers, each locality or each influence being credited with a certain definite number. Thus there were so many diseases of the nose and the lips, and so many of the liver in the *Susruta*, etc.

* Rendered into German by Dr. H. Joachim, 1890, *vide*, p. 181.

† In the Latin translation of Hessler, 1844.

Much of this idea is to be found in those Hippocratic treatises which are supposed to have been of later date than the founder of his school, but it is clear from a passage in the *Airs, Waters, and Places* that Hippocrates himself, to whom all critics ascribe this book, not only believed that stomach-catarrhs had their origin in the head, but also appreciated the clinical fact that nasal catarrh produced gastric symptoms: "Their bellies are subject to frequent disorders, owing to the phlegm running down from the head." Even Aristotle, great biologist as he was, made the egregious blunder* of asserting that at the top of the nostrils there was a kind of lid which rose at the time of inspiration to let in the odors. Plato elaborated this idea still further by supposing that odor was of the nature of fire and ascended upward. In this we recognize Pythagorean ideas derived, perhaps, from the ancient Magi of the Orient. In Celsus, the only Latin medical writer we now possess who wrote in the faultless classic idiom of Virgil and of Horace, we find no variation from the earlier Greeks in this matter. The conception of the nostrils as the cloaca of the brain was not only accepted by learned men and physicians, but it permeated the structure of the ancient Greek tongue, as seen in many colloquial phrases, the same term being applied to a man's stupidity as to the evidences of nasal obstruction. In the Latin language this was carried to still greater lengths and is frequently noted in the poets and satirists. Horace, Juvenal, and especially Martial present numerous instances of it. The term *aproxia*, having had no such ancient anatomical affinities, has been of late years selected from a Greek lexicon, and with the free and easy way of medical etymologists, the Latin suffix, *nasalis*, has been tacked on it and the phrase has been erected into a term for a clinical phenomenon which the Greeks indicated by the name *coryza*, applied to a driveller. In the Latin classics *emunctæ naris*† refers to the mental acuteness of the individual, because he was supposed to have the nasal pathway to the brain unobstructed. Martial,‡ from whom one quotes with trepidation in mixed company, indicates a prejudice against a mental, rather than against a physical, infirmity when he writes "*nasutum volo, nolo polyposum*."

In Galen's time, through the schools of Pergamos and of Alexandria, enormous strides had been made in anatomical knowledge. We can imagine the horror with which the Oriental soul viewed these strivings after light in old Egypt under the Ptolemies. We get a glimmer of it at Rome in Celsus's narration of human vivisection as practised by the early Alexandrian anatomists. A glance at the headlines of a modern yellow newspaper is enough

to give us a hint as to the impulse for such gossip.

Notwithstanding the great progress made, if one will keep in mind the quotation I have cited from the Papyros Ebers one will see its trace in Galen's description of the anatomy of the internal nose in the *Instrumentum Odoratus*: "Each one of the nostrils is divided at the upper part into two portions. One of these divisions leads to the mouth and the other one upward, so that it starts from the entrance and ascends to the brain itself. From this there are two hollow oblong offshoots [olfactory lobes?] having their beginnings from the anterior cavities and reaching to that part of the skull where the nose has its origin. At this situation are the sieve-like bones [the ethmoid] the function of which the name indicates, and the thick membrane with which that of the bones is continuous is pierced by many openings. Through these the thicker parts of the excretions from the brain are transmitted, for things more vaporous mount to the sutures and escape from them. The thick part, such as phlegm in coryza, is carried downward, having first passed through the dura mater. After having been strained through the sieve-like bones, it passes into the channels of the nose, some being expelled anteriorly by blowing and some running down behind into the mouth." We see, therefore, that Galen's anatomy only made more specific and definite the old erroneous conception of the Orientals and of Hippocrates. Not only was his conception of the cranial cavity as a watering pot for the rest of the body unshaken, but it was apparently rather made the firmer by the frequent examination of the colander plate of the ethmoid in the dried skull.

Before passing directly to the renaissance of anatomy among the other arts and sciences over a period of 1,400 years, we must pause a moment to note the observation of Theophilus, a physician bearing a military title at the court of Heraclius, the Emperor of the East, at Constantinople in the seventh century. He, indeed, accepted the doctrine of Hippocrates and Galen, that the inspired air passed to the brain through the cribrous plate and the fluid secretions dripped back into the air and food ways, but he recognized the olfactory nerves as such and as extending to the "foramina of the nose," the perforations of the cribriform plate. Galen had not accepted them as nerves, and Theophilus, although regarding them as the first pair, did not observe the filaments passing through the perforations.*

Nine hundred years later Berengar del Carpi, professor of anatomy at Bologna (1502-1527), who did a thriving business in Rome curing the clergy of syphilis† with his new-fangled mercury medication, was the one who, despite his subservience to and

**De Anima*.

†*Horatii Satirar*, I., iv. 8.

‡*Martial*, *Epigram*, Lib. XII., xxxviii.

**De Hominis Fabrica*, Lib. III, Paris, 1555.

†*La Vita di Benvenuto Cellini etc.* (Guasti, 1800).

reverence for Galen, made more original observations on the anatomy of the nose and throat than any man of whom we have any record. He denied that the cribriform plate was pervious to the passage of liquids.* The first to describe the accessory sinuses in a recognizable manner, he declared that the fluids in the cranial cavity found their way through the sella turcica into the sphenoidal cavity, and thence passed downward as a catarrhal discharge. He inferred this from his mistake in regarding the nutrient canal of the bone as the channel of communication. Clinically, we are in a position to-day to assert that the sphenoidal antrum is the occasional origin of post-nasal catarrh. The pituitary body being recognized as the part of the brain which elaborates this fluid, and having its site in this locality, seemed to lend force to this suggestion. Zerbi, who lived in the latter part of the fifteenth century, a little before Berengar, had noted the filaments of the olfactory bulbs, but supposed that they were processes of tissue through which the cerebral secretions dropped as through a seton. Achellini, who died in 1512, described their distribution to the nasal chambers, while a few years later, in 1542, the year in which Vesalius's great work first appeared, Massa recognized them, if not as nerves, at least as structures by which odor was perceived.† Thus we may conjecture that, in the time of Berengar, as well as in that of Vesalius, it was supposed by many that the holes in the cribriform plate were not pervious *intra vitam*. Vesalius sought an escape for the cerebral fluids and the channel of the origin of nasal discharge in the lacerated foramina at the base of the skull. By his advocacy of this he embroiled himself in a fierce controversy with his teacher, Jacob Sylvius, for thus venturing to impugn the authority of Galen. Sylvius declared that he knew Galen was right because he had traced small hollow channels from the ventricles of the brain through the cribriform plate.

I cannot venture to impose on your patience by even alluding to the variations, modifications, and contradictions of these ideas. Suffice it to say that the perusal of the works of these earnest seekers after the truth should inspire us with humility, for the thought will obtrude itself upon the consciousness of us all that in all probability another 400 years will show that we are as far astray in many matters as they were.

I need only mention the curious fallacy of Willis and of many of his contemporaries. They elaborated the old error, which had long existed, that the nerves were hollow tubes or porous fibres. Through these the vital fluids of the brain‡ were

dispatched to every organ and region of the body. Willis was contemporary with Schneider, but apparently was little influenced by his teaching. Before the appearance of Schneider's works, that is, before about 1660, we find his ideas nascent in the seething scientific activities of the period. Indeed, in a work published more than a hundred years before—in 1546—Cardanus* suggested that the mucus which ran down from the nose did not really come from the brain, but very often was produced in the secretory organs of the nose and mouth. Van Helmont, who died at the age of eighty in 1644, twenty years before the publication of Schneider's books on catarrh, had a less accurate notion of the origin of pharyngeal secretions than Cardanus, but he, at least, an advocate of the local origin of the disease, refused to believe that they came from the brain. He asserted† that they arose from the superfluity of aliments which remained adherent at the upper part of the pharynx. Wepfer, whose work was published first in 1658,‡ has the following note of his refusal to accept current doctrines as to the origin of catarrhs and the destination of vapors. He said that the latter were supposed to extend from the stomach to the head, "just as though the head was to be compared to the smoky roof of a house or the lid of an alembic," but he denied the possibility of this except by the way of the carotid vessels. It must be remembered that, in spite of Harvey's work, published thirty years before, the idea of the arteries as air-carriers still lingered a little, and we have seen Vesalius suggesting the lacerated foramina through or near which the great vessels pass as channels of communication for the fluids and vapors of the brain. "At the base of the brain," continues Wepfer, "are the thick meninges, at that point most impenetrable and of almost four times the usual thickness. The cranium in the live animal or in the animal just dead, and not yet deprived of all the membranes, should not be thought to be similar to the representations of it in the books. All those holes which are seen at the base especially are occluded, so that no ingress or egress is allowed to the vapors or the humors, as may easily be determined." In this *præ-Schneiderian* treatise§ we note the rule that great steps forward are the products of the age rather than the sole discoveries of any one man.

A view of the voluminous writings of Conrad Victor Schneider may well appall the stoutest heart. Never was the kernel of an important fact so wrapped up in the husks of verbosity, but, notwithstanding this, his books are far from being abso-

**Contradictiones Medicorum*, Lib. II., tr. I., cap. 15, p. 457, quoted by Sprengel, *loc. cit.* French translation of his *History of Medicine*, iii, p. 280.

†*Opera omnia*, Catarrh. Delirament. Ed. 1682, p. 412.

‡*Observationes anatomicae ex cadaveribus eorum quos sustulit apoplexia*.

§Schneider had then (1655) only just published his treatise on *The Cribriform Bone*.

*Carpi, *Commentarii anat. munitur*, 1521.

†Massa, *Epist. med. et. philosoph.*, 1542, Epist. VI., p. 58.

‡Willis: *De Cerebri anatome*, 1664.

lutely unreadable, so far as the style is concerned, which is more than can be said of those of some of his countrymen in his day and later. He definitely and unmistakably pointed out the true condition of affairs and asserted that the base of the cranium was impervious to fluids and that the amount of fluid in the cranial cavity was insignificant. He taught that the catarrhal discharges came from the mucosa itself, in health as well as in disease, reporting an autopsy on a horse dead of glanders in which the brain was normal and the nasal mucosa the seat of the disease alone. He named the structures which gave rise to the mucus in the nose the anterior and posterior pituitary membranes, understanding by the latter what we now recognize as the pharyngeal tonsil. He intelligently described this structure as existing behind the *sæptum*, but he seems to have confounded the hyperplastic with the normal state. He likened the structure here to that of the tonsils. He declared that every part of the mucosa, when pressed, even in the dead subject, gave issue to a glairy discharge. Although he thus recognized the mucosa as the origin of the secretions which bathed its surface, he did not mention the mucous glands by name at all.

It was only by the development of knowledge as to these that the doctrines of Schneider came to replace those of Galen and Hippocrates. That is a part of the interesting story which the limits of time and space do not permit me to relate. Unfortunately, the vast majority of workers in science do not realize the absorbing interest that the study of the progress of the evolution of medical knowledge and medical thought possesses. They do not appreciate the enormous advantages such study offers to the modern worker at the problems which we meet face to face every day. They are the same problems in different phases and under different aspects with which were concerned the eager scholars who gathered around the dissecting tables of Vesalius and the active minds of the virile Greeks who clustered about the robed figure of Hippocrates at the shrine of *Æsculapius* in the Isle of Cos.

Testimonial to a Physician.—Dr. J. Finley Bell, formerly of Easthampton, L. I., but now of Englewood, N. J., was pleasantly surprised the other day. He gained considerable prominence last winter through the typhoid controversy. It was by his instrumentality that the State board sent an expert to Easthampton to make an investigation, and his untiring efforts against many odds to have proper sanitary measures carried out in the interests of the health of the town made him so unpopular among a portion of the townspeople that his practice was seriously affected. Since his departure his friends have sent him a letter testifying to his ability and earnest work in Easthampton, and enclosing a check for \$1,310.

ADDRESS IN PATHOLOGY, DELIVERED AT THE MEETING OF THE TEXAS STATE MEDICAL ASSOCIATION, AT GALVESTON, TEX., APRIL 26, 1901.

By ALLEN J. SMITH, M. D.,

CHAIRMAN OF THE SECTION ON PATHOLOGY.

Permit me, in behalf of the officers of the Section in Pathology, to thank you for the honor expressed by our appointment and to congratulate you and ourselves upon the maintenance by the association, for the past nine or ten years, of this particular sectional work. Texan physicians as a class are marked, as are Texan citizens generally, by their intense individuality and close adherence to that which is directly practical; and it means much for the pure study of pathology, to which so few of your number have directly applied themselves, that this organization should have for so many years so recognized its importance in the well-balanced medical education as to devote the attention of a separate section to its consideration and so large a part of the time of the association to its presentation before you.

The time is well within the memory of many of the association when this branch was not regarded as of sufficient importance and practical value to the active physician to require its adoption in the school curriculum; and even to-day there are more schools than one, of well-recognized merit, in which it is represented by a lectureship whose instruction is open to the voluntary attention of the student, but in which a trial of his knowledge of the subject is not regarded as essential to graduation. Your adoption of the branch as an integral part of medical knowledge is doubtless largely due to your appreciation of the work of a former honored member of the association, Dr. George Dock, now of the University of Michigan; but much more to your appreciation of the absolute necessity of a clear understanding of the principles involved in the alterations of structure and function of diseased parts for the thorough grasp of the clinical picture afforded by the sufferer before you. Of course, ever since medicine and surgery were taught in any appreciably systematic manner, a certain amount of attention has been given to the discussion of those features of disease to which pathology is especially directed; even in the days when medicine was essentially empirical, the teacher of practice could not afford to neglect some discussion of the alterations which had come to be recognized as connected with the diseased state. Even in the oldest text-books upon medicine and surgery of our modern profession, while the greatest attention was given to a résumé of the symptomatology, diagnosis, prognosis, and treatment of a given affection, there was neverthe-

less a more or less careful indication presented of the anatomical condition of the diseased parts as exhibited upon *post-mortem* examination. In a large sense these changes were looked upon as merely coincident phenomena; they were less regarded than what we now well know to be often no more than their secondary manifestations, the symptoms; the latter were accepted more or less unquestioningly as part of the whole, and without much question as to their relations; and probably the greatest value was attached to the anatomical alterations as a means of *post-mortem* conclusion as to the type of disease which existed in the living patient.

The medical training of the first three quarters of the past century presented a curious gap. The student was carefully instructed in those matters of normal life, anatomy and physiology, which were and are appreciated as basal to the understanding of the diseased condition; and then immediately, without consideration of the elementary nature of the disease process, with its ever-present "hows" and "whys," he was led to the clinical picture of the symptoms, memory of a more or less defined group being demanded without reason for their manifestation. This gap it is sought to fill to-day by the special study of pathology. Its appreciation demands just the same fundamental knowledge of the studies of normal life; even more, as our knowledge of disease extends to more and more of the variations in our normal relations with all that surrounds us, of course we find it desirable that these normal branches of the curriculum should support with broader and broader foundation the superstructure of pathological and clinical knowledge. Students are often heard to decry the value of chemistry in practical medicine. They assert that their preceptors knew no chemistry and that nevertheless they were good practitioners. This last may be quite true; there are many factors which go to make up the elements of a good practitioner and some of them are not learned in the medical college. But would not a thorough knowledge of such chemistry as is known, have made of those very preceptors even better physicians? Is it of no importance to be able to analyze the intricate problems of disordered digestion and knowingly to apply those chemical ingredients wanting, or to correct those in excess? Is it of no benefit to the patient that his physician is able to separate the various urinary albumins and appreciate the difference of clinical significance of such symptoms? Has not chemistry played an important rôle in the appreciation and development of the widening list of specifics which the bacteriologists are offering for the prevention and cure of the infectious diseases? It is true that the mole feels no need of a lantern. And men who will not en-

deavor to do all that others can do and do, will not long in these times be permitted to regard themselves in the foreground of activities. If one is not willing to progress or to endeavor to progress, his retrogression is as sure as the disappearance of the stationary mile-post from the view of the passengers on the rapidly moving train rolling by.

Pathology has not, and probably never will, clear up all the mists from our power of recognizing the principles of disease and their bearings. Just as the study of the elements of normal life is the darkest for biologists, physicists, and chemists, so the elementary pathological processes are among the least understood among the problems of the natural history of disease. Until the chemist can certainly point out the construction of normal protoplasm, the biologist solve the question of simplest life, and the physicist the nature of force, so long it is more than excusable that the modifications of these principles underlying diseased life should be difficulties in the way of the pathologist and clinician; but it is none the less inexcusable that they should fail to endeavor to grasp what elements they can of the nature of degenerations and infiltrations. As may be apprehended, all bears upon actual practice in some way; and, although there must always remain great stretches of ignorance, each advance, trivial though it seems, must add to the conviction that all medicine is not made up merely of the memory of medical nomenclature, the mental grasp of outlines of symptom-groups, and the recollection of anatomical relations—but that all knowledge of living things bears directly upon its efficiency. Surely enough it appears, even in the blindness which has been entailed upon us, that there is a system in all life; and the closer we approach, no matter from what point of attack, the more certain will become our power of predicting the whole course of the existence of the individual, the more secure our apprehension and avoidance of disturbing elements, and the more efficient our measures for rectifying their influences. No matter how incomplete may be the state of our knowledge of pathology, of the natural history of disease, no matter how little it solves the problems of the practitioner at the present time, it has accomplished at least enough to prove its right to be regarded as a proper connecting link between the pure normal branches of our study and the actual practical phases of medicine and surgery. In such a scheme it at least removes the dangers and tedium of mere rote of memory, and conducts consecutively from cause to effect, from stage to stage of disease, and thus often opens broad possibilities for avoidance of danger and removal of chance of disaster. While in a very distinct sense its advances have depended upon discoveries in the correlated sciences, on the other hand in just as direct sense are the prac-

tical phases of our profession indebted to it for their own advancements in the marvellous improvement in hygiene and the treatment of disease. The whole system of antiseptic and aseptic surgery, antiseptis in the treatment and prevention of non-surgical disease, has followed directly the development of one special branch of pathology, bacteriology; and to-day the hopes of all people are turned for the eradication of the infections to means to be arrived at by the experimental study of the same branch. Who can say, too, that it has not aided in the intelligent care of these same diseases that we should appreciate the influences of the bacterial poisons and the heightened temperature in determining degenerative changes in the most important organs, lending us a key to the inefficiencies of the circulatory, secretory, digestive, and nervous apparatus, in such affections, keeping the practitioner ever on his guard for evidence of the approach of such inefficiencies, and affording him intelligence in the measures he adopts to avert the dangers of such failures? What has come of the great stumbling block of tumor development since Virchow, followed by hosts of eager investigators, turned inquiring attention to their peculiarities? One by one the different growths of the so-called specific granulomata have been withdrawn to a fairly appreciated class; and to-day the only dreaded members of the original group seem hanging in the same balance. When cancers and sarcomata are proved, as is almost sure to be the case, to be the result of parasitic influence, the remainder will have lost most of their old-time importance and menaces, standing merely as curiosities of faulty development and only demanding attention when involving some important part. The quarrels of Cohnheim and Stricker over the essential values of the white blood cell and embryonic connective tissue corpuscle in the regenerative steps of inflammation, perhaps directly but little influenced the thought of the general practitioners; but in a wide sense they did decidedly influence his opinions in that they broadened the whole knowledge of inflammation. And it has been largely the study of the leucocytes as phagocytes by Metchnikoff which has led to much of our knowledge of disease destruction and elimination from the animal body, and indirectly to a wide range of studies of clinical value in the cellular types of the blood and exudates in various conditions. The unravelling of the anæmias, what little we know of the essential processes at work in the development of diabetes and a number of the general diseases, the solution of the tangled mass of the digestive disorders, a whole host of diagnostic and prognostic signs, have all grown out of this supposedly unpractical branch; and few men to-day insist that the safest, truest practice of medicine and

surgery rests upon any other support than a firm ground in pure pathology.

From year to year it has been customary that your chairman should call to the attention of the association such advances as may offer special interest or are of particular importance in the elucidation of standing problems. A year is a short time for material advance; and only from time to time is it possible to make such announcements as seem worthy of general consideration; yet from decade to decade there are few periods in recent times which do not offer treasures in abundance; and what has characterized the past five or six decades in pathology I feel is but the forerunner of what this new century must produce. Advance, even if at this or that particular time it halts, is sure; and therefore no year can be safely passed by lest some contribution which may eventually be of use should be neglected. Your chairman believes that of the work accomplished in the past year that of the endeavor to determine the importance of certain low forms of life as transporters of infection has most deeply stamped the closing member of the completed century. As is well known, this work has been especially directed to the demonstration that malaria is at least in some, if not in all, instances transmitted from the diseased to the normal individual through the agency of the anopheles and perhaps other types of the mosquito. The idea grew originally, so far as the speaker is aware, from the demonstration, in 1884 by Manson, of such agency in the transmission of the filarial embryo from the blood of an infected individual to water by the mosquito (*Transactions of the Linnean Society of London*, 1884, pp. 10 and 367. The possibility of such relation between the mosquito and malaria was suggested upon theoretical grounds by King, of Washington, in 1883-84 (*Popular Science Monthly*, 1883, quoted by Woldert in the *Journal of the American Medical Association*, 1900, No. 5; Philosophical Society of Washington, mentioned by Howard, the *Century*, April, 1901), but the suggestion was not followed by any particular interest; and it was not until Manson and Bignami, in recent years and independently, advocated the view, that any activity in inquiry was elicited. The special prominence given the subject during the past several years has doubtless arisen from the activity of the schools of tropical medicine fostered by governmental influence since so many of the Anglo-Saxon nations have been engaged in tropical and subtropical extension. The present opinion of those engaged in this study points to the idea that in malaria the mosquitoes of the genera anopheles, and possibly psorophora and others, represent an intermediate host for the life cycle of the malarial hæmatozoon found in human blood; and that, in this, the female mosquito alone is concerned.

It is believed that mammalian blood is needed for the full development of the ovarian gemmules of these females and that their habit of biting human beings is in response to a natural demand for such elements of required nutrition; that should the human being from whom the blood is withdrawn be the subject of malarial fever, some of the germs of the disease find their way with the blood into the alimentary canal of the mosquito. There, it is held, these germs invade the cells surrounding the alimentary canal, multiply, and in time enter into the salivary secretion. Should this same mosquito then attack a sound human being, it is thought that, with some of the salivary fluid passed along the labial groove to the site of puncture, the germs find their way into the body of the non-diseased human being and there take up a new cycle of their existence. The work of a large number of observers all over the world is following closely and with corroborative evidence in the same direction as these suggestions; and it would seem that in the future the matter of dealing with malaria will largely resolve itself into one of protection against mosquitoes—protection of the well from such mosquitoes as may already be infected, protection of the malarial subject from the mosquitoes lest the latter become infected; and this matter of protection must be largely one of the proper screening of houses and beds, of protective clothing for the individual during the day, and of the destruction in some way of the breeding places of malaria-carrying mosquitoes. Malaria and the mosquito are not the only features opened up by this line of thought. The brilliant experimental work of some of our American army surgeons, in Cuba, in the matter of mosquitoes carrying the germ of yellow fever, belongs to the same endeavors; and the question of the agency of coprophagic and coprogenetic flies in the convection of such diseases as typhoid fever, cholera, and cholera morbus, is in the same category. Your speaker has several times noted the presence of *amœbæ* very like, if not identical with, *Amœba coli* in the intestinal contents of cockroaches used in class demonstration; and doubtless the further study of fleas in relation to bubonic plague will lead to the same demonstration of some such influential relationship.

These are but a few of the features of the past year's problems; but they indicate a wholesome activity and doubtless embody much which eventually will redound to the advantage of the profession and of humanity. They show, too, in a striking manner, how from time to time the energies of this or that group of workers are concentrated along certain lines, and how thus definite schools are built up. For a long time, following upon the heels of Virchow and other masters of structural pathology, the ideas of pathologists were entirely confined to

attention to the character, size, number, shape, and position of various types of cells found in disease; and the group thus engaged became known as the *school of pathological anatomy*. For a long time these structural changes alone occupied the attention of the student of pathology in the laboratories of schools, and even now their importance is recognized in the predominance in the teaching of pathological anatomy, gross and minute, in every school of medicine. With Pasteur, Koch, and the long train of bacteriologists, arose the *school of ætiology*, to which so much of the advance in the past twenty-five years must be credited; and its mark is also stamped clearly upon medical education in the importance attached to the teachings of the bacteriological laboratory. The *school of pathological physiology* has been not one whit behind, even though its problems are more difficult of approach and solution; and in evidence stands the wide range of experimental medicine, for which humanity is indebted to this promising branch of study—for example, our present knowledge of the intricate structure and workings of the central nervous system in health and disease, that of the digestive and nutritive affections, of modern surgery of the abdomen and brain, of diseases of the internal or blood secretions, of the development of monstrosities, and what little we know of the elementary pathological processes and their workings upon the general system.

To-day these three fundamental schools of pathology are reaching out more and more. The idea of man as one of the general group of animals is taking stronger and stronger hold upon pathologists; and the recognition of this relation opens broad fields for research in every direction. Some of John Hunter's best work upon the diseases of bones, he illustrated by the similar changes he met with in diseased tree-branches and twigs. Some of the earliest work in bacteriology concerned the solution of the problem of anthrax in sheep; and what, in bacteriology, has not been influenced by the solution of this sheep disease? Intermediate hosts in the shape of a number of the lower animals have long been known in connection with important human parasites; and the recent and widely discussed rôle of insects and other low forms of life as transmitters of infections is merely an advance in the same direction. Diseases and disturbances of formation, such as tumors and monstrous growth, identical or analogous in nature to those obtaining in man, are ever occurring in the animal and vegetable kingdoms about us, where intimate study of the changes concerned is far more possible than in the human being. We have been neglecting the source of a flood of sidelight in too strictly confining our studies to human medicine alone. One man cannot know it all; but some men can, and are following along this line of thought and

searching out the relations of low forms of life to human disease and the relations of disease in animals to that in man. Thus there is growing a definite *school of comparative pathology*, destined in the next few years to bring to man aid in the reading of the dark chapters of disease-acquirement and progress. Last year, your speaker almost begged, without avail, three or four of our large medical publishing houses, one after another, to undertake the publication of the translation of Blanchard's *Treatise upon Medical Zoology*. In less than five years these same houses, it is safe to predict, will be seeking far and wide for the honor and advantage of publishing such works.

In another line our work is moving with slow but no less certain progress. Embryologists, like Minot (*Science*, March 29, 1901), are pointing out how changes we have been regarding only in their relations to actual disease are part and parcel of the normal life and development of the individual—not perhaps that we have not known of these facts, but that we have disregarded them. Body development is by no means a uniformly progressive process; there are at almost every stage disintegrative and destructive changes proceeding to make way for the more fitting structure of our advancing growth, or as part of the natural decay of the body apart from active disease. Tissues of lower degrees of differentiation always possess more potentiality of deviation in development than those of the highest differentiation. Note, for instance, how rarely we meet with tumors of ganglionic nerve elements as compared with the less differentiated forms of epiblastic cells; or how rarely we encounter tumors of the striated muscle elements as compared with the lower types of the mesoblastic cells. May I not suggest, too, that much of the favorable prognosis we give in the degenerative affections of important organs, as the kidney, liver, or heart, in children, as compared with the probable persistence of the same diseases in adults, depends, not on the severity of the disease, but upon the fact that in the child there are yet to arise new renal units, new liver lobules, new heart-muscle fibres? The Malpighian tufts and tubules of the child's kidney are of the same size as in the kidney of the adult; the added bulk and weight which growth will bring about depend upon the development of new tufts and new tubes, and these may take the place of those lost by an acute attack of Bright's disease. But in the adult there are no new elements to grow, as in the child, where along the border of every foetal renal lobule these structures are forming; and the hope of the child, to outgrow the disease, is lost to the man. These and other lines are being developed by the group of workers in a branch which may be termed *embryological pathology*.

I cannot in justice take up more of your time. I have said enough to indicate my hopes for the future, and to point out the immediate lines along which progress is trending. There is no danger of our learning too much, and we are never going to arrive at the time when disease will be eradicated; and there is never in this world going to be a time when physicians will not be needed. We shall merely change from the dreary cold rides on winter nights through mud and snow to the patient at the end of the ten-mile road who is never known to pay until his crop is sold, to the habit of meeting all our patients at the office and accepting commensurate retaining fees for advice as to the daily conduct of life so as to avoid malady. But that advice will not be followed, and such Utopian days cannot arrive. But whatever knowledge is attained will help us, and make more and more sure of result our efforts to correct physical wrong. Most of us cannot turn back from our ever-pressing duties to best prepare ourselves for the ready appreciation of the advances in these ever-widening fields of medical science; and there are few among us who do not feel within us the wish that our medical education had been built upon a broader scientific attainment than that possessed when our individual medical studies were undertaken; and there are few among us, who care, who are not always struggling with fundamental problems the solution of which we feel we need, and which we fully appreciate should have been worked out long ago. To men knowing and feeling this, as I do myself, I am sure I shall not be misunderstood when I close these remarks with this earnest advice: If you have boys to follow you in your profession, do not let a single one take up medicine until he is well grounded, not only in the ordinary branches of polite education, but certainly also in the fundamental sciences of chemistry and general biology (especially zoology), and if possible in general histology and embryology also.

St. Luke's Hospital; Appointment of Consulting Surgeon.—Dr. D. Bryson Delavan has been appointed consulting surgeon, department of laryngology, St. Luke's Hospital, New York, in place of Dr. George M. Lefferts, resigned.

Association Française de Chirurgie.—The fourteenth annual meeting of the association will be held in the hall of the Faculty of Medicine, Paris, on October 21st under the presidency of M. Lucas-Championnière, the opening session convening at 2 o'clock in the afternoon. Two special subjects have been designated for discussion, the first being the Surgery of the Spleen, the discussion on which will be opened by M. Férrier, of Nancy, and the second being The Treatment of Tuberculous Odenitis, M. Aug. Broca, of Paris, opening the discussion.

NEUROSES AS SEEN IN ORTHOPÆDIC PRACTICE.*

By B. E. McKENZIE, B. A., M. D.,

TORONTO,

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A CONSIDERABLE number of affections clearly related to the nervous system and manifested by disturbance of functional control are not marked by changes in the central or peripheral nerve structures as yet discovered. These conditions have been recognized and are referred to as neuroses. It has caused surprise to know how largely these conditions force themselves prominently into consideration in many of the cases occurring in orthopædic practice.

In this class of patients the spine is the part most commonly complained of; there is no joint or part of the body, however, which may not be named as the seat of the supposed disease. It is not my purpose in this paper to discuss the admittedly difficult subject of neuroses exhaustively, but to report some striking examples and to describe especially one method of treatment which has been found successful.

CASE I.—L. D., aged twenty-two, a farmer's daughter, said that she had been unable to work for six years, that she had suffered with pain in the back and head and inability to exert herself, that for three months previous to consulting me she had been unable to help herself, and that her mother had been an invalid for ten years and was said to be suffering from "spinal disease." This young woman was brought to my office in the ambulance, having been brought from her home to the railway station in the country on a stretcher. Upon my requesting her to disrobe that I might examine her spine, her aunt said that she was unable to stand or even to hold up her head. By insisting upon her doing as I requested, she did stand up for examination. I was unable to find any evidence of organic disease. She was of good color, though perhaps rather pale; muscles well developed; a fair amount of adipose tissue. She was symmetrically built and her heart and lungs were normal and acting slowly. I assured her father and aunt that she had no serious illness, but that I could not consent to take her under my care except on the condition that she be left in the hospital absolutely under my direction, and that I could not allow her to make or receive visits. These conditions were at once agreed to, and within an hour of the time when she came into my office she walked up two flights of stairs to a ward in the hospital. A few days afterward she was taken into the gymnasium an hour each day, and work at first light, but increasingly difficult, was given until she was able,

with other patients, to do all that was required of her. Treatment was continued for a period of six weeks, care being taken to increase constantly the amount and the difficulty of the work done. At the end of the time she was spoken to very plainly regarding her condition and tendencies. She returned home and has now for more than a year and a half continued well and is working hard.

CASE II.—E. G., eighteen years old, rather anæmic and of nervous manner. At fourteen years of age she complained much of headache, backache, and general lassitude, so that she was kept from school most of the time. During the four years that have elapsed both she and her family have considered her unable to work; and during this time she has been examined by a gynæcologist, who removed one ovary; an orthopædic surgeon, because she was lame and believed to present symptoms of hip disease, who assured the family that she had no joint affection; and a neurologist, who said he believed her condition was one of hysteria.

At the time of examination, in April, 1900, I found her very lame. Her limp, however, was very different from any that I had ever observed. Though she had walked with marked lameness for some years, yet there was no evidence of any inflammatory condition of any joint or of other lesion, and but very trifling atrophy. The only possible organic cause which could be found upon examination was a foot considerably pronated. Whenever any part of the leg or foot was touched, however lightly, the entire limb was thrown into violent and erratic convulsions (I do not know what better term to use, so irregular and so extreme were the excursions of the limb). She had a systolic murmur; otherwise there was no evidence of organic disease. I expressed the opinion that the case was one of hysteria and advised that she come to the Orthopædic Hospital in order that she might be completely under control. Very definite and precise instructions were given to the directress of the gymnasium to the effect that whatever work was assigned must be done with great care, beginning with the simplest forms and movements, calling gradually into exercise each individual extremity, and seeing that excuses were not accepted in place of work. This course was pursued during the month of June, frequent observations being made, but disclosing no real cause for her lameness except the undue pronation of the foot. This, I am disposed to think, was acquired, having arisen from her manner of walking for so long a time. She proved a very docile girl, but was ready on the slightest provocation to burst into hysterical weeping. At the end of the month her limp had almost disappeared, her health and color had greatly improved, and she had been taught to place the unduly pronated foot and walk with it in a correct position. As she was to return home to her mother at this time, I entertained fears that she would relapse during the two months which must pass by before she could come back to her work in the gymnasium. Careful instructions were given to her mother and to her medical attendant, which were scrupulously carried out, in consequence of which she returned in September, showing that improvement had continued. The instructions were to the effect that the girl's attention must not be allowed to centre upon her own troubles, but that she must be assured that her com-

*Read at the fourteenth annual meeting of the American Orthopædic Association, held at Niagara Falls on June 11, 12 and 13, 1901.

plete and permanent recovery was in certain prospect and that she must learn to rely upon herself.

On her return to the hospital, in September, she was subjected to the same discipline as formerly for four months, at which time she had very greatly improved, and could receive ordinary massage without manifesting any reflex movement in the limb which formerly could not be touched even with a feather without manifesting the most exaggerated reflex movements. In her gymnasium work special care was taken to have her take exercises demanding the balancing upon each limb alternately, also the alighting upon the feet from a height, as in vaulting, and in suspension by the arms, etc. These she soon learned to do without experiencing any inconvenience and without the appearance of reflex movements in the affected limb. Considerable difficulty, however, was found in teaching her to run. She was taken out upon the lawn, and with her classmates was engaged in various games. Considerable ingenuity was required to get over the apparently insuperable obstacle presented by running. The quick movement from the sound limb to the affected one appeared to give her a sudden spasm and to block for the moment any further progression. Perseverance along this line and the full engagement of her attention and the arousing of interest in the games finally overcame even this difficulty. Her color and general health were much better, and since her return home she has assumed the duties and responsibilities of the household. Only a few days ago her medical attendant wrote me saying that her condition had continued to improve. It is now about six months since she left the hospital. Her lameness has almost entirely disappeared. There is simply a noticeable lack of symmetry in walking, so slight that an ordinary observer would scarcely perceive the defect.

CASE III.—M. D., aged twenty-nine years, who three years ago had a carbuncle situated near the coccyx. In giving her history she spoke of "abscess of the spine," and said that some bone came away after the incision. The patient is tall, has very slight muscles and a poorly developed chest, but is of good color and presents no evidence of tuberculous disease. The cicatrix shown upon the spine does not indicate that there was anything more than a small carbuncle. During three years, however, she has worn jackets and braces, has been advised change of residence for her health, etc. She was referred to me in order to have a brace applied before leaving for travel abroad on account of her health. Her invalidism continued up to the time when I saw her, in May, 1900. She then complained greatly of pain in the spine and said that she was unable to work. She was immediately subjected to the usual discipline of the gymnasium, with results as gratifying as in the former cases.

CASE IV.—B. W., eighteen years of age. Had typhoid fever in January and February of 1898. On her recovery from the fever it was found that she was unable to walk or even to stand; consequently she was taken about in a wheeled chair, from which she was carried again to her couch or bed. This condition continued until I saw her, in June, 1899. At that time she presented the following conditions: A rather tall and obtuse-looking girl; knees flexed and could not be extended to more than 120 degrees;

feet in a condition of equinus, the plantar surface being at an angle of 120 degrees with the axis of the leg; muscles symmetrically atrophied; slight disturbance of sensation. The case was believed to be one of multiple neuritis following typhoid fever. The recovery from this condition is generally satisfactory; hence, a favorable prognosis was given. The deformities were easily corrected. During the subsequent months much difficulty was experienced in reeducating the patient to walk. She had already been informed by a number of physicians that she would be a cripple throughout life, and was so fully convinced of this that her lack of cooperation in the efforts made proved quite an obstacle in the way of progress. She was at first held up by the arms and her feet and limbs were moved for her. This exercise was frequently repeated until she began to put forth some voluntary effort. Subsequently she reached a point where she could walk by the aid of crutches. She was then subjected to regular class work in the gymnasium, being allowed to stand supporting herself against the wainscoting, which extended as high as the window-sill. Gradually she was led on from one point to another, it being necessary at every step to direct her will and to urge her forward to renewed effort. It was only after she had acquired the power of moving about independently with considerable security that she seemed to recover some brightness and to manifest willingness to cooperate in the efforts being made. When she had regained the power of moving about so as to take care of herself, she was not allowed to return to her father and mother, who were aged and unwisely sympathetic, but was sent to live with a brother, who was carefully instructed how to deal with her. He found her employment in a factory, in which she continued to work, making her own living and making constant improvement until her recovery has become complete.

CASE V.—N. M., twenty-one years of age. For some years she has been a source of anxiety to her family because of ill-health, which, upon cross-questioning, seemed but indefinite in character. She had been subject to various spells and spasms. Upon physical examination, no organic disease was found. She was brought to the hospital with the understanding that she was not to be visited by her friends or allowed to return home. Subjected to the usual discipline, she became unconscious on one occasion in the gymnasium, but without using any efforts to restore her to consciousness she was ordered to be carried into the adjoining room, where she was left for about two hours without any attention being paid to her further than sufficient to satisfy ourselves that she was in no danger. At the end of that time she was spoken to sharply and told that, as it was tea-time, she must at once get up and have supper. She responded to this. Only once subsequently was there any manifestation of this kind. While under treatment she improved in general health, became very robust, athletic, and cheerful, and returned home in good health and spirits and has so remained.

CASE VI.—F. S., twenty-three years of age. This girl presented a slight lateral curvature of the spine, also round shoulders, and complained of pain in the back and side. She had been unable to work for some years and had been the subject of considerable

anxiety to her family. She, too, was subjected to the usual discipline in the hospital. On one occasion, while participating in the regular work, she was seized with a trembling fit, and word was sent to me that she was having spasms. Instead of going to her, I sent word that her work must be continued, that the spasms would do her no harm. Once subsequently, under somewhat similar conditions, she was treated in a similar way by the director who had charge of the gymnasium work. The improvement in her general health and the disappearance of the pain in the back and side were accompanied by an increased alertness and willingness to participate in all the general exercises and games. She returned home, having entirely regained her physical vigor, and from a recent letter we learn that her favorable condition continues.

CASE VII.—H. J., aged eighteen years, had a sprained ankle several years previously and was laid up for some weeks from that cause. A history was given of indefinite pains in the knee suffered at various times; she had had plaster of Paris applied and had kept the leg bandaged much of the time. For several years past she had never been entirely free from lameness. When first seen, she could walk only a short distance, using crutches sometimes.

Examination revealed no organic disease in the limb, but there was considerable atrophy. She was allowed to use a light brace for a short time, but was assured that she suffered only from weakness, which could be cured so that she could leave off her brace. All bandages were removed, massage was given daily, and also, in gradually increasing amount, exercise was given in the gymnasium. The limb rapidly increased in size, the lameness disappeared, and recovery was complete and permanent.

CASE VIII.—E. D., thirty-four years of age, a tanner, whom I saw in September, 1900. While he was engaged three years previously in pulling down a lever pressing down hides, something gave way, allowing the patient to fall upon a truck, the sharp angle of which struck him over the ribs about the middorsal region and at the left of the spine. No fracture was found, but much complaint of pain was made. After a few weeks the patient recovered sufficiently to be about, but professed to be unable to return to work. He had remained in this disabled condition during the three years, himself and his family being supported by contributions from kindly disposed neighbors, from societies, and from the municipality in which he lived. When I first saw him he was standing erect, but when he was disrobed for examination there was observed a peculiar spastic condition of the back muscles, and he professed to be unable to bend forward or to either side to more than a very limited degree. There was also inability to move the right scapulo-humeral joint. Subsequently, when he came to my office, he was walking bent forward about forty-five degrees from the erect attitude. This man was anesthetized and his spine fully extended and a plaster-of-Paris jacket extending from the trochanters to the chin and occiput was applied. He was allowed to be about the wards freely in a day or two afterward. No reaction was experienced. While he was under anesthesia it was forgotten that the shoulder was ankylosed, but upon being around the wards after the plaster jacket was applied he expressed his great de-

light at his improved condition and at the free movement which he had in the shoulder. He was not informed that nothing had been done to his shoulder, but he was encouraged to use it freely. On the removal of the plaster-of-Paris jacket he stood erect and moved very briskly. This continued for the space of about a month while he remained in Toronto. On his returning to his home, I have learned, a relapse occurred.

CASE IX.—B. H., a girl fifteen years of age, whom I found in bed looking healthy, bright, and well-developed. She was the daughter of comparatively wealthy parents, and her mother evidently was over-indulgent. For an indefinite period, probably two years previously, she had been unable to make any considerable exertion, and for some months had not been able to walk more than one block without having pain in her hip and back. On examination, I found no evidence of disease in any joint. There was a very slight postural lateral curvature of the spine. She said that she was free from pain when lying down, and that it was only upon exertion that pain came on. In consequence of this very definite history, which had extended over a long period of time, I refused to make a positive diagnosis on my first visit. Examining on a second occasion, several weeks later, I found the same conditions present. I then made the diagnosis with a good deal of confidence which I had been disposed to make in the first instance—namely, that it was simply a neurosis.

In September last, several months subsequent to my first examination, the girl came into our gymnasium and has remained with us during the year. The time not necessary to be spent with us is spent at a young ladies' college. For several weeks after going there she made a good deal of complaint and had the meddlesome sympathy of the teachers and principal. I found it necessary to speak in very positive terms concerning this matter, assuring them that, so far as her physical well-being was concerned, she was entirely under my charge, that I held myself responsible, and that I must insist upon their carrying out the regulations which I laid down for her if she was to remain in the college. The lady to whom the authorities of the college looked in regard to matters of the girls' health came to see me personally and, finding her a very intelligent and reasonable woman, I had little difficulty in securing her intelligent and hearty cooperation. Since that time we have had clear sailing, and the girl has, during the year, developed into quite a vigorous athlete. She is in the best of health and has unbounded confidence in her own ability to take part in any game or to do any work. No complaints are heard from her regarding pain or disability.

Let the recital of these cases serve to call attention to the work done in the Orthopædic Gymnasium so far as it is employed in the treatment of neurotic patients. The principles of treatment employed are not new; the means used in applying these principles have not received much attention. In order to succeed in the management of these cases a prime requisite is a positive diagnosis. A line of conduct which evinces uncertainty and vacillation is fatal to success. The line of treatment to be adopted should

be well defined in the mind of the surgeon; his instructions to assistants should be definite, and no trifle should induce him to allow any departure from the prescribed regimen. While the nature of the work to be done and the mode of life to be followed are very important, yet the spirit in which these directions are enforced is of still greater importance. It is essential that the patient form the impression and attain to the firm belief that the surgeon is thoroughly master of the situation. It is not sufficient to accomplish this to use strong words and confident assertions. His conduct must bear out his professions.

The Weir Mitchell system of treatment marked a great advance in the management of such cases, but it is essentially passive; the active element is wanting. The patient is acted upon by drugs, diet, and massage, by the will power and force of character of other persons; but little is done to call out, to educate the volition of the patient. She is kept in bed, secluded from friends who would show an unwise sympathy, fed well, and given massage and rest. In fact, rest is made such a prominent feature of the treatment that his plan is almost always spoken of as the "rest cure." It falls short, inasmuch as it is but negative in character. Systematic training to self-reliance and renewed confidence are needed to render the cure effective. Though the patient should seemingly regain health, it is soon found that life is not a negation, but that its problems must be grappled with in a positive manner and solved. Massage, good diet, etc., are important, but in order to establish permanent results the volition must be called into exercise. It is not maintained that the special movements performed in the gymnasium have any specific influence in the treatment of these cases. It is absolutely necessary, however, that an accurate diagnosis should be made and that every one who is concerned in directing the treatment of the patient should be imbued with the most implicit confidence that the course pursued is a wise one and must be followed out with regularity and system.

We have in charge of the gymnasium a woman of good judgment, of tact and firmness, who follows out strictly the directions which are given. Taking these patients into the hospital whenever this course is found practicable, we obtain control of their lives and do not allow any trifling matter to stand in the way of carrying out whatever regulations are deemed important. We obtain a very absolute control over their doings for a considerable length of time, and thus help them to act with good common sense until they have been enabled to see the folly of their former course and become inspired with confidence that they can conduct themselves in a rational manner. The training, continued regularly every day, affords us an opportunity to exercise

the necessary discipline to bring into exercise and coordination the faculties and powers tending to produce rational behavior in a healthy individual.

The work done in our gymnasium, commenced ten years ago, did not have at first any such object in view, but as patients manifesting more or less neurotic tendencies presented themselves for treatment because of curvatures of the spine, flat-foot, etc., it was observed that the systematic control which we were able to acquire in these cases was of marked value; and further observation seems to warrant the conclusion that it is one of the most successful methods of exercising the influence and discipline necessary to restore these vacillating individuals to a condition of normal health and volition.

The neurosis may not be the only, and possibly not the chief, disease present. If there is cardiac disease, indigestion, anæmia, flat-foot, curvature of the spine, or any other abnormal condition, it should receive the most careful attention, and its removal or improvement will do much to further the attainment of the object here under consideration. The one word which expresses more than any other the dictum of treatment is discipline, not only the discipline which calls for submission, but that which succeeds in educating the patient to be self-reliant, not simply to follow directions given by another, but to exercise her own judgment and to become possessed of the conviction that her powers are subject to her own will and may be made to yield, not an erratic, but an intelligent obedience.

In seeking to attain these objects, I consider class-work of much more importance in the gymnasium than individual work. It is true that each individual must be dealt with as a unit and must be studied as a special problem; it is also true that the best effects in an educative way can be obtained when the stimulus of emulation can be used. With these patients, example and surroundings count for much. The sympathy expended upon them must not be a mere matter of emotion, but must be an intelligent sympathy which has for its object the gaining of the patient's confidence in order to accomplish a more definite and worthier end.

In the direction of this work a field is opened requiring great tact and good judgment. For the attainment of the object in view I have not found any means which I can employ more successful than the drill, the discipline, and the development which may be secured in the gymnasium.

12 EAST BLOOR STREET.

Changes of Address.—Dr. Howard Lilienthal, to No. 766 Madison Avenue, New York; Dr. Charles A. Phillips, to No. 371 Greene Avenue, Brooklyn; Dr. E. E. Smith, to No. 26 East Twenty-ninth Street, New York.

SEXUAL INTEMPERANCE: SOME EXPLANATION OF WHAT IS MEANT BY THE TERM.

By JENNIE G. DRENNAN, M. D.,

ST. THOMAS, ONTARIO.

The writer of the original article is glad that discussion has arisen on this subject, even if adverse. An article which provokes none can contain no truth. What leads man even to doubt is beneficial. If the subject had provoked none whatever the author would have felt that the time used in writing had indeed been misspent. She feels gratified to those who have expressed their views on it.

What is meant by sexual intemperance? What is meant by intemperance anyway? Is it not a term used to describe the use of anything in any other than its strictly proper use? A use of function any oftener than natural law demands for the fulfilment of that law is an intemperate use of that function; therefore this use of the sexual function any oftener than is required for the propagation of the species is an intemperate use of this function. Once used for pleasure alone is intemperance.

Dr. Stewart says, "There is in the majority of men, even when uncivilized, a certain sense of fair mindedness and decency, which is a factor in such matters." "Even when uncivilized." Yes, the uncivilized man obeys Nature to a greater extent in this respect than the civilized. Nature rules him and he has not yet fallen a victim to "a little knowledge" which is a bad thing.

We are now evolving from the purely animal to the spiritual planes, and consequently we make many errors, claim for our rights what are nothing but sources of error and degradation to us. What great nation, which has as yet fallen has not fallen through error in the sexual respect? As the child at first has to be thought for, then stumbles in its grasp for reason, and finally gains understanding; so mankind, as it emerges from the animal state, where Nature has guarded it in many ways, to the intelligent human state also stumbles and commits many errors. This was not written to blame man, but rather to aid him to seek a higher level. By man, mankind is meant, for woman also errs.

Sexual abuse consists, not alone in the gross violation of this law, but in the union wherein sexual intercourse is regarded as a means of pleasure and not merely as a function for the propagation of the species. Those who regard sexual intercourse as a means of pleasure in life are existing on a low plane, as well as those who regard eating as a pleasure of life. Many do, but it is not a high ideal. Those who have lived life at its best and left the best work behind them have not been "high livers" in this sense. "Sexual privileges conferred by marriage."

Under the cover of "marriage" too much is taken for privileges. If the world were pure the marriage ceremony would not be required. "What God hath united" no man would ever think of parting; but we have not, to any near degree, reached such a plane of purity, and hence a marriage ceremony is a necessary safeguard. Man does not yet recognize what is meant by his highest privileges. The gratification of animal desires is confounded with higher sources of pleasure.

"Divorce courts will be filled even more full than they are now." Yes, and then perhaps man may open his eyes and view the matter in its true light. He will then recognize on what a plane he is living, one in which he seeks happiness from a wrong source, and then he will seek reform in the right direction. As long as mankind marries in order to indulge in a licensed sexual intercourse, it will seek happiness in vain. No purely animal pleasure can satisfy its nature, which is striving Godward.

By "the period of lactation" I mean the usual period in which a child should depend on its mother for its food. The term "capable of subsisting" may have been "rather ambiguous," but not if viewed in its proper sense as applied to the normal state of things.

The fact that a female is incapable of conceiving at certain times ought to be a law to man to abstain from the exercise of his sexual function, unless he is a polygamist.

"The world has been well peopled so far." Yes, so far as quantity, but not quality, is concerned. Parents who misuse this function must transmit the desire to their offspring, and so the evil grows. Many cases of prostitution can be traced to intemperance in parents and parents one would never suspect as being so addicted.

Woman should have sex attraction for man. One is made for the other; but it should be a sex attraction of soul and mind, not purely physical beauty, which "is only skin deep," and the ability to engage in the sexual act. Those failing from age or disease then become unattractive. Propagation of species is a necessary function of life, and marriages, which have it as one result, are more perfect; but there ought to be marriages in which it can be ignored. Man and woman ought to be able to live happily without this one attraction, when there are so many more. For the sake of one all others should not be sacrificed.

The only reason that woman is willing for intercourse at other times than ovulation periods is a result of violation of natural law, and hereditary transmission of such violation until it has become as part of her nature, though a false part.

"Taste bulbs and sense of taste" are not necessary

to the function of digestion, although pleasant adjuncts thereto." Yes, quite true, and so is the pleasure attending the sexual act a necessary adjunct; but it is no reason that that pleasure should be constantly called into play or any oftener than Nature demands for the propagation of the species. We eat to live, and try to do so under happy circumstances, but we do not live to eat; therefore, we engage in the sexual act to propagate our species—under happy circumstances what ought to be—but we don't live alone for that function. One has only to come in contact with one's patients to know that the sexual organs are abused far too often, to know that maternity is looked upon as the horror of many a woman's life, not merely from fear of physical suffering, or dislike of children, but because she feels that she is called upon—by a disregard of natural law—to do what she has not strength to do successfully. Poverty may encompass her about, she may have to earn the livelihood of the family, and she feels she cannot undertake the care of more. If she and her partner were not slaves to this passion they could regulate their family by self-control and not seek to do it by fœticide. Infanticide is almost a thing of the past in civilized nations, but fœticide abounds in our midst. Children are born into the world under a cloud of disapproval.

AN OPERATION FOR PROMINENCE OF THE AURICLE.*

By THOMAS R. POOLEY, M. D.,

NEW YORK.

Operations for purely cosmetic reasons are not very often performed—perhaps not so often as they might be with good results. The purpose of this short communication, therefore, is to briefly relate one which I did with a fair amount of success in a case in which this common deformity existed to a somewhat unusual degree.

The operation, which I did on both ears, is described by the late Dr. Edward T. Ely, of New York, in Knapp's *Archives of Otology*, Vol. x, 1881, p. 97, who modestly remarked: "I do not know whether this is a new operation for the deformity in question or not." I have not been able to find any account of the operation elsewhere, and, I believe, the credit for its introduction belongs entirely to him.

The patient I operated upon was an actress, twenty-eight years of age, who objected very much to the deformity caused by undue prominence of her auricles, which she said was a decided drawback to her securing engagements in her profession. At first I declined to operate, but her constant importunities at last won me over, and I consented to undertake the improvement of her personal appear-

ance. I operated upon both ears, but at an interval of a few days, and followed closely the method described by Ely in the first operation he did.

On August 6, 1900, I operated upon the left ear, as follows: An incision was made through the skin, along the entire length of the furrow formed by the junction of the auricle with the side of the head posteriorly. This was joined at each end by a curved incision carried over the posterior surface of the auricle, and the skin and subcutaneous tissue included by these incisions were dissected off. Two incisions, nearly parallel to the former ones, were then carried directly through the cartilage, and an elliptical piece of the latter, measuring about one eighth of an inch by one third of an inch, removed. The piece of skin was considerably larger than this. The wound was then united by seven interrupted sutures of black silk, four of which were passed through the skin only, with the three others were passed through both skin and cartilage. Owing to the natural folds of the cartilage it was found impossible to secure perfect coaptation of the anterior portion of the auricle, and a small space was here left to heal by granulation. This operation was done without a general anæsthetic, by using hypodermic injections of cocaine and the frequent instillation of cocaine over the wound during the progress of the operation, and was attended with a good deal of pain to the patient. Before beginning the operation the hair was shaved from the neighborhood of the ear and the meatus stuffed with cotton to prevent the entrance of blood. A strip of iodoform gauze, absorbent cotton, and a firm bandage were then applied. Strict aseptic precautions were adhered to throughout the entire procedure.

The healing was favorable, the wound behind the ear healing by first intention, that in front by granulation. The sutures were removed about the fifth day. A few days later the other ear was operated on by the same method, but a somewhat larger piece of cartilage was removed and the anterior wound was a little larger. In this case, also, the wounds healed favorably; the posterior one *per primam*, the other by granulation; there was, however, on this side slight tenderness with some swelling of the cervical glands.

August 27.—She was discharged from the hospital, both wounds posteriorly healed, but a small button of granulation tissue on the anterior part of the right auricle.

The patient was well satisfied with the result, but I regret to say that I have not had an opportunity to see the case since the patient's dismissal from the hospital, as she went to Europe shortly after, and I have not seen her since. I had a picture before and after the operation taken, which I am sorry to say I have mislaid, which showed very well the position of the auricles before and after the operation.

So far as one operation goes, I can highly recommend this operation of Ely's to your consideration. I do not know whether any of you have done it or not, but if so, I should be pleased to hear what you may have to say of the method.

In conclusion, I may add that Dr. Ely operated on

*Read before the American Laryngological, Rhinological, and Otological Society.

the second ear of his patient in a somewhat different manner:

Holding the auricle so that the light from a window shone through it, he transfixed it with a scalpel and rapidly excised a piece of cartilage of the desired size and shape, together with its overlying skin. Additional skin was then removed from the posterior surface until the wound seemed to correspond in extent to that made at the former operation. Twelve sutures were used, of which three were passed through the cartilage on its anterior surface and one on its posterior surface, while the others were passed through the skin only. Complete union by first intention was not secured behind, but the healing was equally satisfactory. Ely adds that he did not like the method so well as the first one employed.

Therapeutical Notes.

Treatment of Naso-tonsillar Affections in Scarlatina.—Professor Aviragnet (*Medical Press and Circular*, June 19th), in a clinical lecture at Paris, says that the frequency of naso-tonsillar complications requires rigorous antisepsis. Antisepsis of the nose is obtained by the aid of an ointment such as

℞ Vaseline. 1 ounce;
Boric acid. 1 drachm;
Menthol. 5 grains.

M.

Or by injections of

℞ Olive oil. 1 ounce;
Resorcin. 20 grains;
Essence of peppermint. 2 drops.

M.

Antisepsis of the throat is effected by gargling with a solution of boracic acid, naphthol, thymol, etc., followed by the application of a mixture of glycerin and resorcin.

For Pain in Hyperchlorhydria.—*Gazette hebdomadaire de médecine et de chirurgie* for May 30th ascribes the following formulæ to M. Pérochaud:

℞ Extract of cannabis indica. $\frac{1.5}{100}$ ths of a grain;
Powdered coca. $\frac{1.5}{100}$ ths " " "
Powdered belladonna. $\frac{1.5}{100}$ ths " " "
Morphine hydrochloride. $\frac{1}{65}$ th " " "
Licorice powder. q. s.

M. For one pill. From one to four daily.

Or

℞ Tincture of veratrum viride.
Laudanum.
Tincture of belladonna
Tincture of star-anise (*Illicium anisatum*).
of each, 75 minims.

M. Six drops after meals.

Or

℞ Picrotoxine. $1\frac{1}{2}$ grain;
Alcohol. q. s.;
Ergotine Bonjean. 15 grains;
Neutral sulphate of atropine. $\frac{1.5}{100}$ ths of a grain;
Distilled water. 150 minims.

M. From five to twenty drops in a day, taken in divided doses.

Naphthol in the Treatment of Typhoid in Children.—The *Journal de médecine de Paris*, for June 2d, ascribes the following to Legroux:

This treatment consists in: 1. The administration of a purgative dose of calomel (from 5 to 10 grains divided into ten doses) immediately the disease is confirmed. 2. The administration of naphthol, either alone or associated with bismuth or magnesia, according to the following indications:

A. Diarrhœa of lesser intensity;

℞ Naphthol β. 30 grains
in ten packets. One every hour.

B. Diarrhœa abundant;

℞ Naphthol β. 30 grains;
Bismuth salicylate. 30 "

M. In ten packets—to be taken in twenty-four hours.

C. Constipation;

℞ Naphthol β. 30 grains;
Magnesium salicylate. 30 "

M. In ten packets—to be taken in twenty-four hours.

An Analgetic for Cauterization of the Intra-uterine Cavity.—*Gazette hebdomadaire de médecine et de chirurgie*, for June 16th, gives the following:

℞ Guaiacol, }
Glycerin, } equal parts.

M.

Saturate a thin layer of cotton, twisted on the sound, in this mixture to paint the intrauterine cavity in catarrhal metritis.

Lutaud's Injection for Leucorrhœa.—The *Journal de médecine de Paris*, for June 2d, gives this as follows:

℞ Potassium chlorate. 750 grains;
Tincture of opium. 450 minims;
Tar water. 1 quart.

M.

Half a glassful in a quart of [hot] water for an injection, night and morning.

Formula for Arsenic in Dermatoses.—*Gazette hebdomadaire de médecine et de chirurgie*, for June 16th, ascribes the following to Brocq:

℞ Sodium arsenate. $1\frac{1}{2}$ grains;
Pilocarpine nitrate. $\frac{3}{4}$ of a grain;
Cherry laurel water. 6 drachms;
Boiled distilled water. to 8 ounces.

M.

For adults a dessertspoonful, and a coffee-spoonful for youths, at the beginning of the two principal meals.

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THE ETHICS OF MEDICAL JOURNALISM.

This is a subject which we should like to see treated of in a broad spirit oftener than it is. It is true that a medical journal frequently castigates its contemporaries with some asperity and not a little pharisaism, but that does harm rather than good; what is wanted is a correct appreciation of real ethics as applied to journalism, together with a spirit of charity for the apparent shortcomings of others. A good example in this direction has been set by Dr. Burnside Foster, the editor of the *St. Paul Medical Journal*. At the recent annual meeting of the Association of American Medical Editors Dr. Foster presented a paper entitled *Some Thoughts on the Ethics of Medical Journalism*, and it appears in the July number of his journal.

Dr. Foster began by giving his ideas in brief of what such an association as he was addressing ought to be. It should be partly to bring together men engaged in the same kind of work and give them an opportunity to know each other socially, and partly to discuss matters pertaining to the improvement and elevation of medical journalism. Consequently, certain fundamental rules of conduct must be laid down by the association, and everybody who desires to be a member must bring his journal up to a certain standard of ethics, or else cease to be a member. Commercialism, according to Dr. Foster, is the curse of American medical journalism at the present time, and an association that aims to represent the best that there is in medical journalism must be divorced from commercialism; no journal should be represented "which permits a line of advertising to appear in its reading pages, whether the adver-

tisement appears as such or whether it appears in the form of the insidious reading notice." There can, we should say, be no dissent from this on the part of any reputable journal.

Dr. Foster next enters upon a consideration of the vexed question of editorial censorship over the advertising pages. No journal fit to be represented in such an association, he says, would carry the advertisement of any medicine of unknown composition or of one advertised to the general public. But there are certain pharmaceutical preparations, he adds, concerning which it is not at first sight easy to state whether they may properly be advertised in a reputable medical journal or not. These, he thinks, should be referred to a board of censors or to the editor of the *Journal of the American Medical Association*. In such matters, we do not doubt, great deference would be paid by all reputable journals to the opinion of the editor of the journal mentioned, but would it be quite fair to put such a responsibility upon him? Our own idea is that the editor of each journal should decide the question with reference to his own publication; if such a course were uniformly pursued, the ethical status of any journal could readily be appreciated by the association, and of no journal could it truthfully be said that it held itself within ethical bounds under compulsion.

As to the abominable practice of making advertising contracts conditional on the publication of one or more "original articles" laudatory of the preparation to be advertised and to be furnished by the advertiser, there can be but one opinion among self-respecting editors; "journals which resort to such methods," says Dr. Foster, "have no business to be represented in this association if this association is to be representative of the highest type of medical journalism." This sentiment is undoubtedly endorsed without the slightest reservation by every medical journal worthy of any reputable practitioner's subscription.

Dr. Foster then touches upon the "pirating" of original communications and upon subservient book notices, both of which he properly condemns. The first of these practices is not, we believe, followed to any considerable extent by even what we should term fifth-rate American medical journals; there is altogether too much of the second, we are forced to think, and it ought to be stopped, as a matter of policy if for no better reason, for no physician will

long continue as a subscriber to a journal that persistently misleads him. We hope that Dr. Foster's entire communication will be earnestly pondered by his fellow-editors. Its purport is unquestionably wholesome.

ONEIRIC MANIA.

The conception that the dreams of the insane are often characteristic of their malady is not a novelty, but M. Régis, of Bordeaux, seems to have done much to improve our knowledge of the relationship, especially in insanity of toxic or infectious origin. At a meeting of the French Academy of Medicine, held on May 7th (*Gazette hebdomadaire de médecine et de chirurgie*, May 12th), he gave his conclusions from twelve years' observation. We need but watch the subjects of toxic insanity, he says, to perceive that they are not ordinary sleepers, acting as the simple spectators of the "objectivations" of their mental automatism; they are active, in motion. Like somnambulists, they pass from the silent dream to the spoken dream and to the enacted dream, sometimes from the second state to the reality or from the reality to the second state, accordingly as they are interfered with or let alone. Also like somnambulists, they come out of their delirium by a veritable awakening, having generally but a confused remembrance of their attack, if any at all. Finally, like somnambulists again, for a longer or shorter period after their recovery they retain some fixed false idea, the relic of one of the principle conceptions of the hallucinatory dream.

M. Régis is convinced that this condition, which he terms *délire onirique*, a morbid complexus made up of mental confusion and delirium, is so characteristic as to warrant one in affirming that there is present an infection or an intoxication. He thinks, furthermore, that all mental affections in which the dreams are of such a character are toxic or infectious in their origin; they are, in particular, the mental derangements due to inanition, to insolation, to burns, to senility, or to surgical operations. Possibly, however, he remarks, each individual poison and each mode of intoxication tends to impress somewhat special symptoms upon the general picture; thus, as he has pointed out before, torpor, somnolence, and narcolepsy are more commonly observed in cases of gastro-intestinal and especially of hepatic origin, while cramps, cataleptoid attitudes,

tetany, and convulsive seizures are oftener met with in those of renal origin.

The intoxication psychoses, with their mental confusion and especially their peculiar oneiric mania, are, therefore, notably distinct from the pure forms of insanity. They are distinguished from them not only by their nature, their characteristics, their evolution, and their pathogenic lesions, but also by the conditions under which they show themselves; they are oftener met with in hospitals than in asylums.

THE FUNCTION OF LACTATION.

Although in many of our text-books considerable attention is paid to the requirements of the nursing infant, it is well that the subject should be reviewed occasionally, especially when it is done so ably as it recently has been by de Rothschild in a lecture published in the *Progrès médical* for June 15th. Naturally, M. de Rothschild was not able to say much of anything that might strictly be termed new, but there are some points in his discourse that are well worthy of mention. One of them pertains to the preparations which a prospective mother ought to make to enable herself to suckle her child to the greatest advantage. In the first place, says the author, she should eat regularly and generously, taking care at the same time that her digestive organs do their work well. In the second place, she should avoid fatigue and live in large, airy rooms. It is a pity that so few women are able to carry out this second injunction, owing to the *res angusta domi*, but the author tells us that of late years institutions have been provided in which women verging on maternity may follow it to some extent, and thus prepare themselves to bring forth well-conditioned children and afford them rich and abundant milk. No doubt such measures are destined to play an important part in "*puericulture*."

On another point, that of the influence of pregnancy and menstruation on the function of nursing, M. de Rothschild's remarks seem to us so sensible that we shall here give them substantially as they came from his lips. Until within recent years, he says, authors advised the suspension of lactation on the supervention of either of these conditions. Nevertheless, observation has often shown that a fresh pregnancy exerts but little influence on the milk of the mother or a wet-nurse, provided the gravid state follows a normal course. There

should, therefore, be a reaction against the too widespread notion that a pregnant woman should stop nursing. However, a woman who bears her pregnancy badly should suspend lactation; if she does not sleep well, if she has nervous disturbances, if her urine is albuminous, or if there is any other notable disorder, she should no longer give suck.

It is a very prevalent notion, says M. de Rothschild, especially among the laboring class, that a woman whose menses return should discontinue nursing her child, but as a general thing the resumption of menstruation has only a slight effect upon the nursling's health. Sometimes, however, there are moderate digestive disturbances, such as a little diarrhoea, and loss of flesh with each menstrual period. If these effects persist or if the child's health is really suffering, recourse must be had either to another nurse or to artificial feeding. In the matter of lactation, as in everything else, he adds, we must not be too absolute; and moderation, it is only fair to say, is the keynote of his whole discourse.

THE CITY BOARD OF HEALTH ON SUNSTROKE.

The board has recently issued its customary annual circular of information, printed in English, French, German, and Italian. It advises that if a feeling of fatigue, dizziness, headache, or exhaustion occurs, the person should cease work immediately, lie down in a cool and shady place, and make cold applications to the head and neck. A person overcome by the heat, says the circular, should immediately be removed to the nearest shady place, and the collar of the shirt or dress be loosened. The nearest physician should be sent for, also a policeman, and drinks of cool water, black tea, or coffee given, if the person is able to swallow. If the skin is hot and dry, the person is to be placed in a sitting posture with the back supported, and the body and limbs are to be sponged or affused with cold water, pounded ice wrapped in a towel or other cloth being applied to the head. If the person is pale, very faint, and with a feeble pulse, he should be laid on his back and given ammonia to inhale "for a few seconds," or, by the mouth, a teaspoonful of aromatic spirit of ammonia or tincture of ginger in two teaspoonfuls of water. Cold water should not be applied to the head or body, but the back, the hands, and the feet should be rubbed and warm applications made to them until the circulation is restored. For the latter purpose mustard, a tablespoonful to a quart of water, is recommended. In the main, this advice is probably as good as could be given to

the general public, but we should hesitate to trust the average man with the administration of ammonia by inhalation.

OUR SUBSCRIBERS' DISCUSSIONS.

We are receiving most gratifying evidence of the appreciation of this new department of the *Journal* on the part of our subscribers. As an example, we give the following passage from a letter written by a very distinguished New York physician: "I think you deserve your subscribers' gratitude and congratulations for having started this interesting department of Subscribers' Discussions. Through this department of the *Journal* much valuable information will be elicited. The busy specialist, the great consultant, is not always the one to answer questions of every-day importance in the most practical way. Practical and valuable information can be more often obtained from the busy general practitioner, whether living in a great city or in a remote village. The family physician, the country doctor, by years of experience, becomes often a veritable fountain of information, but lack of time, disinclination to writing lengthy articles, and very often too great modesty prevent him from giving to his medical brethren the fruits of his ripe and valuable experience. This new department of the *New York Medical Journal* demands short, practical answers to questions of interest to every one. It will and should invite contribution from every one who has really something to offer which may prove of utility."

"MEN HAVE TO SPIT."

Such is the sage observation of a New York Solon at one of its police courts. If by this is meant that they "have to spit" as a constant and continual habit, the proposition is not true, and comes with bad grace from one whose duty it is to administer the law as it stands. If it means that occasions once in a way overtake all of us when a single act of expectoration may be an absolute necessity, we may reply that there are other necessary acts of Nature which men have to perform, yet which they are not permitted, and very few attempt, to perform in public. If the practice is merely a habit, it must be stopped, both on account of its unwholesomeness and of its disgustingness. If in a given case, it is the result of disease, then it should be properly treated, as would be done with a case of bowel or bladder complaint, and in the meantime the necessary occasional act should arouse such stringent efforts on the part of the sufferer to be as little disgusting as possible, as he would make were his trouble of the other kind named. Most people carry pocket handkerchiefs, at any rate. The real

unfortunate could at least make use of that article to expecorate into. For the filthy habitué no one need entertain any greater sympathy than he would for one who should offend in the other directions referred to.

THE CHILD'S NAP.

It is not easy to shake the convictions on which a well-nigh universal practice rests; and, we may add, it is not generally desirable that it should be. Some weight, however, should be attached to the statements given in a letter signed "E. G.," published in the *Boston Medical and Surgical Journal* for May 16th. The writer appears to rate sunlight above sleep as promoting health in children. In the case of his own children he has found them thrive better if allowed to play outdoors all day instead of being called in for a nap. They did not really lose sleep, he intimates, for they consumed less time in getting asleep at night and woke later in the morning.

PHYSICIANS AND VETERINARY PRACTICE.

According to a recent decision by an Illinois court, a physician cannot recover for services in the treatment of domestic animals, for the reason that he is not authorized to practise as a veterinarian. The case was one in which a physician who had treated an injured race-horse rendered a bill for \$258, was paid \$100, and sued for the balance. Veterinarians are not everywhere readily accessible, and as a result of this decision owners of valuable animals may find difficulty in obtaining the services of a physician, which they would doubtless regard as better than none.

OXYCYANIDE OF MERCURY IN GONORRHOEA.

For several years it has been known that oxycyanide of mercury was an antiseptic quite equal to mercury bichloride in efficiency and free from some of the objectionable properties of corrosive sublimate. It has lately been recommended by Genouville (*Annales des maladies des organes génito-urinaires*, April; *Journal des praticiens*, June 22d) as superior in some respects to potassium permanganate in the irrigation treatment of gonorrhœa. It is said to be absolutely unirritating and to prove efficient in cases in which the permanganate has failed. Genouville uses it in solutions varying from 1 to 5,000 to 1 to 1,000, but he says that the susceptibility of the individual patient should be tested by employing a weak solution at first, which may rapidly be increased in strength. It will be well to remember, we may add, that as little as possible of the solution should be allowed to remain in an irrigated cavity, for fear of absorption.

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Marine-Hospital Service, during the week ending July 6, 1901.

Smallpox—United States and Insular.

California.....	Los Angeles..	June 1-22.....	7 cases.	
Illinois.....	Chicago.....	June 22-29.....	6 cases.	
Indiana.....	South Bend..	June 22-29.....	1 case.	
Iowa.....	Clinton.....	June 15-22.....	1 case.	
Kansas.....	Lawrence....	June 15-22.....	1 case.	
	Wichita.....	June 15-30.....	3 cases.	
Kentucky.....	Lexington....	June 22-29.....	1 case.	
Louisiana.....	New Orleans..	June 22-29.....	2 cases.	
	Shreveport...	June 22-29.....	3 cases.	
Massachusetts..	Fall River...	June 22-29.....	3 cases.	
	Waltham.....	June 22-29.....	1 case.	
	Worcester....	June 14-21.....	1 case.	
Minnesota.....	Minneapolis..	June 15-29.....	15 cases.	2 deaths.
	Winona.....	June 15-29.....	3 cases.	
Nebraska.....	Omaha.....	June 22-29.....	7 cases.	
	South Omaha.	June 24-July 1.	5 cases.	
New Jersey.....	Bayonne.....	June 23-30.....	1 case.	
New York.....	New York.....	June 22-29.....	97 cases.	15 deaths.
Ohio.....	Cincinnati...	June 22-28.....	1 case.	
	Cleveland....	June 23-29.....	8 cases.	1 death.
Pennsylvania...	Philadelphia..	June 22-29.....	3 cases.	
	Pittsburgh...	June 22-29.....	1 case.	
Rhode Island...	Providence...	June 22-29.....	2 cases.	
Tennessee.....	Memphis.....	June 22-29.....	5 cases.	
Utah.....	Salt Lake City	June 22-29.....	7 cases.	
Washington.....	Tacoma.....	June 17-30.....	3 cases.	
West Virginia...	Wheeling.....	June 22-29.....	1 case.	
Wisconsin.....	Green Bay....	June 23-30.....	5 cases.	
Hawaii.....	Lihue.....	May 7.....	1 case.	
	Waimea.....	May 5-15.....	1 case.	
Philippines.....	Manila.....	May 11-25.....	14 cases.	

Smallpox—Foreign.

Argentina.....	Buenos Aires.	April 1-30.....		140 deaths.
Austria.....	Prague.....	June 1-15.....	10 cases.	
Belgium.....	Antwerp.....	June 1-8.....	5 cases.	2 deaths.
Brazil.....	Rio de Janeiro	May 1-15.....	35 cases.	12 deaths.
Canada.....	Hamilton, Ont	June 1-30.....	1 case.	
	Gaspe Basin..			
	Quebec.....	June 22-29.....	10 cases.	
Colombia.....	Panama.....	June 18-24.....	6 cases.	
Egypt.....	Cairo.....	May 27-June 3.		1 death.
France.....	Paris.....	June 8-15.....		20 deaths.
	St. Etienne...	May 15-30.....	1 case.	
Gibraltar.....		June 1-16.....	2 cases.	
Great Britain...	Cardiff.....	June 8-15.....	2 cases.	
	Glasgow.....	June 15-21.....	13 cases.	
	Liverpool....	June 8-15.....	2 cases.	
	London.....	June 8-15.....	1 case.	
India.....	Bombay.....	May 28-June 4.		3 deaths.
	Calcutta.....	May 24-June 1.		14 deaths.
	Madras.....	May 18-24.....		9 deaths.
Italy.....	Messina.....	June 8-22.....	36 cases.	6 deaths.
	Naples.....	June 8-16.....	124 cases.	28 deaths.
Mexico.....	Mexico.....	June 16-23.....	2 cases.	1 death.
Russia.....	Moscow.....	May 25-June 15.	34 cases.	11 deaths.
	Odessa.....	June 1-8.....	1 case.	
	St. Petersburg.	June 8-15.....	10 cases.	2 deaths.
	Warsaw.....	May 25-June 1.		14 deaths.
Spain.....	Madrid.....	May 4-June 1...		11 deaths.
Switzerland....	Geneva.....	May 25-June 1.	1 case.	
Uruguay.....	Montevideo...	May 11-25.....	35 cases.	4 deaths.

Yellow Fever.

Colombia.....	Boaca del Toro	June 28.....	1 case.	
Brazil.....	Rio de Janeiro	May 1-15.....		14 deaths.
Mexico.....	Vera Cruz....	June 22-29.....		3 deaths.

Cholera.

India.....	Bombay.....	May 28-June 4.		2 deaths.
	Calcutta.....	May 25-June 1.		67 deaths.
	Madras.....	May 18-25.....		3 deaths.

Plague—Foreign and Insular.

Plague—Foreign and Insular.

China.....	Amoy.....	April 28-May 10.		325 deaths.
	Hongkong....	May 11-18.....	122 cases.	113 deaths.
India.....	Bombay.....	May 28-June 4.		141 deaths.
	Calcutta.....	May 24-June 1.		50 deaths.
Hawaii.....	Honolulu....	May 31-June 10.	4 cases.	4 deaths.
Philippines....	Manila.....	May 11-25.....	55 cases.	48 deaths.

Marine-Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the United States Marine Hospital Service for the seven days ending July 4, 1901:

STONER, G. W., Surgeon, granted leave of absence for thirty days from August 3d.

KINYOUN, J. J., Surgeon, directed to proceed to Yokohama, Japan, and Hong Kong, China, as inspector. Granted

leave of absence for four months upon completion of duty as inspector.

GREENE, J. B., Passed Assistant Surgeon, granted leave of absence for two days from July 5th.

HASTINGS, HILL, Assistant Surgeon, granted leave of absence for two months from July 15th.

PARKER, H. B., Assistant Surgeon, relieved from special temporary duty at San Francisco and directed to rejoin station at New Orleans.

BILLINGS, W. C., Assistant Surgeon, relieved from duty at Baltimore, and directed to proceed to Los Angeles, California, and assume temporary command of the service during the absence of the medical officer in command, reporting to him for duty upon his return to station.

MOORE, DUNLOP, Assistant Surgeon, relieved from duty at Port Townsend Quarantine, Washington, and directed to proceed to Nome, Alaska, for special temporary duty.

FOX, CARROLL, Assistant Surgeon, relieved from duty at Portland, Oregon, and directed to proceed to Port Townsend Quarantine, Washington, and report to the medical officer in command for duty.

ALLEN, G. C., Hospital Steward, relieved from duty at Mullet Key, Florida, and directed to proceed to Norfolk, Virginia, and report to the medical officer in command for duty.

PECK, F. H., Hospital Steward, relieved from duty at New Orleans, and directed to proceed to St. Louis, and report to the medical officer in command for duty and assignment to quarters.

PHILLIPS, W. C., Hospital Steward, directed to proceed to Chicago, and report to the medical officer in command for duty and assignment to quarters.

Appointment.

W. C. PHILLIPS, of Iowa, appointed junior hospital steward in the United States Marine-Hospital Service.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending July 6, 1901:

ANGENY, G. L., Assistant Surgeon. Detached from the *Lancaster* and ordered to the Naval Laboratory, Brooklyn.

BERRYHILL, T. A., Surgeon. Detached from the Naval Laboratory, Brooklyn, and granted leave of absence for three months on account of illness.

IDEN, J. H., Assistant Surgeon. Detached from the Naval Hospital, Chelsea, Massachusetts, and ordered to the *Lancaster*.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending July 6, 1901:

DISEASES.	Week end'g June 29		Week end'g July 6	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever.....	33	10	24	14
Scarlet Fever.....	376	30	220	33
Cerebro-spinal meningitis.....	0	3	0	5
Measles.....	274	10	275	18
Diphtheria and croup.....	251	54	153	24
Small-pox.....	97	15	91	25
Tuberculosis.....	230	149	166	150

The Medical Department of the University of Buffalo has, we are asked to state, opened a Pan-American bureau of information for the use of its alumni, at 24 High Street, in the library of University Building, through which accommodation can be secured in advance, and mail and other conveniences obtained.

The Senn Building at the Rush Medical College.—Professor Nicholas Senn laid the cornerstone for the Senn building at Rush Medical College, at Chicago, on June 19th. The building is to be named after him, as he is one of the largest contributors toward its construction. The estimated cost is \$100,000, of which Professor Senn has furnished \$50,000.

Manhattan State Hospital Attendants to Answer Charge of Hastening a Death.—Michael Carroll and John Foley, two Manhattan State Hospital attendants who were declared by a coroner's jury to have hastened the death of an insane patient, by ill-treating him, were arrested on July 3d. The warrants were issued by Coroner Zucca, who held the accused men in \$2,000 bail to await the action of the Grand Jury. Carroll gave bail.

Brooklyn Borough's Highest Death Rate.—Dr. Sylvester J. Byrne, in charge of the Vital Statistics Bureau of the Health Office in Brooklyn, is authority for the statement that the death rate for the week ending July 6th was 338 in excess of the highest death rate for a week ever known in the history of Brooklyn since records were kept. Deaths from all causes in Brooklyn reached the total of 938, of which 257 were due to the heat.

Physician Presented with a Loving Cup on his Silver Jubilee in Hospital Service.—Dr. Charles K. Bridson recently completed his twenty-fifth year as attending surgeon to the Presbyterian Hospital, and a loving cup and parchment testimonial were given to him in commemoration of his long connection with the hospital. The presentations were made at a complimentary dinner given to the physician at the University Club by the Alumni Association of the Presbyterian Hospital.

Warning Regarding R. G. Stearns.—The publishers of the magazine *Success* have issued a warning to the effect that a man calling himself "R. G. Stearns" is swindling physicians in various cities through offering them a clubbing combination of from eight to twelve magazines at a cost of \$4 or \$5. He uses a form of receipt with the name of the publishers printed on it, which they state is wholly unauthorized. He has operated in Scranton and Reading, Pa., in Utica, Syracuse and Albany, N. Y., in Detroit and elsewhere.

Northwestern University Medical School.—Dr. N. S. Davis, Jr., has been elected Dean, and Arthur R. Edwards secretary, of the Faculty of the Northwestern University Medical School (Chicago Medical College). The Wesley Hospital, in close connection with the college, has been informally opened to the profession, and after complete equipment the formal opening will take place. This hospital will accommodate three hundred patients. Plans are completed and the money has been subscribed for a \$22,000 amphitheatre and operating rooms at Mercy Hospital, with a seating capacity of four hundred. Dr. C. L. Mix and Dr. P. T. Burns have been appointed assistant professors of anatomy.

Foreign University News.—Dr. Karl Klecki, adjunct professor of general and experimental pathology at Cracow, has been promoted to a full professorship.—Dr. W. v. Lingelsheim, a tutor at Marburg, has been nominated conductor of the hygienic institute at Beuthen.—Dr. Kraft has been appointed tutor in Röntgenology, mechanotherapy, and hydrotherapy at Strassburg.—Dr. Ludwig Rydygier, professor of surgery at the University of Lemberger, has been elected rector of the university.

Bellevue Hospital's "Oldest Patient" is Dead.—Patrick Travers, thirty-nine years old, who entered Bellevue Hospital as a patient in October, 1886, and who had the distinction of being the "oldest patient," died there on July 7th. When Travers was admitted he was suffering from a gunshot wound, which brought on paralysis. Nine months ago Travers, while hobbling about in the hospital stables, got in the way of an ambulance responding to a hurry call and was so badly injured that it was thought he would surely die within a few hours. He lingered, however, until July 7th.

The Floating Hospital Service.—The floating hospitals of St. John's Guild started the summer's service for the children of the poor on July 8th, and now the two hospitals are making trips every day except Sunday, one running on the North River and one on the East River. The service is given free to the sick children of the poor of New York, and the management of the guild gladly sends tickets of admission to the floating hospitals and the seaside hospital free of charge to any hospital, dispensary, church, charitable organization, or practising physician applying for them. Applications should be addressed to St. John's Guild, 501 Fifth Avenue.

New York Board of Health's \$30,000 Laboratory.—A special laboratory for combating the bubonic plague has been completed recently in New York at a cost of \$30,000. With its new facilities the health board will be able to cope with any possible danger which may arise from the plague. The laboratory is the most completely equipped of its kind in the country. The building stands at the foot of East Sixteenth Street and is to be known as the Robert A. Van Wyck Laboratory. It is built entirely of concrete and marble and is absolutely fireproof. For the present the new laboratory will be used for the general work of the health board.

A Staten Island Physician Appointed Assistant Sanitary Superintendent of the Borough of Richmond.—Dr. Theodore Walser, of New Brighton, the oldest physician on Staten Island, has been appointed by the Board of Health assistant sanitary superintendent in the Borough of Richmond, to fill the vacancy caused by the death of Dr. John L. Feeny, which occurred three weeks ago. The salary is \$3,500. Dr. Walser is eighty-three years of age, and has been a practising physician on Staten Island for more than half a century. He was for many years the

health officer of New Brighton, and during the cholera scare, several years ago, volunteered his services, and was detailed on Swinburne Island. During the recent smallpox outbreak in Manhattan Dr. Walser also volunteered his services.

The Extermination of Imbecile Children.—The Colorado State Medical Association disappointed a large audience at its recent meeting, in Denver, by passing over the paper which Dr. Denison, a Denver physician, was to have read, in which he was to argue for the extermination of imbecile children. Dr. Denison's suggestion, which has aroused great indignation, is that on the application of the parents, imbecile children be painlessly put to death. Humanity in general would thereby be benefited, he says. The delegates passed over the paper because they wanted to think the matter over before discussing it. If the suggestion is adopted a petition will be presented to the legislature. It is predicted that it will be killed there. The delegates are about evenly divided.

Foreign News Notes.—Professor Rieder, of the University of Bonn, has been appointed general inspector of all the medical schools of the Turkish Empire.—Representatives of several Austrian medical societies recently presented to the Prime Minister of Austria a petition asking for a reform of the methods employed by the sick benefit associations. The prime minister replied at some length to the petitioners and showed that he was quite familiar with the subject. He admitted the force of many of the arguments advanced in favor of a change in the existing laws; he pointed out that any change would be a serious matter, involving as it would numerous and important changes in the sick benefit insurance laws. The deputation also called upon Baron Call, minister of commerce, and upon Baron Speus, minister of justice.—The question of preventive measures against the spread of tuberculosis was discussed recently in the lower Austrian Diet, and the probabilities are that active measures will be adopted.

What American Rule has Done for Cuba's Health.—"The pest of yellow fever has been combated with such vigor in Cuba that not a single death has been reported as resulting from it this year," Colonel J. B. Hickey is reported as saying recently. The colonel served as an assistant adjutant-general on the staff of General Wood at Havana. He continued: "The reason that yellow fever has been so successfully overcome is because of the efficient sanitary methods employed by the United States health officers. Havana itself has been revolutionized as regards its sanitary conditions. Recent experiments having proved that yellow fever was to a great degree transmitted by mosquitoes bred in the tropical swamps and the cesspools, drastic means were employed to kill these insects. The streets and sewers in Havana and other cities of the island were sprinkled with kerosene, with the most satisfactory results. True, the time of greatest infection from yellow fever is later in the year, be-

tween the months of July and October, but I feel assured that this year will end, as it has continued thus far, with no deaths from this scourge. This means in many ways the salvation of Cuba, for if the danger of yellow fever is eliminated thousands of Americans will settle in the island."

Brooklyn Doctors Win a Suit for Alleged Breach of Contract.—The suits of the Merchants and Physicians' Adjusting Agency against five Brooklyn physicians to recover \$25 from each for alleged breach of contract have been decided in favor of the defendants. They were Dr. C. L. Ash, of 60 Park Place; Dr. Gustave J. E. Tieck, of 89 Pulaski Street; Dr. George D. Barney, of 393 Third Street; Dr. J. S. Wood, of 94 Livingston Street, and Dr. Eben F. Smith, of 73 Franklin Avenue. The physicians signed a contract with the agency under which the latter was to collect the physicians' accounts. In the contract a clause was secreted providing that the agency should be furnished by each physician with the names of at least thirty debtors owing an aggregate of \$150 within thirty days after the signing of the contract. In case of failure to do this the physicians were to forfeit to the agency \$25 each. When called upon for the forfeit the five physicians promptly refused to pay and suits were begun. In the answer the defendants set up that there had been fraud; that the agency, being a New Jersey corporation, had failed to file its certificate in New York State, and that the contract was against public policy. The court sustained this view.

Improving the Milk Supply of New York City.—After more than a year of preliminary investigation and preparation, the commission appointed by the Medical Society of the County of New York to devise methods of improving the milk supply of this city has begun its practical work by issuing to a few dealers labels certifying to the quality of the milk sold by them. The label adopted is the usual patented wood-pulp cap used on milk bottles. Around the margin is printed "Milk Commission, Medical Society Co. of N. Y.," and across the centre the single word "Certified." The commission hopes that the better class of consumers will learn to demand this label of the dealers who supply them. Certificates will be granted only to milk the acidity of which is less than two per cent., which contains not less than 3.5 per cent. of butter fat, and not more than 30,000 germs or bacteria of any kind to the cubic centimetre. The last figure seems to be a large one, but the commission found 2,000,000 bacteria to the cubic centimetre in the milk sold by one large dealer of this city, and 10,000,000 to the cubic centimetre in that of another firm.

In its milk inspection, the Board of Health only enforces the law, which requires that milk shall have not less than three per cent. of butter fat and shall not contain any preservative. Milk which meets both these conditions may still be dangerous, either because it contains actual disease germs or bacteria which bring about rapid changes which may make the milk harmful for infants or invalids, though wholesome enough

for healthy adults. Taste is the least reliable test. The richest and creamiest milk, for instance, comes from the breeds of cows most delicately organized and most often subject to tuberculosis and other diseases.

Diphtheria.—Oshkosh, Wis., has been visited by an epidemic of diphtheria. At one time there were thirty cases noted.—The Board of Health at Mt. Holly Springs, Pa., has ordered all the Sunday schools closed because of the number of diphtheritic patients there.

The Bubonic Plague Situation at Honolulu.—A dispatch from Gen. Shafter, at San Francisco, says: "Major Blair D. Taylor, Medical Department, Honolulu, reports four deaths from bubonic plague at Honolulu from May 29th to June 9th. His report states that the Honolulu Board of Health has taken every precaution in segregating the inhabitants of infected houses and disinfecting, and the president of the board of health believes he has the situation well in hand."

The Bubonic Plague at Marseilles.—The steamer Laos arrived at Marseilles recently from Yokohama and Colombo with fifteen cases of bubonic plague among the Arab stokers, two deaths having occurred during the voyage. The steamer and crew have been quarantined and the government has given instructions to have all the members of the crew given preventive inoculations of plague serum. The Arab stokers have refused to submit to this, and grave fears are entertained that the plague will spread unless this step be enforced.

Cuba is Practically Free from Yellow Fever.—Reports received by Dr. Wyman, surgeon-general of the Marine-Hospital Service, from members of the medical staff scattered all over Cuba show that the island is practically free from yellow fever. This is probably the first time this statement could be made for centuries. The report from Dr. H. A. Glennon, in Havana, says: "There have been no cases and no deaths from yellow fever during the week ending June 4th."

Dr. Wyman is considering the advisability of raising the quarantine on passengers from Cuba destined to points north of the southern boundary line.

Small-pox.—According to the records of the Bureau of Vital Statistics, there were twenty-five deaths from small-pox in New York city during the week which ended July 6th. The disease keeps spreading steadily.—Other places where small-pox is epidemic are Manville, R. I.; Leominster and Fall River, Mass.; Middle Haddam, Conn.; Topeka, Kans.; Louisville, Ky.; Waukegan, Ill., and Scranton and other points in Pennsylvania.—Dr. Benjamin Lee, secretary of the State Board of Health of Pennsylvania, is of the opinion that the disease was brought into the United States by returning soldiers in the Spanish-American War. There have been more than 2,000 cases of the disease in Pennsylvania, although, owing to the mildness of the attacks, few deaths have resulted.

New Buildings for Bellevue Recommended.—At a meeting of the New York State Board of Charities, held at Albany on July 10th, a resolution was adopted urging the authorities of the city of New York to erect new buildings for Bellevue Hospital to replace those now standing, which are antiquated and inadequate, and the authorities were also recommended to increase the rate of remuneration paid by the hospital, so as to be able to secure a better class of employees.

The Skene Memorial Hospital Project is Abandoned.—Instead of building and endowing a hospital for self-supporting women at a cost of \$300,000, as a memorial to Dr. Alexander J. C. Skene, of Brooklyn, the persons in charge of the movement have found themselves obliged to be content with the humbler project of putting up a monument in Prospect Park in honor of the physician. Of the amount required only \$23,000 was subscribed, and little more than \$3,000 actually paid in. In the Supreme Court Justice Hooker took the first steps toward granting the petition of the directors for the winding up of the hospital society by his issue of an order directing that all persons having claims against it shall appear in court on October 9th, to show cause why the petition should not be granted. There is little doubt that the organization will be dissolved. Part of the funds collected will be devoted to work on the proposed monument. The hospital society was organized by friends of Dr. Skene in his lifetime.

Hospital Buildings and Endowments.—By the will of Mrs. Angelica Crane, of New York, \$5,000 each is bequeathed to the Woman's Hospital of the State of New York, the Home for Incurables, and St. Luke's Hospital.—Mrs. John Hodge, of Lockport, N. Y., has given a new hospital to the Lockport Home for the Friendless.—The managers of the Homœopathic and Maternity Hospital, at Yonkers, N. Y., have purchased the Warner homestead, adjoining the present hospital, for \$25,000. It is said that a hospital will soon be erected on the grounds.—The Sisters of St. Francis, a community which conducts about twenty hospitals, has recently started another at Evanston, Ill.—Mrs. Cornelia A. Atwill, of New York city, has bequeathed \$10,000 to St. Luke's Hospital.—J. C. Hammond, of Geneseo, Ill., has given the city a building for a hospital. It will be known as the J. C. Hammond Hospital.—Contracts have been signed for the construction of the hospital at Richmond, Va. It will cost \$119,000 and will be called the Old Dominion Hospital.—George Foster Peabody and his brothers have agreed to contribute \$50,000 for the building and furnishing of an operating room as a memorial to the late Dr. A. J. C. Skene, for the Long Island College Hospital at Brooklyn, which is to be practically rebuilt. It is to be called the Skene Memorial Operating Room.—The plans for the addition to the Government Hospital for the Insane, at Washington, D. C., authorized by Congress to be constructed at a cost of \$1,000,000, have received the final approval of Secretary Hitchcock, of the Interior Department, and Dr. A. B. Richardson, superintendent of the institution.

Foreign Obituary Notes.—Dr. Hermann Baur, tutor in surgery at the University of Giessen, is dead.—Dr. Wersilow, tutor in neurology at Moscow, died recently.—The death is reported of Dr. Giuseppe Caccio, professor of comparative anatomy at the University of Bologna.

The Death of Commissioner Thomas S. Brennan.—Thomas S. Brennan, Deputy Commissioner of the Department of Public Charities of the City of New York, died at his home, in this city, Tuesday, July 9th. The deceased was well known to the medical profession of Greater New York, from his long connection with the administration of the public hospitals. In 1875 Mayor Wickham appointed Mr. Brennan Commissioner of Charities and Correction, and through reappointments by Mayor Ely and Mayor Edson he held the position for fourteen years. After the adoption of the Charter for Greater New York, making the department a single-headed commission, and the transfer of the care of the insane to the State, John W. Keller was made Commissioner of Public Charities and Mr. Brennan was appointed a deputy commissioner, which office he held up to his death. Mr. Brennan was born in New York in 1844. He attended public school and was later sent to St. Francis Xavier's College, Manhattan College, and St. Theresa's College, Montreal. He is survived by his widow and two sons.

Births, Marriages, and Deaths.

Married.

BAYLIS—PEEBLES.—In Eastabuchie, Louisiana, on Wednesday, June 26th, Dr. W. F. Baylis and Miss Jennie Peebles.

DOERBECKER—BOWER.—In Waukegan, Illinois, on Wednesday, July 3d, Dr. George Doerbecker and Miss Alida Bower.

HOUSEMAN—JONES.—In New York, on Sunday, June 30th, Dr. John Houseman and Miss Mary Jones.

LOCHBOEHLER—SCHMITT.—In Washington, on Wednesday, June 26th, Dr. George J. Lochboehler and Miss Mary Margaret Schmitt.

SHAUL—HEALEY.—In New Orleans, on Wednesday, June 26th, Dr. Frederick Shaul, of Philadelphia, and Miss Louisa Healey.

Died.

BUTTS.—In St. Louis, on Saturday, June 29th, Dr. H. B. Butts, in the sixty-seventh year of his age.

CURWEN.—In Harrisburg, Pennsylvania, on Tuesday, July 2d, Dr. John Curwen, in the eightieth year of his age.

EASTMAN.—In Baltimore, on Thursday, June 27th, Dr. Lewis M. Eastman, in the sixty-fourth year of his age.

HART.—In Baltimore, on Saturday, June 29th, Dr. John Beauregard Hart, in the thirty-ninth year of his age.

REYNOLDS.—In Saratoga, N. Y., on Wednesday, July 3d, Dr. Tabor B. Reynolds, in the eightieth year of his age.

WAGONER.—In Somerville, N. J., on Monday, July 1st, Dr. Henry G. Wagoner, in the seventieth year of his age.

WILLIAMS.—In Philadelphia, on Sunday, June 30th, Dr. Martin H. Williams, in the thirty-ninth year of his age.

YOUNG.—In Washington, on Wednesday, July 3d, Dr. James T. Young.

Pith of Current Literature.

Medical News, July 6, 1901.

Practical Notes Relative to Rabies. By Dr. N. G. Keirle.—Treatment should be resorted to as soon as possible. Delay is always dangerous and sometimes deadly. As to risk, there is none greater than the rare and unjustifiable occurrence of abscesses. The length of treatment should not be less than twenty-three days. It is a mistake to kill the biting animal if it can be kept. The therapeutic material is a portion of the spinal cord of a rabbit that has died of rabies; this is rubbed up in sterile cool water and hypodermically injected. For convenience the abdominal region is selected.

Actinotherapy in Cutaneous Medicine, a Preliminary Communication. By Dr. William S. Gottheil.—The author refers particularly to the use of the arc light. Increase of the ampérage employed and reflection and concentration of all the available rays upon the area to be treated have lessened the time of treatment and, in the author's practice, half-hourly sittings every other day have been found to be sufficient. In one case of extensive lupus vulgaris, and in another of obstinate tertiary syphilitic ulceration of the leg, the author has obtained very good results. The use of the arc light is, according to the author, conservative, painless, and effective, and may be profitably employed in the various skin affections which are dependent upon micro-organic or parasitic infection, or where increased tissue metamorphosis is a desideratum.

Ideals in Physical Education. By Dr. D. A. Sargent.

The Early Operative Treatment of Acute Mastoid Inflammation. By Dr. Edward B. Dench.—The author lays stress upon the rapid course which mastoid involvement may follow, and upon the rapidity with which infection of the intracranial structures may occur. When there is well-marked mastoid tenderness, and when there is narrowing of the meatus, he does not believe that it is wise to attempt to abort the inflammation by the local application of cold or by the local abstraction of blood. It is much better to keep the patient perfectly at rest and under observation for a day or two without the use of other abortive measures than to mask the symptoms by external applications. If, at the end of twenty-four or forty-eight hours, the condition is not changed, the surgeon is certainly warranted in operating upon the mastoid process. If nothing is found, no damage has been done; the observation of this rule will save many lives which would be lost under the abortive plan of treatment.

Salient Points in an Epidemic of Typhoid Fever Based upon Fifty-five Cases. By Dr. William J. Crittenden.

A Case of Lobar Pneumonia with Hyperpyrexia; Recovery. By Dr. William R. Williams.

Journal of the American Medical Association, July 6, 1901.

Poverty and Pregnancy; their Cause, Prevention, and Cure. By Dr. N. S. Davis.—Presidential address at the annual meeting of the American Medical Temperance Association, at St. Paul, June 6, 1901.

The Chairman's Address in the Section in Stomatology, at the Fifty-second Annual Meeting of the American Medical Association, at St. Paul, June 4, 5, 6, and 7, 1901. By R. R. Andrews, A. M., D. D. S.

The Appointment of State Boards of Medical and Dental Examiners. By Dr. William Carr.—The author hopes that the day is not far distant when each State will have a board of regents, possessing the powers of the Regents of the University of the State of New York, or, as suggested by Henry Wade Rogers, that "there should be established in each State a council of education, which should be invested with powers similar to those of the Regents of the University of the State of New York, and it should be composed of the most eminent men of the State, without any reference to political considerations. No degree-conferring power or no degree-conferring institution should be incorporated without the approval of the Council of Education." The success of this system in New York depends upon the fact that the university, while controlling all educating bodies, does not itself possess a teaching faculty, and the board is thereby kept out of politics and a double responsibility is thereby created for its appointments.

Revenue for Conducting the Work of State Boards of Dental Examiners. By Dr. George L. Parmele.—The gist of the author's article is that the revenue for conducting the work of the State boards shall be obtained from the candidate.

Revenue for Conducting the Work of Boards of Dental Examiners. By V. E. Turner, D. D. S.—The profession should not hesitate to bear the burden for the sake of the benefit which is derived from a proper discrimination between the worthy and qualified and the unworthy and incompetent, and in order to prevent the lowering of the standards of professional equipment and to provide against the advent of those who pursue the calling as a hustling business rather than as a learned and dignified profession.

The Dental College Standard. 1. Is it what it Should Be? 2. If not, what Improvements should be Made? 3. How may the Requirements be Improved? By Chas. C. Chittenden, D. D. S.

Licensing. 1. By Examination. 2. By Diploma. By J. A. Libby, D. D. S.

Post-operative Hæmorrhage. By Dr. A. H. Cordier.—In diagnosing post-operative hæmorrhage, the operative history will aid much. The symptoms of shock and those of hæmorrhage are very similar. In suspected cases the cutting of a single stitch in the incision will tell: The surgery must be quick and decisive in these cases. In cases in which bleeding is expected the tube

should be used. Large quantities of decinormal salt solution will save many patients. This should be used both per rectum and by injection into the veins. Strychnine, belladonna, etc., will not control bleeding from a uterine or ovarian artery any better than from any other artery. The surgeon should do what his surgical conscience tells him is right. Late researches in hæmatology make it appear that a concealed internal hæmorrhage may be demonstrated by a careful blood count.

The Advantages and Disadvantages of Drainage after Abdominal Operations. By Dr. Hunter Robb.—In the author's clinic, the employment of drainage in abdominal cases has been practically abandoned, and for seven years a glass drainage tube has not been used. Drainage by means of gauze has been resorted to, however, on several occasions in which it has been impossible to control the bleeding, and also in those cases in which a rupture of the bowel has occurred during the operation with a tear which it has been an exceedingly difficult task to close.

Actinotherapy in Cutaneous Medicine—A Preliminary Communication. By Dr. William S. Gottheil.—See abstract of the *Medical News* in this issue of the *Journal*.)

A New Operation for Removal of Cancer of the Rectum. By Dr. Matthew D. Mann.

The Accidents and Complications of Pelvic Surgery and their Treatment. By Dr. J. B. Deaver.

Cirrhosis of Liver—Report of a Case. By Dr. C. S. Muscroft and Dr. H. A. Ingals.

American Medicine, July 6, 1901.

Experimental Yellow Fever. By Dr. Walter Reed, Dr. James Carroll, and Dr. A. Agramonte.—The authors invite attention to two matters. They present facts indicating that the period of incubation of yellow fever occasionally exceeds the quarantine period of five days, and they point out that, although exceptional, this must not be left out of consideration. Their observations emphasize anew the importance of the recognition by the profession of mild and very mild cases of yellow fever. They believe that the failure to detect cases of mild yellow fever has been the most important factor in the development of the theory of the propagation of this disease by fomites.

A Medico-legal Aspect of Tuberculous Joint Disease. By Dr. H. Augustus Wilson.—The keystone of modern success in the avoidance of the distressing deformities due to tuberculous bone disease appears to lie in the accepted principle of aiming at securing ankylosis rather than attempting to avoid it. With full faith in the efficiency of persistent fixation one would constantly avoid making passive motion to see how the joint was progressing; or applying massage to prevent muscle atrophy, when such a course must produce more or less joint motion; or encouraging early use of the affected leg; or, finally,

attempting to break up adhesions that have resulted from tuberculous osteitis. The author suggests that suits for malpractice, when deformity has resulted from fractures and dislocations, will be less frequent when attention is called to the dangers of pursuing methods that have been proved to be inadequate or inefficient, remembering that the highest forms of success can only be secured in the very incipency.

Three Distinct Consequences of Myocardial Degeneration Following Coronary Arteriosclerosis, Illustrated by Typical Cases. By Dr. A. P. Ohlmacher.

Occlusion of the Vena Cava from Compression: Diffuse Cancer, Chiefly Abdominal. By Dr. R. T. Edes.

A Brief Note on Aspergillus Keratitis. By Dr. James Moores Ball.—Aspergillus keratitis, according to the author, is a more common disease than has been supposed. Intense pain in the eye, followed by the development of a brownish or blackish mass within the substance of the cornea, is the pathognomonic sign. Removal of the mass early in the case is followed by an uninterrupted cure. Failure to recognize the condition and apply proper treatment is followed by sloughing of the cornea, and in some cases by loss of the eye. In the few cases of keratomycosis aspergillina where cultures have been made, only aspergillus fumigatus has been found.

The Therapeutic Value of Adrenaline Chloride. By Dr. Dudley S. Reynolds.

Pilocarpine Hydrochlorate and Its Uses in Croup. By Dr. S. E. Wertman.

Medical Record, July 6, 1901.

Observations in China and the Tropics on the Army Ration and the Post Exchange or Canteen. By Dr. Louis Livingston Seaman.

The Place of Cereals in Infant Feeding. By Dr. Henry Dwight Chapin.—The gist of the article is that chemical analyses of milk are not the only scientific bases of comparison; Nature adapts an animal's milk food to its digestive system, and cow's milk and woman's milk were intended for different digestive systems. As cow's milk forms solid curds, and woman's milk flocculent curds, the curds of cow's milk intended for an infant should be broken up mechanically; and, as cereal gruels mechanically break up the curds of cow's milk, and as infants are able to use them, their use is rational. It is often preferable to make the standard diluent of digested gruels.

The Value of Local Sanatoria in the Combat of Tuberculosis in Large Centres of Population. By Dr. S. H. Knopf.—The author deplores the indifference that exists among statesmen and philanthropists on this matter. He pictures the conditions of the consumptive poor in New York, and he points out that, by having sufficient suitable hospital and sanatorium accommodation, we cannot only cure a large number of tuberculous patients and make of them useful citizens and bread winners for their families, but can also suppress countless centres of infection and thus

can do a curative and preventive work at the same time.

Observations and Remarks on Removal of the Gasserian Ganglion in the Cadaver. By Dr. Robert F. Amyx.—A careful dissection of the ganglion from the dura and other contiguous structures must be made, the dissection being made upon the ganglion and its branches as much as possible. If this is done, there will be very little hæmorrhage. The ganglion must be dissected from its dural covering; the cavernous sinus, internal carotid artery, and middle meningeal artery should be completely separated from the ganglion before any effort is made to evoke it. It is best to divide the second and third branches, and then to break through the trunk of the ganglion and pull it away from the cavernous sinus before any attempt is made to cut the first branch of the ganglion. This will enable the operator to avoid the sixth nerve and the contents of the cavernous sinus. Physical conditions favoring hæmorrhage are old age and arteriosclerosis. In the middle-aged and the young very little hæmorrhage is encountered.

Primary Carcinoma of the Tip of the Appendix; Primary Epithelioma of the Sphincter Muscle of the Bladder. By Dr. J. Riddle Goffe.

Traumatic Hydrothorax. By Dr. J. M. France.

An Untoward Occurrence in the Use of Suprarenal Gland. By Dr. Clement Block.—The disagreeable symptoms, the author thinks, were probably due to the fact that too much of the suprarenal gland had been given, and he advises that this substance be applied in aqueous solution.

Foreign Body Lodged for Four Months in the Trachea of a Thirteen-months-old Child. By Dr. Harris F. Brownlee.

On a Form of Sarcoma of the Ovaries and its Peculiarities. By Dr. W. Moser.

A Case of Anatomical Asymmetry. By Dr. James E. Davis.

Boston Medical and Surgical Journal, July 4, 1901.

Medical Prospects. By Dr. George E. Francis.—The annual discourse read before the Massachusetts Medical Society, June 12, 1901. The author discusses some conditions and tendencies now to be observed in the practical side of medicine, and endeavors to forecast some of the changes that they are likely to bring about. He considers specialism, medical training, the differentiation of the physician from the surgeon, the relation of dentistry to medicine, the increased stress of competition, the great changes in the habits and constitutional conditions of our patients, the relations of the physician and patient, specifics, etc.

A City Isolation Hospital. By Dr. May Salona Holmes.—Chiefly of local interest.

Report of a Case of Porro Cæsarean Section for Placenta Prævia Centralis. By Dr. W. J. Gillette.—An interesting account, owing to the rarity of operation for this cause. Lawson Tait recorded a similar case in the *Lancet* for Febru-

ary 11, 1899, for which the author gives him credit.

Forced Flexion and Adduction in Cases of Extreme Sensitiveness of the Hip-joint. By Dr. E. H. Bradford.—The author records two cases, in children seven and three years of age respectively, in which, after failure of all the usual methods, a plaster-of-Paris bandage was applied, under ether, to the limb forcibly flexed and slightly adducted, with complete cessation of the night cries. The measure is only temporary and demands great care, and is probably advisable in but few cases. The child is secured upon a bed frame lying on the back to prevent rolling, and the flexed and adducted thigh and leg, secured in a plaster spica, is so slung that the weight may not be an inconvenience.

Lancet, June 29, 1901.

Acute Cardiac Failure. By Sir R. D. Powell.—The Cavendish Lecture. (See abstract of *British Medical Journal* for June 29, 1901, in this number of the *Journal*.)

The Practical Points in the Treatment of Threatened Asphyxia. By Dr. R. L. Bowles.—(The second of a series of three lectures upon this subject. They will be abstracted as a whole upon completion.)

Intestinal Suture by means of Continuous Catgut Stitch and Excision of the Mucous Membrane. By H. Littlewood, F. R. C. S.—The author describes his method of intestinal suture as follows: Gastro-enterostomy. The abdomen is opened in the middle line, a suitable portion of the stomach is selected (either the anterior or the posterior wall), and a loop of jejunum. These are now emptied and clamped by means of Doyen's pedicle forceps, the blades of which are covered with india rubber, and are held by an assistant so that the portions of the stomach and bowel to be operated upon are in close apposition. The parts are surrounded with strips of gauze or flat swabs. An incision about one and a half inches in length is now made into the stomach and bowel through all the coats down to the mucosa, and then with a pair of ophthalmic scissors and forceps the coats all round are separated from the mucosa for a short distance, so that a broad surface of all these coats may be brought into contact. The posterior edge of the stomach incision is now stitched through its full extent to a similar portion of the bowel with chromic gut by means of a small curved Hagedorn's needle; the suture is knotted at both end and left long. An elliptical portion of the mucous membrane is now excised from the stomach and a similar portion from the bowel, and the parts are cleansed. The cut edges of the mucous membranes are now stitched the whole way round by a continuous stitch of catgut, knotting it at the two extremities of the openings, so as to prevent its drawing too tightly and narrowing the opening. This done, the anterior edges of the incisions into the stomach and bowel through the remaining coats are united by a continuous stitch, the same suture which was left long after uniting the posterior edges. The clamps are then removed. As a

rule there is no bleeding. The gauze is removed and the abdomen is closed. In doing enterectomy, a very similar operation is performed.

A Case of Ectopic Gestation with Septic Infection of the Gestation Sac. By Dr. H. Macnaughton Jones.—The author reports a case of ectopic gestation occurring in a woman aged thirty years, upon whom he performed abdominal cœliotomy. In the delivery of the gestation sac through the enlarged abdominal incision, it ruptured, and some extremely fœtid fluid escaped, but none entered the abdomen. The patient did well for two days, when her temperature rose and she began to vomit. The bowels were obstinately constipated, and on the fourth day the abdomen was reopened, but no obstruction was to be found. The patient gradually failed and died on the seventh day. Examination of the gestation sac showed two cavities; one contained the fœtus, the other fœtid pus. The tubal pregnancy had ended in a molar pregnancy or apoplectic ovum, and secondary suppuration had been set up within the dilated tube and around the ovum. The source of infection must have been through adherent bowel.

Are not some Patients, said to be Afflicted with Gastric Ulcer, Really Suffering from a Different Disease? By Dr. W. H. White.—The author suggests that there is a disease met with chiefly, or perhaps only, in women usually between twenty and forty years old; that its chief symptoms are gastric pain, nausea, sickness, and hæmatemesis, that these symptoms are not dependent upon ulceration of the stomach, any ulceration that may be present being quite superficial and no more than might occur secondarily to the hæmorrhage; and that the diagnosis from genuine gastric ulcer occurring in women is very difficult; yet the facts, that in spite of serious gastric symptoms extending over years the patient is not wasted, has been or is often chlorotic, and has none of the mechanical effects of gastric ulcer, such as adhesions, pyloric stenosis, or sub-phrenic abscess, may help us to a right conclusion. The prognosis is much more hopeful in these cases than in gastric ulcer, but relapses are frequent. The disease is closely related to chlorosis, but may exist apart therefrom. Operators are already accustomed not to find an ulcer, even where the bleeding has been severe. Such cases should and do well on iron and good food.

Foreign Body in the Bronchus; Tracheotomy; Recovery. By F. B. Judge Baldwin, F. R. C. S.—In the treatment of foreign bodies in the bronchi, tracheotomy is universally recommended. It lessens the danger from glottic spasm in the event of the foreign body moving and being coughed up; and it affords a supplementary outlet for the foreign body itself. The further treatment consists in waiting for the development in the lung and dealing by direct operation with the possible abscess that may arise. The author reports the case of a boy who had got a fragment of beech nut into his left bronchus, and upon whom he had to perform tracheotomy twice, the foreign body being eventually coughed out through the wound.

Three Cases of Puerperal Eclampsia, with

Critical Notes on the Ætiology, Pathology, Prognosis, and Treatment. By Dr. J. P. Simpson.—The author reports three cases of puerperal eclampsia seen by him, all of which recovered. No special treatment, beyond the usual sedatives, was employed. The death-rate in this disease is not quite so high as is generally believed; the author puts it at about ten per cent. If the albumin in the urine is principally para-globulin then with judicious treatment recovery may be predicted with safety; while, if the convulsions are due to Bright's disease, recovery would be a matter of doubt. Empiricism in treatment is to be avoided; no special line of treatment is suitable for all cases. The less heroic methods should be tried first, and later the more powerful ones. The author gets good results with pilocarpine, and reserves the use of morphine and hypodermoclysis until the last. In the first months of pregnancy forcible methods of emptying the uterus should be avoided even under chloroform. The bougie acts as well and more gently. Venesection is a valuable form of treatment if the patient is plethoric.

British Medical Journal, June 29, 1901.

Acute Cardiac Failure. By Sir R. D. Powell.—The Cavendish Lecture. By acute heart failure the author implies the culmination, in temporary or permanent arrest of the cardiac function, of a variety of conditions damaging to texture and exhaustive to nerve power or muscular energy. A most obvious cause of heart failure is direct injury, such as the sudden rupture of one of the aortic cusps in a healthy man, following some sudden effort. Embolism is a common cause of acute anginal heart failure, and is attended with urgent dyspnoea, irregular pulse, and variable heart signs. The condition is one of asphyxia of the heart, and terminates either in death or in dislodgement of the clot. Here we can only relieve suffering and insure quietude. These cases are by no means necessarily fatal. In cardiac failure from over-taxation, two factors are always at work—direct fatigue of the nervo-muscular tissue of the heart, and a poisoning of the blood of auto-metabolic source. Anæmia and vomiting are among the most constant after-effects of over-exertion, showing a changed condition of the blood consequent upon the accumulation of products of metabolism. Such attacks occur most frequently in young children, and they usually recover, though not always. Attention is called to the advisability of the routine examination of the health of every boy on entering school life, and of girls also. The treatment of such cardiac failure from over-strain involves a period of a few weeks complete rest and often many months of careful supervision. The younger the patient, the more ready and complete the recovery. Some cardiac irritability may persist for many months. Fatigue heart failure is frequently met with in acute disease. Acute pneumonia, acute bronchitis in old people, severe asthma, all furnish examples. The heart failure may come on with a gradual quickening of the pulse day by day, or suddenly. Such an attack in an old person with bronchitis or pneumonia is

almost of fatal augury. The factors to be looked for as indications for treatment are: (1) Maloxygenated and contaminated blood supply to the heart; (2) excessive burden of blood; (3) exhausted innervation from sleeplessness; (4) positive obstruction to the flow of blood through the lungs; and (5), changes in the texture of the heart muscle incidental to the disease (*e. g.*, diphtheria) and to pyrexia. The first two indications are to be met by depletion, either through the secretions or by blood letting, and by the use of oxygen inhalations. Strychnine must be given for exhausted innervation and obstruction to the flow of blood. Where the stomach is distended, it should be given hypodermically. The changes incidental to fever are best warded off by bathing, and hot sponges are preferred to cold. The author touches upon the subjects of anginal heart failure, and also that seen in certain cases of plethora. He also calls attention to the association of anginal heart failure with epilepsy, or at least a neurosis of an epileptic character. In the cases seen by him there was usually also a history of excessive use of tobacco. Cases of cardiac "hesitation" with attacks of fainting are not uncommon in young children, and are difficult to distinguish from *petit mal*.

Clinical and Experimental Observations upon General Paralysis. By Dr. L. C. Bruce.—From his observations and experiments the author draws the following conclusions: 1. General paralysis is a disease directly due to poisoning by the toxins of bacteria whose point of attack is through the gastric and intestinal mucous membranes. 2. The poisoning is probably mixed, but the *Bacillus coli* is apparently one of the noxious organisms. 3. The result of treatment with serum taken from a case of general paralysis in a condition of remission and injected subcutaneously into an early progressive case, points strongly to the fact that some form of serum treatment is the proper treatment for this as yet incurable disease.

Observations Bearing upon the Question of the Pathogenesis of General Paralysis of the Insane. By Dr. W. F. Robertson.—The author's conclusions may be briefly summed up as follows: (1) General paralysis is dependent upon the occurrence of chronic toxæmia of gastro-intestinal origin; (2) the toxins are mainly bacterial and are formed in consequence of a partial breakdown of those forces by which the harmful development of the micro-organisms that constitute the ordinary flora of the alimentary tract is normally prevented; (3) the toxins are absorbed and tend specially to produce proliferative and degenerative changes in the vessels of the central nervous system; (4) these vascular changes tend to set in earliest in those parts of the brain that are relatively best supplied with blood, because their walls are brought in contact with the largest quantity of toxins; (5) tabes dorsalis is dependent upon the same form of toxæmia; (6) the part played by syphilis in the pathogenesis of general paralysis and tabes dorsalis is essentially that of altering the natural immunity; (7) there is some evidence in favor of the hypothesis that

this alteration in the natural immunity is dependent upon commencing exhaustion of the leucoblastic function of the bone-marrow; (8) the treatment of general paralysis and tabes dorsalis should be directed primarily to the correction of the disorder of the alimentary tract; (9) probably the only means by which it will be found possible to check the excessive growth of the gastro-intestinal bacteria is that of the employment of specific antitoxines; (10) to arrest the disease by such means may be more practicable than would at first sight appear, because it is probable that the specially injurious toxins are the products of only a few bacterial forms.

An Experimental Inquiry into the Pathology of Gastric Tetany. By Dr. W. D. Halliburton and Dr. J. S. McKendrick.—The authors are convinced that self-intoxication furnishes the only plausible theory of the pathogenesis of gastric tetany. A poisonous substance is formed in the stomach, which, when absorbed into the blood stream in sufficient amount, gives rise to the tetanoid contractures and other concomitant symptoms which are well known in this disease. They have carefully studied the case of a man of middle age, which presented the following chief points of interest: A dilated stomach following pyloric stenosis due to old gastric ulcer; attacks of clonic contracture of the arms and hands, and complete loss of consciousness for thirty-six hours; albuminuria during the tetanoid seizure; and entire relief of the tetanic symptoms following an abdominal operation. The authors isolated from the stomach contents of the patient a toxic substance which, when injected into an animal, produced a marked fall of blood-pressure and slowing of the heart's beat. The gastric contents were obtained after the patient was in a state of partial convalescence, and it is possible that, had the fluid been obtained during the period of coma with contracture, this poisonous substance would have been present in greater amount, and would, when injected into the veins of an animal, have produced convulsions and death. The injection of normal gastric contents into animals produces no effect.

Changes in the Neuronal Centres in Beri-beri Neuritis. By Dr. H. Wright.—In a careful examination of eight cases of beri-beri the author has found changes in those posterior spinal ganglion and anterior horn cells which give origin to the degenerated nerves and in the combined and hypoglossal nuclei of the bulb in those cases when the fibres from these parts were atrophied. The lesion is scarcely distinguishable from that found in cases of alcoholic poly-neuritis.

Faradaization of the Head in the Treatment of Chronic Insomnia and Associated Neuroses. By Dr. S. Sloan.—The author recommends faradaization of the head in cases of chronic insomnia and associated neuroses; in forty-five per cent. of his cases, the patients were absolutely cured, and in thirty-two per cent., they were greatly relieved. A faradimeter should always be used, and the maximum amount of current given should be one milliamperè. The electrodes are soft and applied to the brow and to the nape of

the neck. The vibrations of the rheotome should be the fastest obtainable, and the current should be applied for fifteen minutes each time.

Observations on Sea-sickness. By J. R. Wor-tabet, M. B.—The author recommends that those persons who suffer from sea-sickness, before starting on a voyage should provide themselves with a good flannel roller bandage, twelve feet in length and six inches in breadth, and wind it around their trunk, over the whole width of the abdominal region; this will frequently afford great comfort by preventing the viscera from undue movement. A few turns of a surgical bandage round the head also appear to allay a good deal of the accompanying headache.

Presse médicale, June 8, 1901.

Cocainization of the Spinal Cord.—M. Tuffier, in a polemic article, defends the method which bears his name, makes a plea for its further use, and urges the mortality which has followed its use as not dependent upon the anæsthesia. He thinks that the patients would have died under chloroform or ether anæsthesia.

Agglutination of Bacterium Coli by Typhoid Serum.—M. E. Sacquépée says that this is a frequent phenomenon when the serum and the bacilli are derived from the same subject. From a typhoid subject, several varieties of the colon bacillus can be isolated, each of which is differently affected by the same serum. Typhoid serum will agglutinate readily colon bacilli which belong to varieties not found in the intestines of typhoid patients. The agglutination of the colon bacilli in typhoid fever seems to indicate an infection or intoxication through these germs residing in the intestines.

Journal des praticiens, June 8, 1901.

Neuralgia and Latent Aneurysm of the Aorta.—M. Huchard draws attention to intractable brachial neuralgia as a symptom of an aneurysm of the ascending aorta or one of its branches, and of similar pains in the back and lumbar region caused by abdominal aneurysm. The pain is usually dull, like that of a bruise, not lancinating as in a simple neuralgia. It is sometimes constant, sometimes paroxysmal. If the pain cannot be relieved by change of posture, if it is abnormally intense and of long duration, and if a tumor can be simultaneously mapped out, the almost certain diagnosis of aneurysm can be made.

Delirium in Senile Gangrene.—M. Paul Fabre reports two such cases, in both of which it was evident that alcoholism played no rôle. The author attributes the phenomenon to circulatory disturbance in the cerebrum due to advanced arteriosclerosis.

Lyon médical, June 9, 1901.

Hygieia. By M. A. Sabatier.—An historical review. (Continued article.)

Malaria and Mosquitos.—M. Bonveyron says that the hematozoon of Laveran undergoes two cycles in man and in the mosquito (anopheles) respectively. In the one it accomplishes its

asexual reproduction, in the other the sexual propagation. It is only after the latter has been completed that the anopheles can in its turn infect man, from whom the original infection came to it.

Progrès médical, June 8, 1901.

Thyreoid Treatment of Myxœdematous Idiocy.—M. Bourneville and M. Laurens report in minute detail the clinical history of a patient whom they had observed for three years, who was idiotic and myxœdematous and who improved in a remarkable manner under the constant administration of thyreoid gland given fresh in soup. The child was of vicious heredity. The authors say, in their conclusions, that myxœdematous idiots are rarely given to masturbation. They are often strongly constipated, as a result, sometimes, of a prolapse of the rectum. They administer with the food from seven and a half to eighteen grain of a fresh thyreoid gland. Under its influence the weight diminishes, the tongue grows less thick, dentition takes on a normal course, and perspiration becomes evident. The mental state improves simultaneously. Special exercises must also be given.

Gazette hebdomadaire de médecine et de chirurgie, June 6 and 9, 1901.

Ocular Complications of Mumps.—M. Alphonse Péchin reports two cases in which iritis and keratitis supervened as complications of acute mumps.

Diagnostic Value of the Diazoreaction in Diphtheria.—M. Lobligeois finds Ehrlich's diazo-reaction of use in distinguishing between a simple erythema and a true scarlatina, being negative in the former, positive in the latter. In diphtheria it is rarely present, having been found but five times in 118 cases, and in four of these instances the reaction could be explained on other grounds than by the diphtheritic process.

Klinisch-therapeutische Wochenschrift, June 2, 1901.

Mechanical Laxative for Nurslings.—Dr. Hermann Beer recommends the following method: The mercurial end of a clinical thermometer is smeared with vaseline and placed within the infant's rectum. It is then turned in a circle, the circle being constantly increased in its diameter until it is seen that the sphincter remains open. A spontaneous defæcation will result. The act may be repeated whenever necessary.

Wiener klinische Rundschau, June 9, 1901.

Idiopathic Peritonitis.—Professor H. Nothnagel says that the notion of a primary, idiopathic peritonitis must be absolutely withdrawn from scientific nomenclature. There is but one way by which a peritonitis of this kind could be evoked without a lesion of the continuity of structure, and that is by way of the female genitals; but even here there is almost always found some lesion of the genital tract whose inflammation has spread to the peritonæum. There is no

evidence showing that a peritonitis can spring from infection by the blood. Even in those cases in which the tonsils have been the portals of infection, Nothnagel believes that the germs have reached the peritonæum through the intestines, and not by way of the blood.

Nosocomial Gangrene. By Dr. A. Brabec.—*(Continued article.)*

Bronze Diabetes. By Professor A. Murri.

Medicinische Woche, June 3, 1901.

Gonorrhœa of the Female Genitals.—Dr. R. Kossmann is of the opinion that salpingitides of gonorrhœal origin frequently become thickened, or even organized, so that their removal is not always necessary. They are probably not absorbed, although the ætiologic germs usually die within a year. If adhesions and complicating pains render an operation necessary, Kossmann favors splitting of the uterus and removing the appendages of each side with its corresponding half of the uterus. The results as to coitus, ability to work, and recovery are good, while the patient's sterility was assured before the operation.

Silver as an External and Internal Antiseptic in Gynæcology. By Dr. Crédé.—*(Conclusion.)*

Münchener medicinische Wochenschrift, June 11, 1901.

Neutral-red Staining of Nucleated Red Blood Cells. By Dr. Bettmann.

Gelatin as a Hæmostatic.—Dr. H. Gebele highly recommends gelatin as a hæmostatic agent, especially after the loss of large quantities of blood. It is then easily absorbed and acts as a fibrin-forming agent. To work promptly, the gelatin should be introduced after the loss of one fourth or one fifth of the total quantity of blood, as is often the case in practice. It is warmed to 102°-103° F., is used subcutaneously in a two-per-cent. solution, locally in a ten-per-cent. solution, under strict asepsis. In less severe hæmorrhages, the ordinary methods of hæmostasis will usually suffice. The reaction consists in a slight albuminuria, a rise of temperature, pronounced itching at the site of injection, which gradually diminishes in from six to eight hours.

Pathological Fantasies. By Dr. Karl Heilbronner.

So-called Pseudomyxoma of the Peritonæum. By Dr. Eugen Fränkel.

Hot-air Treatment of Middle Ear Disease.—Dr. Hecht favors this method in preference to douching. It evokes a violent local metabolism which draws more blood to the part, thus causing a better nourishment thereof, and increasing its regenerative function and its resistance.

A Pessary for the Treatment of Hæmorrhoids. By Dr. Scheffer.

Riforma Medica, June 3 and 4, 1901.

The Toxicity of the Cerebrospinal Fluid in

Epileptics. By Dr. Romano Pellegrini.—A study of seven cases of epilepsy in which lumbar puncture according to Quinke was performed, showed that: 1. The cerebrospinal fluid of epileptics was endowed with very marked toxic properties. 2. If injected into guinea-pigs, this fluid produced grave convulsive phenomena, bringing about ultimately the so-called epileptic state. It had, therefore, a convulsive action. 3. The cerebrospinal fluid which was removed from epileptics soon or immediately after an attack, had a far greater toxic and convulsive effect than that removed from the same patients between the attacks. 4. The administration of the so-called anti-epileptic or anticonvulsive (antispasmodic) remedies had no influence upon the toxicity or the convulsive action of this fluid. 5. Tubes of gelatin broth, inoculated with cephalo-hachidian fluid from epileptics, remained sterile upon cultivation. The lumbar puncture did not produce any clinical alteration in the course of the disease, and had, therefore, no curative value in epilepsy.

June 7, 1901.

Mixed Angioma. By Dr. G. Rizzutto and Dr. R. Gomez.—Mixed angiomas are those which participate in the characters of several of the groups of vascular tumors—the plexiform (arterial, venous, capillary) and the cavernous (formed of spongy tissue). The authors report one case in which such a tumor was present. It was removed and the loss of tissue replaced by plastic work. On microscopic examination the tumor showed the mixed character referred to. The authors not only affirm that such a mixed form may exist, though it has never been described, but state that they have evidence that the cavernous form may result from a transformation of the plexiform variety. Whether this process of transformation takes place in all cavernomas they cannot say, but it seems not improbable.

June 8, 1901.

Subdiaphragmatic Abscess on the Left Side. By Dr. Francesco Arezzi.—The patient was wounded with a sharp instrument three centimetres above the junction of the anterior axillary line on the left side, with the transverse line passing through the umbilicus. The wound was four centimetres long, and a portion of omentum protruded from it. After disinfection, the protruding omentum was tied and cut off, and the wound closed. Iodoform and a dry dressing were applied. On the following day the patient's condition was normal, except that there was a little pain in the wound. Nothing of note occurred during the following seven days. Then the pain became worse and radiated from the wound, which had healed *per primam*. There was a rise of temperature, and in a day or two the pain extended to the whole abdominal wall. Soon a dull percussion sound was obtained in Traube's semilunar space, and the heart was found displaced upward. The abscess was opened and drained, and the patient recovered with a good scar over the site of the abscess.

Vratch, May 12 (May 24, *New Style*), 1901.

On Syphilitic Endocarditis. By M. J. Breitmänn.

On Genu Recurvatum. By A. A. Vorobieff.—The author reports nine cases of this affection. The chief cause of it is acute anterior poliomyelitis. Other causes may be locomotor ataxia and progressive paralysis. In one of the author's cases there was an injury to the lumbar portion of the spine, followed by paralysis of the sciatic nerve and paresis of the femoral nerve group. Other causes of genu recurvatum may be fractures of the femur or of the bones of the leg, rickets, osteomyelitis, tuberculosis or syphilis of the bones, and traumatic arthritis of the knee followed by suppuration, etc.

A Case of Hysterical Deaf-mutism. By Dr. N. U. Kumberg.—The patient was a soldier, aged twenty-seven years, with neuropathic predisposition on the father's side (?), who developed an attack of hystero-epilepsy, after which he remained deaf and dumb, and manifested a series of hysterical symptoms. The patient had been in perfect health before the attack, but the exciting causes were a condition of exhaustion, mental depression, use of alcoholic drinks, and exposure to cold. The patient was slowly taught to talk, and regained his speech and hearing after a time. Bromides and valerianates were also employed, in addition to the moral and psychical treatment.

A Case of Suppurative Appendicitis, with Rare Termination. By Dr. P. D. Veingroff.—In this case there was the rather unusual occurrence of a rupture of the circumappendicular abscess into the large intestine and a separation and discharge of the entire appendix through the bowel.

A Case of Appendicitis Complicated with Acute Parenchymatous Nephritis. By Dr. J. V. Moldavsky.

Klinitchesky Journal, March, 1901.

On Traumatic Endocarditis. By Dr. M. Litten.—Under this heading the author considers exclusively those inflammations of the endocardium that are secondary to traumatism, and excludes all immediate effects of traumatism. He emphasizes the fact that in very severe traumatism of the heart, even in rupture of the organ as a result of injury, there may not be any marks of violence upon the thorax. Analogous conditions are seen in injuries of the lungs. Secondary endocarditis of traumatic origin may be directly due to the trauma, or it may happen that the trauma simply produced a place somewhere in the endocardium which was favorable for the entrance of infection. General sepsis thus results, with a secondary localization in the endocardium. The latter type of cases rather belongs to the subject of general sepsis. In the present article the author discusses simply the endocarditis which follows upon an injury. These cases for the most part are of benign character, the disease usually, though not always, leading to a permanent lesion of the valves. The clinical course is similar in every respect to that of endocarditis after acute articular rheumatism, etc. The pa-

thology is not well known, because the disease is rarely fatal. Severe injury predisposes, of course, to the development of the inflammation of the endocardium. A more important predisposing factor, however, is the presence of previous endocardial disease.

A Case of Acquired Stenosis of the Pulmonary Artery. By Dr. I. E. Tikanadze.—The patient complained of pains in the region of the heart, palpitation, and shortness of breath. There was a history of malaria and of a severe fall from a tree. It was found that the patient's body was slightly cyanosed, the cardiac region was somewhat prominent on inspection, and the area of cardiac dulness enlarged toward the right side, and there was a systolic bruit, most intense over the pulmonary area; the apex beat was enfeebled. In addition, there was frémissement cataire systolique felt most distinctly in the second left intercostal space. The diagnosis of pulmonary stenosis was made. The second pulmonary sound was not accentuated, which excluded the possibility of a mitral insufficiency with a systolic murmur heard (exceptionally) loudest at the upper part of the sternum. In this case the origin of the trouble may be referred to the injury in falling from a tree which the patient sustained two years before admission, though malarial infection may have had something to do with the case.

Hæmoptysis and Tuberculosis. By Dr. T. A. Grusinoff.—In a total number of 101 cases of tuberculosis forty-one of the patients had hæmoptyses. The author found that the patients with hæmoptysis not infrequently showed evidences of arthritism. Arteriosclerosis is found very frequently among these patients, and is evident even in young subjects. The hæmorrhagic diathesis is also encountered with comparative frequency.

On the Effect of Baths with the Addition of the Extract of Pine Needles. By Dr. S. G. Jakoushevitch.—Extract of pine needles, when added to the bath in moderate quantities, acts as a mild irritant to the skin, producing a general hyperæmia which lasts even after the bath. This hyperæmia produces a rise in the surface beat and in the internal temperature, an increase in the pulse rate and that of the respiration, and a fall in blood pressure, together with a decrease of muscular power. In other words, these baths increase the metabolism and favor the processes of oxidation. These baths are similar to salt baths (three per cent.) in their general effects, but the effects of the pine needle baths are more lasting. The addition of pine-needle extract to salt baths increases the efficiency of the latter. These baths, therefore, are useful adjuncts in balneotherapy and may be used in anæmias, chronic articular rheumatism, peripheral nervous affections, and maladies of metabolism. [According to Hager, a pine-needle bath is prepared as follows: Extract of pine-needle, 250.0 grammes; oil of pine (*Pinus pumilio*, *Pinus sabiniana*, etc.), 2.0 grammes; and ninety-per cent. alcohol, 50.0 grammes are mixed and diluted with water until the mixture assumes a syrupy consistency. This mixture is added to a bath-tub full of water and should be freshly prepared.]

Proceedings of Societies.

AMERICAN MEDICAL ASSOCIATION.

Fifty-second Annual Meeting, Held in St. Paul, on Tuesday, Wednesday, Thursday, and Friday, June 4, 5, 6, and 7, 1901.

Section in Diseases of Children.

(Continued from page 46.)

Prevention of Tuberculosis in Babes Born of Tuberculous Parents. By Dr. Clifton Scott, of Des Moines, Iowa.—Two cases are reported, in one of which a mother known to be tuberculous was confined. The child was immediately removed and placed with its aunt and fed on modified milk. When the babe was five months old the mother died. The child has continued to live, is now three years old, the picture of health and vigor, is well developed, and has no symptoms of infection or hereditary taint.

The second case was one of tuberculosis in a woman, twenty years of age, just married. She asserted that she had had perfect health during pregnancy, but she was afterward found to be suffering from tuberculosis in its incipient form. The child was not seen for three weeks after it was born. The mother in the meantime had been up and going about the city as usual, had taken part in a literary entertainment, etc. When she was again seen her temperature was 103° F., pulse 120, and she was ordered to bed. After microscopical and clinical examinations and consultations, her case was diagnosed as tuberculosis. The child in the meantime had been nursed. The mother's condition progressed rapidly to the end, and she died within sixteen weeks after confinement. The child had been nursed for five weeks. After this time it was put on modified milk. It began, however, to exhibit loss of weight and pallor, and râles could be detected in the lung. It passed through a well-marked history of acute tuberculosis and died one week after the mother.

In discussing these two cases, what evidence have we that the second child suffered from hereditary tuberculosis any more than should have been expected in the first? In the first case, the child was not allowed to be nursed by its mother; in the second case, it was. It is more reasonable to suppose that the second child did not inherit tuberculosis, but was infected with it from the mother through the milk, or possibly by kisses, caresses, or other modes of contact. Infection of tuberculosis in foetal life through the membranes of the placenta cannot positively be denied, but its occurrence is certainly very infrequent, I think. The author thinks it highly important that, during the last two or three months of pregnancy, the lungs as well as other organs of every pregnant woman should be examined, and that by this means, perhaps, many cases of tuberculosis hitherto unsuspected would be found, and preventive measures at least might be taken to protect the child when born. The mother's milk and all contact with the mother must be prohibited. People should be educated to the importance of the case, and, if so instructed, children born to tuberculous parents might in a great many cases be saved.

Discussion.—Dr. Johnston thought that something could be learned from the veterinarians, who watched the milk coming from tuberculous cows. Calves of such cows had been found not to be infected congenitally. They did not inherit tuberculosis, and if fed on other and pure milk, they developed into strong and healthy cows. There was no question that a mother could infect her offspring with the disease.

Dr. J. Noer stated that milk from tuberculous cows was not necessarily infective unless there was a local lesion on the udders.

Dr. I. A. Abt protested against the idea that there were such a limited number of cases of congenital tuberculosis. He thought the number of congenital cases must far exceed the origin of the disease in any other way. When such a number of children less than a year, and even less than a week, old, had died of a widespread tuberculosis, and yet had been under the best possible conditions of hygiene, it seemed reasonable to suppose that these cases had been of congenital origin. To prove the contention, however, the bacillus must be demonstrated in the placenta and the endometrium.

Dr. E. F. Brush, of Mount Vernon, N. Y., detailed some experiments that he had made on the transmission of tuberculosis from cows to laying hens, and the fatal effect of such infection, not only upon the hens, but also upon the chickens in the eggs that these hens had laid.

SYMPOSIUM ON SCHOOL HYGIENE.

Some Suggestions Regarding a Department of School Hygiene. By Dr. Leigh K. Baker, of Cleveland, Ohio.—The nations that have exercised a powerful and elevating influence have been those that have exercised a care for the health of their citizens. In a democracy self-preservation demands an educated citizenship. An elemental condition of useful citizenship is a fair degree of physical health. It is both the interest and the duty of the State to insist that the physical basis in the educational structure shall be adequately and properly laid. It is strikingly true of the children of the cities that the desired improvement in health has not been attained. The dark, noisome alleys and tenements contain millions of the miserable offspring of ignorant foreigners, poorly born, poorly housed and fed, with crooked spines and misshapen skulls, with pathological eyes or ears, and with little in their environments to produce self-supporting, self-respecting citizens. The question is, Shall we put sufficient money into the school system to produce self-supporting citizens, or shall we later, on account of half supporting them and paying insufficient attention to the health of the children, spend larger sums for the construction of hospitals, dispensaries, police stations, reform schools, etc.? Physicians, who of all classes of men are forced to carry this burden of indigence perhaps more than any other, should combine to place the right kind of men on school boards. The author outlines a systematic plan of organization with reference to the composition of the school board, the superintendent and teachers, and points out the dangers of allowing political influences to enter. The head of the department of school hygiene must be a medical man who is at the same time a school sani-

tarian. Regular inspection of school children should be made, and plenty of assistance should be available for the purpose.

Physical Culture in Children: The Objects to be Obtained. By Dr. J. Madison Taylor, of Philadelphia.—It should be clearly understood at the outset what is meant by the term physical culture. Two objects are aimed at; first, to raise the general bodily efficiency of the child, as found in the schools, by aiding in the natural spontaneous processes of growth and development, both mental and physical; and, secondly, to assist in improving the conditions of those who are found to be below par in any direction, and in bringing them up to the standard for their age and conditions, so that they may progress in the same degree as ordinary individuals. It is essential that all school children should have the benefit of skilled medical supervision during their growth. With all the ordinary opportunities for spontaneous development that are enjoyed by the young, nevertheless it is plain that often many faults of attitude are acquired, involving impairment of the full activity of the vital organs. Children cannot be trusted to grow up properly unless directed, and unless faults of attitude are corrected at their inception they will remain and probably grow worse. Many of these are due to original errors of construction, some are hereditary, and some are acquired by extended imitation or the conditions of the environment. If these are allowed to go on the result will be postural errors or interference with symmetrical growth.

Defects in the organs of special sense, notably the eye, ear, and naso-pharynx, may be enumerated as among the causes, and must be dealt with by the specialist. Relatively local disorders are capable of producing great functional disorder when the physique is a little below par, whereas, if the general mechanism of the body is good, they cause very little mischief. It is not commonly known that many defects in the ocular or hearing apparatus are remediable by specialized movements of the head and upper parts of the body. In many cases they have been practically cured by physical culture alone. This statement seems extravagant, but it can be proved by the very men who had given the adverse opinions.

It needs no proof to establish the fact that the heart, lungs, and the very important lymphatic mechanism of the thorax can certainly be assumed to be in far better functional efficiency if the shape and mobility of the thorax is normal. Unless the spinal column is maintained in a healthy condition of straightness, and the bones and ligaments of the ribs and shoulders, and the soft tissues controlling them, retain their normal flexibility, the lungs must inevitably suffer and the heart likewise fail of its normal activity.

These organs should be perfectly free from external pressure, for, from no other cause than mechanical pressure, serious conditions of a most disabling sort oftentimes arise. The first main object of physical culture for children, therefore, is to teach them to assume right normal attitudes. Physical culture teachers are usually neither physicians nor physiologists; and, often, not even good observers. Their methods, therefore, are too often empirical or prejudiced and their knowledge of the subject not sufficiently thorough. In the study of

the chest and shoulders, one error was long taught as a truth; it may even still be of value, if properly carried out, and that is to throw the shoulders back, and the chest out, the head up, and the chin in. A simple rule that can involve little error is to let the shoulders alone, free from tension, but to keep the back straight and to hold the chest as far up as possible, keeping the abdomen held in; then the arms and shoulders are free from constraint and can be moved in any direction. Almost the most important factor is the position of the pelvis, which should be maintained as nearly as possible at a level. Then the action of the thighbone at its junction with the pelvis is so easy that the slight forward leaning of the body, as in stepping forward, allows the leg, which is raised, to swing forward with almost no effort. A child, or even an adult, trained in this particular, can walk at a much higher rate of speed and maintain it for a longer distance than a very much stronger person who fails to observe the condition.

The subject of breathing is one about which many fallacies are taught. The diaphragm is a muscle of unrecognized importance and is capable of high training and development, just as are the muscles of the arms and legs. The object in right breathing is to obtain the fullest degree of elasticity of the thorax and the greatest degree of freedom. Unless the largest measure of freedom is allowed, stiffness and contractions in the tissues in certain localities, such as about the hips, the upper part of the chest, and the back of the neck, may result. Nine tenths of the ordinary movements of life are flexions. Little more than one tenth involve definite extensions. We often see in children, even five or six years of age, the commoner forms of adult anamorphosis. These stooping shoulders, sunken chests, drooping or protruding heads and half-bent knees are chiefly due to lowered muscular tones. From asymmetries arise lateral pulls or twists in the back, neck, or legs, showing that degenerative changes have begun. Another group indicates occupation, as warpings, lowered right shoulder, tilted pelvis, pigeon toes, exaggerated lumbar or dorsal curves, clawed hand, etc. These defects arise principally from lack of extensor tone. Extensor power may gradually lessen or become almost lost from disuse, and flexor power yet remain. The assumption is that in the motor areas of the brain there are two sets of cells, one for extension and one for flexion. The development of flexor activities may not be accompanied by the development of extensor activities, and thus asymmetry may result. Normal development involves the idea of the acquirement of symmetrical activities. The teacher needs to know the basic principles and to be able to adjust his methods to the exigencies encountered.

The Pubescent Schoolgirl. By Dr. W. Edgar Darnall, of Atlantic City, N. J.—The great importance of the period of puberty is dwelt upon. The girl at this period is peculiarly susceptible to mental, moral, and physical influences, and her environments and tendencies should be studied with the utmost care and discretion. This time may be the starting point for perfected womanhood, if properly managed, or for a physical wreck, if neglected. She should be shielded from every deleterious influence, while her mind should be directed along

healthy channels during this impressionable age.

The average girl at puberty is at school, and, under the modern high-pressure system, is straining every effort to keep up with her duties, and using up all her vitality in mental pursuits. This system is largely responsible for the nervous irritability and dyspepsia that have become such prominent characteristics of our people. The demand for rapid education is the curse of the age. During the period from nine to fifteen years of age the body is developing so rapidly that brain weight is actually lost by the lessening of the blood supply that goes to nourish the rapidly growing organs. The child's brain is easily fatigued. What is crammed into a tired brain is soon lost, because it makes no impression. Memory is demoralized and the very end for which one is striving is defeated.

The physiologic processes of the girl make even greater demands on the girl than that of the boy do on him. In addition to performing the same work as her brother in school, she is also expected to acquire the accomplishments, such as music and painting, at an early age. Too much time has to be given to practice and books when she ought to be out in the open air. Then come the exacting examinations. These are followed by four years of high-school life—four years of endless antagonism between brain growth and body growth; four years, perhaps, the most important in her whole life, when the menstrual period is just beginning, or is struggling to assert itself under difficulties. These four years are very needful for the perfect development of the sexual organs, and the woman's whole future health and happiness may hang upon the result. Hysteria, irritability, crossness, neurasthenia, and sexual incompetence are the outcome; and the girl, although bright, intelligent, and accomplished, perhaps enters life the possessor of a large outfit of headaches, backaches, and spineaches.

Accompanying this strain, there are also other important factors involved in the school breakdown. Home life is often poorly regulated, habits are irregular. No attention is paid to the functions of the bowels and bladder. There is an utter disregard for the menstrual week, when, by their own feelings and sensations, women ought to know that they are unfit for exhausting work of any kind. Schoolgirls, also, are often allowed to fill their stomachs with an unwholesome diet of sweetmeats, candies, and pickles, which they are constantly nibbling between meals. Inadequate supplies of light, air, and outdoor exercise bring in their train sleeplessness, nervous complaints, headaches, and lassitude.

The unhygienic, close-fitting female dress is not an unimportant factor in the ill health of woman-kind. The body is usually unevenly clothed, the clothing being too heavy about the trunk, and too light about the shoulders and neck, as also about the limbs. Heavy skirts are suspended from the waist, instead of from the shoulders, thus dragging down the pelvic viscera; and, worst of all, the growing girl is early put into an ill-fitting corset. She is fitted to the corset, not the corset to her. Lacing at this period is even encouraged by some mothers in order, as they think, to produce a beautiful figure in their daughters. The abdominal viscera are thus forced either upward or downward. The estimated total pressure of the corset is found to vary between

thirty and eighty pounds. The capacity for the expansion of the chest is reduced one fifth when the corset is on. The abdominal wall is thinned and its muscles weakened, while various organs suffer displacement, and the pelvic floor is bulged downward at least one third of an inch. The difference is easily recognized by examining *per vaginam* a patient with the corset on, and the same patient with the corset off. Cramped under this pressure, forced out of their normal position, the circulation of the pelvic organs is interfered with, and a full bladder and rectum carelessly neglected only serve to make the matter worse. How can the sexual organs, therefore, on which so much depends, properly develop. No girl, during her pubescent period, should ever be allowed to wear a corset and thereby run the risk of life-long misery for herself. The flexible waists are equally good for all purposes of dress, and better for health. It is little short of a crime to encase a growing schoolgirl in a modern corset.

Painful menstruation is the bane of the existence of the schoolgirl. Chapman thinks fully seventy-five per cent. of girls who have reached the pubescent age would give a history of painful and scant menstruation. Engelmann has tabulated five thousand cases, and found about sixty-six per cent. with more or less menstrual suffering. The fact of the pains being increased with long hours or intensity of study, with worry and emotion, and being diminished or ceasing entirely without treatment of any kind during vacation time, is a fitting commentary on the underlying causes. The nervous or mental element is a more prominent factor than we take it to be, and shows the importance of general management, and the elimination of all injurious conditions of worry and debility, mental or physical.

A large percentage of the neurotic class of women have arrested development of the sexual organs in varying degrees. The most common defect is a failure in the development of the uterine cervix, which retains its infantile characteristics. It is usually anteфлекed, and its canal less patulous than normally. The tubes and ovaries may also be imperfectly developed, or even rudimentary. It is these women who are most apt to break down under the stress of life's duties and to suffer from hysteria and neurasthenia. May not much of such trouble, therefore, be dated back to school days and the abuse of the corset?

The girl's life during the oncoming of puberty should be carefully watched and her studies restricted if necessary; in some cases she should be taken from school altogether for a year. Special attention should be paid to properly regulating the functions of the bowels and bladder. All stimulants and excitements, late hours and children's parties should be prohibited. Plenty of sleep should be had by them, proper diet supplied, and the habit of eating between meals forbidden. Undue excitement, mental worry, or anything that may divert the vital forces from the great work they are performing in the development of a perfect woman, should be jealously guarded from the pubescent girl, as this short period is perhaps the most important to the future happiness of her entire life. Teachers must learn that health is more important than knowledge, schools must realize the futility of the forcing process, and the health of girls must be guarded by

diminishing, rather than by increasing, the work during this period, and it must be remembered that a sound mind depends upon a sound body. It is only thus that we can hope to diminish the pitiable army of neurotics and sexual incompetents among the womanhood of the land, who so largely fill up the hospitals, and who are to be the mothers of the men of our country.

(To be concluded.)

Section in Obstetrics and Diseases of Women.

(Continued from page 45.)

Contributing Factors in the Production of Peritonitis.—Dr. J. G. Clark, of Philadelphia, read a paper with this title. His conclusions were as follows: 1. The peritonæum has an enormous absorbing function, being capable of taking up in one hour from three to eight per cent. of the entire body weight. 2. Minute solid particles are carried in an incredibly short time from the peritoneal cavity through the diaphragm into the mediastinal lymph vessels and glands, and thence into the blood circulation, by which they are quickly distributed to the abdominal organs and to the bone marrow. 3. The granular bodies are at first largely transported as free bodies, swept along by the lymph currents, but later the leucocytes act as the carriers. 4. There is normally a force in the peritoneal cavity which carries fluids and foreign particles toward the diaphragm, regardless of posture, although gravity may greatly favor or retard the current. 5. After the introduction of micro-organisms into the peritoneal cavity there is a great decrease in their number within the first hour, both through their intraperitoneal destruction and through their rapid absorption into the general system where they are dealt with. There is, therefore, no possibility of limiting free infectious matter to any part of the peritoneal cavity by mechanical means. 6. Vigorous streptococci which remain behind, develop, within six hours, a repellent or destructive quality for leucocytes, and the lethal combat is, therefore, inaugurated and well under way before drainage, as ordinarily employed, can possibly exercise any beneficial action. In many cases, therefore, in which surgical drainage is employed, the patient recovers in spite of and not because of it. 7. A moderate amount of even virulent microbes, carried by the blood to the lungs, liver, spleen, kidneys, gastro-intestinal tract and bone marrow, may be destroyed or eliminated without the least harm to the patient; whereas, if the same amount of infectious matter is detained about a surgical field in the abdominal cavity, or stagnates in a dependent pocket, it may generate myriads of other organisms, and thus overwhelm the patient. 8. In many cases, therefore, drainage, as ordinarily employed, is superfluous or even dangerous, and the rational method is to remove all possible debris and infectious matter by thorough irrigation and then to leave one litre of salt solution (0.6 per cent.) in the abdominal cavity, and in order to promote and hasten natural drainage, supplement this by an enema of a litre of salt solution given while the patient is well under anaesthesia and in the Trendelenburg posture. 9. Under this plan the patient is greatly stimulated, shock is minimized or averted,

the urinary excretion is greatly increased, and thus toxic matters are more easily eliminated without irritation of the kidneys or bladder, peritoneal infection is quickly eliminated while yet minimum in amount, thirst is alleviated or entirely prevented, intestinal peristalsis is promoted and consequently tympanites is of less frequent occurrence, and the early action of the intestines evacuates infectious matter thrown out into the canal by the blood vessels of the villi. All of these factors combine to reduce mortality after abdominal sections, to decrease pain, discomforts, and complications of the first forty-eight hours, and, finally, to hasten the recovery of the patient.

Cases in which Peritoneal Infusions may be Dangerous, and therefore Should not be Employed: 1. Ascites accompanying the surgical lesion indicates that the natural peritoneal drainage is already deficient; therefore, to add an additional burden through the saline infusions is not advisable. 2. General purulent peritonitis.

Cases in which Gauze Packing may be Indicated: From a critical review of all classes of drained cases I feel justified in greatly reducing the number of conditions in which gauze packing may be indicated. Since the publication of my review of Seventeen Hundred Cases of Abdominal Section from the Standpoint of Intraperitoneal Drainage (*American Journal of Obstetrics*, Vol. xxxv, No. 4, 1897), I have seen no reason to change my indications for gauze packing. I discard the word "drainage" purposely, for I do not believe that the gauze is of any great service as a conducting medium, but that it simply acts as a plug to keep the external opening patulous and to prevent the closure of the drained area by normal granulation tissue. Even the conditions enumerated below may be reduced to a minimum by the most painstaking technique. It is in these cases that the greatest skill is shown and an evidence of this skill is the absence of gauze packing or other surgical drainage.

Resection of Tubes and Ovaries, with a Preliminary Report of the Results in 97 Cases.—Dr. A. Goldspohn, of Chicago, stated that follicular cystic degeneration of ovaries was of frequent occurrence, and was regarded as an abnormality by all pathological anatomists. By the majority, comprising Virchow, Klob, Orth, and others, it was regarded as distinctly pathological, while a few, like Ziegler and Nagel, viewed it as a hypertrophy, due to pathologic thickening of the follicle membranes. It was sometimes a sequel of systemic infectious diseases, but was mostly due to long-standing passive hyperæmia of the organs, with or without a supplementary infection. Such hyperæmia resulted mostly from descensus of the ovaries, which was most frequently enforced upon them by retroversion of the uterus. These cystic follicles could often be detected in skilled and careful bimanual palpation, by the globular contour of such ovaries, especially if descended. All competent and experienced gynæcologists who understood how to reach and palpate ovaries clinically, to judge of them correctly during operation, and who observed the cases neutrally afterward, knew that such cystically degenerated ovaries caused much pain, both local and remote. They caused much more pain than actual cystic neoplasms that were not large enough to encroach upon the neigh-

boring organs. But ovaries could also be saved in younger women sometimes during the removal of neoplasms, notably dermoids, fibroids, and some non-proliferating glandular cystomata without surface papillomata or other evidences of malignancy. Two cases to illustrate: In a virgin, twenty-nine years old, bilateral ovarian cysts were removed. The smaller cyst of one side showed ovarian tissue spread out like a shield, upon its wall near the pedicle. This was first dissected up toward the base of the tumor, leaving as broad a pedicle of its own as possible. This flap of ovary was doubled upon itself and stitched at its edges, after the cyst was removed. In another case, after removal of a larger ovarian cyst of one side and a distended enlarged tube on the other, the ovary of the latter side remained attached merely by a small vein and a bit of connective tissue. It was then stitched with four or five fine catgut stitches upon a scarified spot upon the posterior surface of the anteverted uterus. Both of these patients menstruated regularly and without pain from the second month after operation.

Carl Schroeder was the first to do and publish this work in five cases in 1884. He was soon followed by A. Martin, with a collection of twenty-seven cases of resection of ovaries and forty cases of salpingostomy, in which only one pregnancy followed. Up to 1893, von Winckel, Hoffmeier, Schatz, Zweifel, and P. Müller approved this treatment, and Hegar, Leopold, and Fritsch opposed it. Pozzi and F. Matthaei then also contributed cases. In America, M. H. Polk, A. P. Dudley, and Burroughs had each published a collection of cases. Recently, H. C. Coe, L. Fischer (Vienna), Waldstein (Vienna), and Schauta had published very derogatory results of cysts forming over again from remnants of diseased ovaries that could not be removed. A. Maximo (Russia) had made vivisections on forty rabbits and two guinea-pigs. He incised ovaries or excised wedges and then killed the animals after from five hours to eighty days, and made careful microscopic examinations of those ovaries. He found that not only the germinal epithelium multiplied mitotically and covered defects, but that the other ovarian stroma also had a reproductive capacity. Dr. Goldspohn then gave briefly the essential details of each of 97 cases that he had succeeded in following out of 108 cases of resection of ovaries and opening of tubes, in three tables. In the first table were 9 cases of vaginal cœliotomy, of which only 5 showed perfect results. In the second table were 32 cases of median ventral cœliotomy, of which 15 cases presented pus during the operation. Of this class, 27 cases, or 84 per cent., showed perfect results after two years' average observation; four were partial successes, and one had a recurrent cyst. The third table comprised 56 cases in which ovaries were resected or tubes opened through the dilated internal inguinal ring, in conjunction with a thorough form of the Alexander operation. Of this number, 49, or 87.5 per cent., presented perfect results, 5 were partial successes, and 2 cases were failures. Ten cases of pregnancy occurred in all.

The author chose for the vaginal route such of these cases as had no retroversion of the uterus to be cured and also had probably no pus in the parts; for the regular abdominal section, he chose the more severe grade of cases probably having pus or else

extreme adhesions, no matter what was the position of the parts; and for the bilateral inguinal (Alexander) route, the cases having complicated retroversions of the uterus, but not pus or its equivalent still present. The resection of ovaries and opening of tubes was nearly always an associate or incidental indication to other more formidable ones, the nature of which determined the route of entrance. The examinations of Alexander and other cases after a later childbirth showed that the Alexander operation, well done, was the only operation that had been proved to stand the "double test of pregnancy," *i. e.*, to be not merely innocent of harm in view of pregnancy and labor, but also able to prevent a return of displacement after a later childbirth. And, therefore, he aimed to give as many cases of retroversion the benefit of the inguinal shortening of the round ligaments as he could by attending to the complications of the complicated ones, by the introduction of an index finger through the internal ring in the Alexander wounds, by means of which he liberated the uterus and its appendages, when adherent, and drew the tube and ovary of each side into the corresponding wound, removed diseased particles and anchored the shortened round ligament against Poupart's ligament with the same stitches that were used to close the wound after the manner of Bassini in operating for hernia.

The following are the author's conclusions: 1. In patients who are not near the menopause, and who are not tainted by tuberculous or malignant disease, one, or a part of one, or both ovaries should be preserved, with or without retention of the corresponding tube, in the following conditions: (a) In follicular cystic degeneration or cirrhotic induration due to inflammatory processes or other circulatory disorders; (b) in extirpating dermoid tumors.

How shall we Deal with Uterine Myomata?—Dr. E. E. Montgomery, of Philadelphia, concluded his paper as follows: 1. Small uterine myomata which do not cause symptoms are subperitoneal or interstitial and may be permitted to go untreated, but the patient should be kept under observation, and any increase in size should indicate operation, as continuous growth may result in destruction of the uterus. 2. Small growths which cause hæmorrhage are submucous or interstitial, and should be removed through the vagina. They can be made accessible by tents or by incision through either the anterior or posterior lip. 3. Multiple growths or small growths, non-accessible by the vagina, causing symptoms, should be removed by abdominal incision. The uterus should be preserved whenever practicable. 4. When the growths are large or render extirpation of the uterus necessary, the entire removal of the organ is the simplest and most expeditious procedure.

(To be concluded.)

St. Louis Christian Scientists must Explain Death.—The Health Department of St. Louis, Mo., is investigating the death of Mrs. Catherine Krite, who died on June 18th of gastro-enteritis, as was certified to by George W. Barrett, a Christian Scientist. Deputy Coroner Fitzsimmons and Assistant Health Commissioner Francis are proceeding against Barrett on the ground that he had no legal right to sign a death certificate.

Letters to the Editor.

THE VIRCHOW FUND.

110 WEST THIRTY-FOURTH STREET,
NEW YORK, July 1, 1901.

To the Editor of the *New York Medical Journal*:

SIR: Some months ago a committee consisting of Dr. Reed, president of the American Medical Association; Dr. Bowditch, president of the Congress of American Physicians and Surgeons; Dr. Weir, president of the New York Academy of Medicine; Dr. Welch, of the Johns Hopkins University, and the undersigned, secretary, published an appeal to the American medical profession requesting contributions to the Virchow fund, which was established ten years ago in honor of Rudolf Virchow's seventieth birthday, which was reached October 13, 1891. The fund was created for the purpose of fostering biological, anthropological, and general medical research. A large German committee, with national committees formed all over the globe, has undertaken to increase this fund in honor of the coming eightieth birthday of the great medical reformer. Whatever contributions are raised should be sent to Germany on the first day of September, in order to be received and acknowledged by the central committee in due time. As our former notices may have been overlooked by such as are anxious to show their appreciation of the great master and to aid the cause represented by his life-long labors, we herewith repeat our appeal.

A. JACOBI, M. D.

THE NEW YORK STATE PATHOLOGICAL INSTITUTE.

NEW YORK, July 5, 1901.

To the Editor of the *New York Medical Journal*:

SIR: You will oblige me by publishing the following copy of a recent letter of mine to the State Commission in Lunacy.

IRA VAN GIESON, M. D.

"June 24, 1901.

"State Commission in Lunacy.

GENTLEMEN: I am in receipt of your letter accepting my resignation as director of the Pathological Institute. I wish it to be distinctly understood that this formal resignation is forced upon me by the unfavorable conditions encountered in my defense of the institute and its final destruction by the State Commission in Lunacy.

"Yours very respectfully,
"IRA VAN GIESON."

Book Notices.

The International Medical Annual. A Yearbook of Treatment and Practitioner's Index. Nineteenth Year. Pp. 682. New York: E. B. Treat & Company, 1901. [Price, \$3.]

Little can be said in commendation of the present number of the *Annual* that has not already been said concerning previous editions. The general plan pursued in past years has been adopted in the present edition, and special arti-

cles on X-ray work in medicine and surgery, on color-blindness, on dental and oral surgery, and on toxins and antitoxines have been added. As heretofore, bibliographical lists are scattered throughout the volume, including the most important articles upon the various subjects treated of, which have appeared up to the time of going to press, thus materially enhancing the usefulness of the book as a work of reference.

La Surdi-mutité. Etude médicale. Par ETIENNE SAINT-HILAIRE. Médecin auriste de l'Institut de Sourdsmuets du Département de la Seine, etc. Pp. 300. Paris: G. Maloine, 1900.

Perhaps the most interesting chapter in this elaborate monograph on deaf-mutism is that on the subject of heredity, in which the author draws the conclusion that the condition is more likely to occur in children whose grandparents, rather than their parents, are or were deaf mutes; in other words, that atavism is marked in this species of deformity. He cites several striking instances. Alcoholism, hysteria, and the nervous diseases generally seem to favor the development of the condition. The work treats of the entire subject, from its pathogeny to its treatment, in the most exhaustive way, the author laying particular stress upon the rôle of degeneration in the lives of deaf mutes. To those interested in the subject, it must prove of very great value.

Anatomie générale appliquée à la physiologie et à la médecine. Par XAVIER BICHAT, Médecin du Grand Hospice d'Humanité de Paris, etc. Première partie. Pp. 256. Paris: G. Steinheil, 1901.

The reprinting of Bichat's famous work should be heralded with pleasure by all medical readers. Concerning this classic it would be a waste of words to utter any comments. Its epoch-making entry into medical literature at the beginning of the century just past was practically the beginning of scientific medicine. Those who do not possess an earlier edition should have this one.

Transactions of the American Orthopædic Association. Fourteenth Session, held in Washington, May 1, 2, and 3, 1900. Volume XIII.

The thirteenth volume of these *Transactions* is up to the standard in interest and importance. The meeting of which the volume is the record was replete with papers of importance.

International Clinics: A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pædiatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose, and Throat, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the World. Edited by HENRY W. CATTELL, A. D., M. D. Volume I. Pp. viii-312. Eleventh Series, 1901. Philadelphia: J. B. Lippincott Company, 1901.

The present volume contains the usual excellent selections of clinical lectures on the principal

topics of medicine and surgery. New York, London, Philadelphia, Rome, Paris, Denver, and Berlin furnish the authors of the lectures in this volume. A review of the lectures is manifestly impossible, but it is proper to say that this particular set of lectures is exceedingly interesting.

Oral Sepsis as a Cause of "Septic Gastritis," "Toxic Neuritis," and other Septic Conditions. With Illustrative Cases. By WILLIAM HUNTER, M. D., F. R. C. P., Senior Assistant Physician, the London Fever Hospital, etc. Pp. 30. London and New York: Cassell & Company, Limited, 1901.

From his personal experience the author insists upon the septic nature of carious teeth, and points out, from cases cited, the dangers of general septic infection. While such dire results from "bad teeth" are, fortunately, rare, Dr. Hunter cites osteomyelitis, ulcerative endocarditis, and suppurative meningitis among the general infections which he has witnessed. Gastric and general toxic effects are among the morbid influences which caries of the teeth may exert. Oral asepsis and antisepsis and removal of the foci of the causative carious teeth are the primary means of treatment.

The Johns Hopkins Hospital Reports. Volume VIII, Nos. 3 to 9. Baltimore: The Johns Hopkins Press, 1900.

This volume of these celebrated reports is devoted to typhoid fever. Dr. Osler writes on Hemiplegia in Typhoid Fever, Hepatic Complications, and Special Features, Symptoms, and Complications. Dr. Thayer contributes a paper on The Blood in Typhoid Fever; Dr. Dobbin writes on Puerperal Infection with the Bacillus Typhosus; Dr. Flexner, on Typhoid without Intestinal Lesions; Dr. Lyon, on Coincident Typhoid and Malarial Infection, and Dr. Camac, on Gall-bladder Complications in Typhoid Fever. Dr. Finney and Dr. Cushing contribute papers on the surgical aspects of perforations. Altogether, the volume is a good representative of the class of work done at Johns Hopkins. It is impossible to review the papers in detail.

BOOKS, ETC., RECEIVED.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia in the Jefferson Medical College of Philadelphia, etc. Assisted by H. R. M. Landis, M. D., Assistant Physician to the Out-patient Department of the Jefferson Medical College Hospital. Volume II. June, 1901. Surgery of the Abdomen, including Hernia—Gynecology—Diseases of the Blood—Diseases of the Glandular and Lymphatic System—Metabolic Diseases—Ophthalmology. Philadelphia and New York: Le Brothers and Company, 1901. Pp. vi-18 to 470.

Clinical Lectures on Stricture of the Urethra and Enlargement of the Prostate. By P. J. Freyer, M. A., M. D., M. Ch., Surgeon to St. Peter's Hospital, London, etc. New York: William Wood & Company, 1901. Pp. 9 to 115.

On Paralysis Agitans; with an Account of the Clinical Features of other Forms of Tremor. By R. T. Williamson, M. D. (Lond.), F. R. C. P., Physician to the Ancoats Hospital, Manchester, etc. With Ten Illustrations. Manchester: Sherratt & Hughes, 1901. Pp. 7 to 70.

Transactions of the Twenty-second Annual Meeting of the American Laryngological Association, held in the City of Washington, May 1, 2, and 3, 1900.

Twenty-fourth Annual Report of the Board of Health of the State of New Jersey, and Report of the Bureau of Vital Statistics. 1900.

Proceedings of the Academy of Natural Sciences of Philadelphia. Volume LIII. Part I. January, February, March, 1901.

Eighth Biennial Report of the North Carolina Board of Health. 1899-1900.

Ninth Annual Report of the Grady Memorial Hospital of Atlanta, Georgia, 1900.

The Official Gazette of the United States Patent Office, containing the Patents, Trade-Marks, Designs, and Labels, issued Tuesday, June 18, 1901.

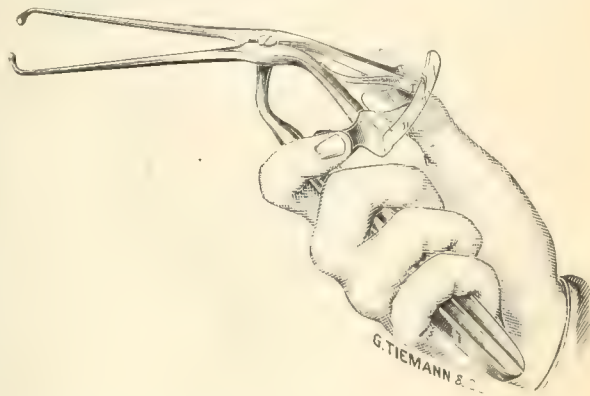
New Inventions.

A NASAL SÆPTOMETER.

By HENRY WALLACE, M. D.,

BROOKLYN.

This sæptometer was first presented to the profession at a meeting of the Rhinological and Laryngological Section of the Medical Society of the



County of Kings about a year ago. The advantages alleged for it over the original Seiler sæptometer are the following:

1. The handle is attached to the instrument at a more acute angle, making it much more convenient to manipulate.
2. It has a vertical end-scale, rendering the taking of a reading much easier by the operator, who can thus secure a measurement without changing the position of the instrument.
3. A finger-and-thumb piece facilitates the opening of the instrument while it is still held firmly in the grasp of the hand.

It is intended that the instrument should be held in the hand, palm up, three fingers steadying it against the palm while the instrument is opened by the pressure of the first finger and thumb, which are free for this purpose. I wish to thank Messrs. George Tiemann & Co. for the successful manner in which they have brought the instrument to its present perfection.

Although there are rhinologists who say that they seldom if ever have use for the sæptometer, still I consider it an almost essential adjunct to the specialist's armamentarium and one which has oftentimes proved a necessity in nasal work.

183 CONGRESS STREET.

Miscellany.

Treatment of Tuberculous Patients in all Countries of the World.—S. W. Hynes, chief examiner of accounts of institutions in the Department of Finance, New York, has sent to Comptroller Coler a report of an investigation he has made regarding the treatment of tuberculous patients in various countries. The investigation was started by complaints made by residents of Spuyten Duyvil concerning the presence near their homes of the Seton Hospital, to which the city sends a number of poor consumptives every year.

According to Mr. Hynes's report, Germany has taken the lead in the establishment of hospitals devoted entirely to the care of patients suffering from consumption. In that country there are now nearly 100 hospitals for such patients, with a capacity of 5,000. The life insurance companies find it profitable to send the insured who develop the disease to hospitals, for they have found that many of the patients recover, and that the lives of others are prolonged so that the additional premiums collected make a difference in the losses. The isolation of the sufferers also prevents the spread of the disease. So far as is known there is no other country in which the insurance companies have followed the lead of the German corporations.

In England, prior to the present movement on behalf of the consumptives, there were hospital accommodations of about 2,000 beds. Since this movement began many new sanitariums have been opened and the old ones have been improved. England has probably 3,000 beds for consumptives at the present time.

In France about 2,800 beds for tuberculosis subjects existed when the present movement began, and sanitariums either have been built or are being built at Lyons, Paris, Orleans, Bordeaux, Nancy, Lille, Havre, Canet, and Cimiez. The French Government is about to complete a sanitarium at Agincourt, which will cost over a million francs.

In Russia, under the leadership of the Czars, five sanatoriums have already been established and a number are under way.

In Italy, sanatoriums are being established at Arizanno, Padua, Umbria, Naples, Messina, Tarent, Cadore, and Milan. A law has also been passed requiring existing hospitals to set aside wards for the treatment of consumptives.

In Norway, since 1897, three sanatoriums have been established. Two are under way, all under control of the government. A number of private sanatoriums have also been opened.

In Denmark a hospital for consumptives, with ninety-four beds, was opened in 1900 for the use of the entire country, and another with 110 beds for the use of the city of Copenhagen only.

In Sweden a large sanatorium for consumptives is at present being built as a jubilee memorial.

In Switzerland there are seven sanatoriums for poor consumptives, and a number of others are planned.

In Austria a sanatorium has been established at Alland, and similar institutions are projected in Bohemia, at Maehren and at Steiermarck.

In Hungary a sanatorium is being erected as a memorial to the late Empress Elizabeth.

Poland has three sanatoriums for consumptives.

In Spain, under the leadership of the royal family, a large national hospital has been opened at Porta Coeli.

In Portugal, Queen Amelia has recently given 20,000,000 reis for the establishment of a tuberculosis hospital.

In Holland the Queen within the year has given a large sum of money for the establishment of a sanatorium.

In Canada there are two sanatoriums for consumptives, with a combined capacity of seventy-five beds. The government of the province of Toronto has recently passed a bill encouraging the establishment of sanatoriums by providing legal machinery for raising revenue for them. Under this act any municipality can, with consent of the general government, establish a sanatorium and raise revenue for its maintenance.

The United States government has established sanatoriums in New Mexico for the treatment of tuberculous marine-hospital patients and for consumptives of its army. The State of New York has at present ten sanatoriums for consumptives under private management and one projected to be supported by the State. These have an aggregate capacity of about 600 beds. Of the ten three are in the city of New York. The city, for 1901, appropriated \$70,010 for care of the consumptive poor. A few of the general hospitals of the city of New York, such as St. Catharine's and St. Peter's, of Brooklyn, also care for consumptives. Massachusetts has five hospitals for consumptives, one of which was established by the State. The combined capacity of the five hospitals is about 350 beds. The State of Massachusetts appropriated \$150,000 for the establishment of its hospital. Illinois has one hospital for consumptives in operation and two projected, all in Cook county. The three will have a combined capacity of about 500 beds. Colorado has three private sanatoriums for pay patients. Maryland has one hospital for poor consumptives, with a capacity of 100 beds. Ohio has one hospital for poor consumptives, with a capacity for 100 beds. North Carolina has two pay sanatoriums for consumptives. Alabama has two sanatoriums for consumptives, one for pay patients and one for consumptive prisoners of the State. New Mexico has three small pay sanatoriums for consumptives and one large one is projected. Connecticut has one small pay hospital for consumptives. Pennsylvania has three tuberculosis hospitals, with a combined capacity of about 120 beds, and nearly half of these beds are in wards of general hospitals, supported by the Free Hospital for Poor Consumptives. Sanatoriums for consumptives are projected in New Jersey, Ohio, Minnesota, Michigan, and Rhode Island. Rhode Island has under consideration a bill appropriating \$200,000 for a tuberculosis hospital.

CYST OF THE OMENTUM.*

By A. JACOBI, M. D., LL.D.,

NEW YORK.

Josephine Costello, seven years old, born in the United States, of Italian parentage, was admitted to the Jacobi Ward of Roosevelt Hospital October 10, 1900. Four years previously the abdomen began to swell, and the child lost flesh and looked out of health. The diagnosis of ascites, probably of tuberculous origin, was made by the chief of my clinic, Dr. F. Huber. He performed paracentesis and drew two quarts of a clear, slightly bloody serum. The swelling disappeared, and the child improved and appeared cured. After two years the swelling, with fluctuation over the whole abdominal cavity, returned; the child lost flesh, looked bad, and was again tapped by Dr. Huber, after which the health of the child improved. There was no history of cough or of bloody or other expectoration. In the spring of 1900 the abdomen filled again, with some impairment of the looks of the child. Still she was active and had good appetite, sleep, and strength. No cough, expectoration, or sweats. When she was admitted, there was an occasional cough; there were many, but small, lymph bodies palpable in the groins and axillæ, but there was no change in the respiration of either lung, but a very slight extensive dullness in the right axilla down to the liver. The body weight was forty-seven pounds five ounces. The kidneys and urine were negative. Abdominal circumference over last rib, 69 centimetres—28 $\frac{1}{8}$ inches. Fluctuation universal in all directions.

October 22d.—300 cubic centimetres of a slightly bloody serum was withdrawn. The opening of the trocar then became obstructed, I thought, by intestinal coils, and the operation was interrupted.¹

October 30th.—The circumference was only 23 inches; it remained so until the middle of November, when it began to increase again. Body weight on November 7th, forty pounds ten ounces; on the 14th, forty-one pounds and eight ounces. Neither the operation nor the subsequent absorption caused any change of temperature. On November 22d the patient was transferred for laparotomy to the surgical service of Dr. Weir.

The child was operated upon by Dr. R. F. Weir under chloroform anæsthesia. The incision, two inches and a half in length, was made in the median line and commenced from a point about an inch and a half above the umbilicus, and was directed upward. A very thin-walled multilocular cyst presented itself, which, when drawn out of the abdominal cavity, contained about two quarts of straw-colored fluid in its main cavity, and was found to be incorporated in and involved the greater part of the great omentum, the cyst narrowing off into two pedicles as it approached the stomach. These pedicles of the omentum were ligated and the cyst was easily removed. The contents were mostly lost.

Two days after the operation the temperature rose suddenly to 103.2° F., and the child began to cough. During the next nine days the temperature fluctuated between 100° and 104°, rising once to

104.4° F. No observation was recorded of the possible cause of the cough. It does not appear that the temperatures had anything to do with the wound, for recovery was complete. The abdominal wound healed by primary union, dressings were omitted on the eighteenth day after the operation, and the patient was discharged, cured, on December 30, 1900.

The upper part of the specimen consists of omentum, which is cut off in two places. The cyst is large, with a number of recesses communicating with the main cyst with mostly large openings, some of them from three to five centimetres in diameter. It is covered with large and anastomosing blood-vessels and lymph-vessels, running in thick solid tissue. Between these masses of thicker tissue the wall of the cyst is quite thin and translucent. The cyst wall consists of several tissues, unstriped muscular fibres, fat, and fibrous tissue, in layers of different thickness, traversed by enlarged blood-capillaries and lymph-capillaries. It has on both sides, both externally and internally, a lining of endothelium, such as lines blood-vessels and lymph-vessels. The gelatinous contents are finely granulated; they consist of coagulated serum, with multinuclear and eosinic forms of leucocytes, endothelial cells, and a few red blood-cells. Staining with Weigert's method proves the absence of fibrin.

Reference to cysts of the omentum is not quite infrequent, but mostly indefinite. Thus, J. H. Fruit-night says in the *American Text-book of the Diseases of Children*, Philadelphia, 1894, p. 586: "Cysts are met with not infrequently. They are usually dermoid in nature, though simple serous cysts are encountered." The *American Text-book of Surgery*, 1892, p. 743, has the following only: "Cysts between the peritoneal layers of the mesentery containing serum or a sanguineous fluid have been successfully removed by operative treatment. Chylous cysts have sometimes the size of a head." In his discussion on acute sarcoma of the omentum, Koenig says that between the nodules and nodes ascitic fluid may be found in cysts, and adds that in operations for hernia Richter and Dieffenbach found an additional membrane. Cutting into it, they got into a cavity, the result of inflammation, filled with clear or bloody serum, with a portion of omentum.

The differential diagnosis from an ovarian cyst may be easy in those cases in which the mesenteric cyst is found to be high above the pelvis, bulging, and supplied with a distinctly perceptible part of the mesentery, which appears to act as a pedicle. But these peculiarities are rare, and when the walls are thin and the size is large, a unilocular cyst may easily be and has been mistaken for ascites.

Dermoid and hydatid cysts and tuberculous tumors should be excluded from our consideration. They form a large part of the literature collected by Dowd under sixty-nine headings. With the exception of a few cases of hæmatoma and abscess, nothing remains but chylous and serous cysts. Nearly

*Read before the Association of American Physicians, May 1, 1901.

¹The fluid was examined, with negative result, for tubercle bacilli only.

all of them, perhaps all, are of lymphatic origin, and result either from dilatation of lymph-vessels or from a cystic degeneration of lymph-bodies, such as Rokitsansky described at an early time (*Lehrbuch der Anatomie*, p. 677). Of the first variety, Weichselbaum reported a case (Virchow's *Archiv*, xiv), and Sabourin and Le Dentu another (*Bulletins de la Société d'anatomie*, 1876, p. 339). The contents are chyle. The same should be said of the second variety, as long as the case is of recent origin, as in the cases of Werth (*Archiv für Gynäkologie*, 1880) and of Merklen (*Bulletins de l'Académie de médecine*, 1880). Werth's case is that of an omental cyst of the size of a child's head. It was described in the *Archiv für Gynäkologie* (Vol. xix, 1882, p. 321). It rose from a segment of the mesentery belonging to the small intestine. Its contents were rather thick, whitish, and looked like chalk suspended in water, and contained albuminous and fatty detritus, but no formed elements, particularly no epithelia which would permit one to trace the origin to a tissue with epithelium. The walls consisted mainly of connective tissue, coarse and fine, the latter with small spherical cells in the intestines, of pronounced lymphatic character. That is why the cyst must not be taken for an actual neoplasm, but is a cystoid degeneration of a lymph-node, which was alleged by Rokitsansky as the source of such degeneration. The latter can best be explained by a primary obliteration of vasa efferentia, which, the entrance of chyle not being impeded, must lead to retention and dilatation.

A similar cyst was described by Eppinger (*Prager Vierteljahrschrift*, 1873). This description tallies perfectly with the foregoing, and does not justify his opinion, according to which his specimen is dermoid. The latter, however, is sometimes found, and is mentioned by Klebs (*Handbuch der path. Anat.*, Vol. i, p. 331).

When cysts are of longer duration, their contents become altered, greenish, yellowish. Péan quotes Ducarset (*Bulletins de la Société d'anatomie*, 1848), who found in the multiple lymph-body cyst of a boy of four years a few recesses filled with chyle, and others with a serous fluid. Rokitsansky made the same observation in a man of fifty-three. In all of these the wall was thick, with the structure of the lymphatic system, and without epithelia in the interior. Thus it appears probable that the serous cysts should be considered to be chylous cysts of long duration. The number of observations is limited. In his remarks on operative treatment, Péan mentions sixteen cases of serous and fourteen of chylous cysts. In that number he is probably mistaken.

All of the three cystic tumors in Péan's personal observation exhibit a peculiarity which seems to deny

them the diagnosis of a genuine mesenteric cyst, for they were attached to the posterior wall of the abdomen and appear to have got between the layers of the omentum secondarily only, during their growth and the consecutive opening of the omentum. They seem to be of retroperitoneal origin. If that is so, or, rather, as that is so, his strenuous objection to extirpation is not justified, nor is his preference for opening and drainage.

Mr. Alban Doran exhibited for Dr. Bantock to the Obstetrical Society of London (*Trans.*, Vol. xxiii, 1882) a large thick-walled single cyst, removed from a woman fifty-eight years old. Its symptoms always resembled those of an ovarian cyst; it once ruptured and filled again, and several times it was tapped, dark serous fluid being removed. The great omentum was normal from the greater curvature of the stomach to its usual adherence to the transverse colon, but could be traced as a thickened and calcified sheet on to the top of the cyst, which proved to be entirely within the omentum. One fold of the latter completely separated the tumor from the normal pelvic organs. The tumor was partly adherent to this fold of mesentery and to the transverse mesocolon.

Mr. Doran also exhibited a Hunterian specimen (No. 1109, Path. Series, Museum, R. C. S.) of a small cyst in the folds of the great omentum.

Mr. N. Terry Marsh and Mr. Keith Monsarrat publish (*British Medical Journal*, March 2, 1901) a case of multilocular cystoma of the omentum which was removed from a female child three years and five months old. The tumor consisted of a large thin-walled cyst, capable of containing ten pints, and a number of independent smaller cysts varying in capacity from eight ounces to one drachm. In some of the smaller cysts the fluid was a clear serum, but in all the larger ones it was deeply tinged with blood. The walls of the cysts, and particularly those of the large one, had numerous anastomosing vessels; they were large and thin-walled in the large cyst, smaller and firmer and more firmly imbedded in connective tissue in the smaller cysts. All of the cysts resembled each other histologically. Externally they carried an endothelial covering, internally a coat of fine connective tissue containing numerous blood-channels.

The several layers of the omentum were not traceable in the cyst walls; that circumstance, the presence of numerous large blood-vessels, and the early appearance of the tunefaction point to a foetal inflammatory process, for the abdomen was noticed to be considerably enlarged when the child was one year and four months old. At the age of one year and eight months the abdomen measured 23½ inches. There were general fluctuation and dullness. Five weeks after admission, the first punc-

ture was made, the second nine months later; nine months after this the third; two months and a half afterward the fourth and last. Soon afterward laparotomy was performed. There were two attachments, one in the right iliac fossa, the other consisted of the omental attachment to the greater curvature of the stomach, forming a broad pedicle for the whole mass. Recovery was complete.

In the *Report of the Proceedings of the Pathological Society of London*, 1851-1852, p. 374, Dr. W. T. Gairdner describes a cyst that was "found beneath the anterior layer of the greater omentum in a woman. It consisted of a highly transparent closed sac, between three and four inches in length, and from a half to one and a half inches in breadth, having a lobulated appearance externally, like that of the distended colon, but in no part subdivided by any approach to complete septa. The sac was fed by numerous vessels running within the omentum and ramifying over it in every part. The fluid in the sac was a transparent, colorless serum containing numerous flocculi. No parasite or ova were discovered. In the same woman were found in the cellular tissue of both groins a cluster of globular cysts of the ordinary type; similar cysts in the large uterine fibroid, and a globular cyst of the size of a bean in the pineal gland."

Thornton (*British Medical Journal*, 1882, ii, p. 1243) describes two cases of small omental cysts, both of which were found accidentally during operations on a papillomatous and a sarcomatous ovary. One was very small, multilocular, at the lower part of the omentum; the other, of the size of a small cocoanut, had a thick whitish wall and a puckered lining. It was attached to the omentum by a heavy vascular pedicle, under the edge of the liver.

Dr. Gooding has a case of omental cyst (*Lancet*, February 12, 1887). It had the size of a foetal head, was without a pedicle, and was imbedded in the omental folds.

Spencer Wells operated on a child of four years (*British Medical Journal*, June 14, 1890).

Dr. Buckley (*British Medical Journal*, May 16, 1885) has the case of a cyst with thick walls which contained about a quart of fluid, in which were found cholesterin and fat, besides "compound granular debris."

In William Osler's *Lectures on the Diagnosis of Abdominal Tumors*, Case L, on page 123, is that of a cyst of the mesentery of the last twelve or eighteen inches of the ileum; before removal it was suspected to belong either to the omentum or the pancreas. The first tapping yielded a bloody fluid. During apparently good health the cyst filled repeatedly, nor was the health ever disturbed by or

after the tapping. In the fluid cholesterin was found.

Altogether, the number of uncomplicated and genuine omental cysts is small. Circumspection and careful acumen had to be called in to make the diagnosis in many cases. Thus, W. Joseph Hearn, while quoting a case of Schwartzenger's, that of a true lymph cyst in a girl of four years, reports the case of a complex hydatid cyst of the omentum (*Annals of Surgery*, June, 1897). It was observed in and removed successfully from a boy of eight years, who weighed, before the operation, 93½, two weeks after 49 pounds. The abdomen was found large at birth, diminished in size after six weeks, remained comfortable six years, and then grew rapidly, until the abdomen had a circumference of 44 inches, and the distance from the ensiform process to the pubes amounted to 25 inches. Two aspirations yielded a small quantity of a brown fluid. Laparotomy removed the whole hydatid mass, which was taken out in compartments, and was found to have its origin in the folds of the omentum, below the margin of the transverse colon.

It will always be difficult to decide whether such hydatids occur primarily in the omentum or, as Schwartzenger maintains, have their primary seat in the liver.

A case of Doran's (*Obstetrical Transactions*, Vol. xxiii, p. 165) and another of Ormby's (*British Medical Journal*, 1883, i, p. 578) originated in the ovaries.

A large intestinal cyst, 22 centimetres long, 14 broad, and 10 deep, was observed by C. Hennig (*Centralblatt für Gynäkologie*, 1880, No. 17, p. 398). Delivery was instrumental, very difficult, the child dead (lacerated). The sac contained still 100 cubic centimetres of a pretty clear, slightly red, and viscid fluid, which betrayed its intestinal origin. Weigert found cylindrical epithelia on the wall and in the fluid and intestinal follicles in the wall. In the same child there was a cyst, of the size of a plum, covered with cylindrical epithelium, on the anterior wall of the third, fourth, and fifth cervical vertebræ (branchial probably).

Dr. W. Howship Dickinson describes (*Transactions of the Pathological Society of London*, Vol. xxii, 1871, p. 296) a mesenteric tumor that occurred in a female child of two years. It was first noticed when the infant was between three and four months old. When the child died, she weighed sixteen pounds. The tumor, together with the left kidney and a small portion of small intestine, weighed 2 pounds 5½ ounces. It nearly filled the left half of the cavity; in front of it lay the transverse colon and the cæcum above, and a coil of adherent small intestine below. It consisted in its great bulk of ordinary connective tissue studded with true fat, in

which there were found cartilage, bone, and many cysts in which ciliated epithelium and plenty of mucoid masses were found. This teratoma should not be considered among the serous cysts under consideration.

In addition to the serous, the dermoid, and those cysts which result from cystoid degeneration of lymph-bodies, Roth (Virchow's *Archiv*, Vol. lxxxvi) describes an enterokystoma which is congenital and due to the dilatation of the omphalo-mesenteric duct caused by local obliteration.

Of cysts of the pancreas, Oser collected 134 cases. They are either (1) retention cysts (by inflammation or compression of the pancreatic duct, or catarrhal inflammation, or concretions or neoplasms mainly in the head of the gland), or (2) proliferation cysts depending on adenoma, epithelioma, or carcinoma of the tissue, or (3) apoplectic (A. Russow, *Jahrb. f. Kind.*, Vol. liii, p. 345).

ON THE HOME TREATMENT OF PULMONARY TUBERCULOSIS.*

By LEONARD WEBER, M. D.,

NEW YORK.

From 1879 to 1885 I took occasion to visit some of the well known sanatoria for the treatment of pulmonary tuberculosis, both here and abroad. When I saw what could be accomplished by physiotherapy in the first and second stages of tuberculosis, and how many well-marked cases of it rapidly improved and were even cured in such institutions, I determined to imitate this mode of treatment in private and dispensary practice, for such patients as could not or would not be sent away from home. Besides physiotherapy I employ such medicines as have proved themselves most serviceable in combating the tuberculous infection. Pretty careful records of my cases have been kept since 1886, and the care and management of them is based upon a fairly uniform working plan which has been followed in every case, slight individual modifications excepted, and which I have not yet had reason to change. Pains-taking and repeated physical examinations, the frequent use of the thermometer, and the examinations of sputa will not leave us in doubt for many days about the presence of pulmonary tuberculosis. By these frequent physical examinations I confess to have been greatly helped in arriving at the correct estimate of a case, in detecting the advance of retrogression of the apex-lesion on the side first infected, or the sudden manifestations of slight but suspicious

catarrh in the other apex, supposed to be sound. I have found in this way, even in the early stage of pulmonary tuberculosis, bilateral affection—unequal in depth and extent, to be sure—more often than I had suspected at the first or second examination. So far as my observations go, these explorations are not even now so generally and carefully made as they might be, yet without them we could estimate correctly neither the severity of the infection nor the power of resistance on the part of the patient, so as to be able to give a fair prognosis of the case.

And it is so important to find out as soon as possible whether we have to deal with a relatively slight and manageable form of pulmonary tuberculosis that will admit of home treatment, or with the more malignant, rapidly spreading form, that will end in phthisis in a short time unless the patient is removed into a climate of great high altitude.

In making the statement that by physical exploration, including bacteriological examinations, we can generally soon arrive at the positive diagnosis of the early stage of pulmonary tuberculosis, I mean just so much and no more. Unfortunately, however, the early stage in which this can be done, is not incipient pulmonary tuberculosis, it is already more than that. In the incipency of tuberculous infection there may be no sputum (*vide* last case reported) or, if any, bacilli may not be found present in it. And it is just in these very incipient cases that we should like so much to make a certain diagnosis. The tuberculin test we do not feel inclined to use on our patients; perhaps the Arloing-Courmont serum reaction recently brought out may prove of great value in the near future. In their report, December 1, 1900, Arloing and Courmant, of Lyons, have alleged positive proofs of agglutination in a large number out of 400 cases, but their results have not been generally confirmed, have even been contradicted by some competent investigators. So long as we have to go without a sure and readily made serum diagnosis for incipient tuberculosis, let us give a suspicious case the benefit of the doubt, and rather treat the patient as if he were infected with tubercle than give him medicine for latent malaria.

Having determined the presence of acute or subacute tuberculous infection, the nature of the disease is explained to the patient and his relatives, the fact of its communicability stated, and printed rules and regulations are handed them which describe the order of the requisite sanitary measures plainly and with particular accuracy with regard to the disinfection and destruction of sputa, the ventilation and disinfection of rooms,

*Read by title before the American Climatological Association at its annual meeting at Niagara Falls, May 30 and 31, 1901.

clothing, etc. At the same time it is impressed upon them to take a hopeful view of the situation, and to understand that, though the patient is suffering from an attack of tuberculosis, or tuberculous lung catarrh, if you please, he is not, by any means, consumptive or phthisical as yet, and that he will probably be very much better in a few weeks, if the treatment to be applied is carried out with intelligence, patience, and perseverance, so that he may have a fair chance of regaining his health and strength and be able to assume his occupation in the course of time. Shall we call this procedure in question, say that we assume too much by this suggestive presentation of the case, and, perhaps, make the patient too hopeful and careless in considering his own case? I have not found it so in practice. Provided we have gained the patient's confidence by locating his disease and its extent by an examination, for which half an hour's time is certainly required, reassurance and promise of early improvement which can be given with perfect honesty, will be the very thing to help him in the beginning and continuation of adequate treatment. It is surprising, to say the least, but nevertheless true, that even at the present time in the average case of recent pulmonary tuberculosis, coming on with more or less febrile disturbance of the system, etc., the patient is not sent to bed and kept there for some weeks for rest and treatment until the acute stage is passed. It may well be said that it is to be regretted that these patients not infrequently do not feel very ill at the onset of tuberculous invasion, and that the tubercle bacillus may occupy quite a bit of territory in one or another apex of the lungs before the first visit is made to the doctor's office. For the good of the sick and for the increased success of home treatment I wish it were otherwise, and that they all felt at the beginning at least as sick as a patient with quinsy, rheumatic fever, acute gastritis, or the like; then many more cases of pulmonary tuberculosis would be recognized in the early stages. It is a pity, indeed, that the tubercle bacillus does invade in so insidious a manner that we often find considerable infiltration of the apex or elsewhere in cases that look as if they had just begun.

(1) *The first order given in a case of fresh febrile tuberculous infection is that the patient should go to bed and stay there until the thermometer shows practically normal temperature. Rest cure at the outset, to be repeated at intervals according to the circumstances of the case, and careful nursing, are essential for successful treatment.*

(2) The patient's room must be well above ground, must admit plenty of light and air, and

be easy to ventilate. The furniture and equipment ought to conform more or less to those of the average private room in a modern hospital. The heating of the room should be done by an open fireplace or grate-stove; heating by dry hot air is to be deprecated; it brings too much dust into the room, and this we know to be particularly obnoxious to people with coughs and bronchial trouble. For collection of sputa I recommend either enameled iron spittoons, such as Dr. Knopf uses, or glass spittoons, or paper boxes, also the Japanese paper sheets for use when the patient is about. What is collected in spittoons is disinfected with a five-per-cent. solution of carbolic acid or three-per-cent. formaldehyde solution or 1-1000 corrosive sublimate. Papers filled with sputa are burned, of course.

(3) Food, selected according to the condition of the case, is given every two or three hours in small quantities, or in the shape of meals four times a day so soon as the patient is able to take and digest them. That fat-producing materials should be largely taken is self-evident. In the acute febrile stage the patient is sponged with alcohol and water three times daily, and his linen changed as often as required; when he has improved and become convalescent he is advised to take a cool sponge-bath every morning, standing in a rubber tub before the washstand that has a large basin full of cool water on it ready for use and a big linen sheet for drying by the side of it. Time allowed for this procedure, from two or five minutes. When the patient has made further progress in gaining strength and resistance or is vigorous at the outset and but little infected, so that he does not need the rest-cure any longer, if he ever has needed it at all, he is advised to take the douche—or rain bath—warm or tepid for the first two minutes, cool or cold the next two, every morning. Short procedures and low temperature of the water used are the essentials for successful hydrotherapy in this class of patients.

(4) In the early stages, and at all times, I have found it of great moment to keep down high temperature, and thereby save the patient's strength and body weight. Quinine I have not found as serviceable here as the compound coal-tar remedies. For ten years at least the following formula has been in use in my practice:

R	Acetanilide.	1 grain;
	Phenacetine	3 "
	Antipyrine	3 "
	M. ft. pulv.	

Such powder to be given when the temperature goes above 101° F. It has been gratifying

to notice the prompt action of this compound in the quantity stated—and even less in some cases—in reducing temperature without depressing effects.

(5) Not very infrequently, particularly in young persons, the disease is ushered in, so to speak, to the horror and alarm of the patient and his relatives, by hæmoptysis of more or less severity. No alarm need generally be felt at all at the first occurrence of hæmoptysis, though it is a different and more serious affair in advanced cases with excavations in the lung tissue. In every acute case I have noted of hæmoptysis there is considerable rise in temperature from the second or third day on. The treatment I have followed for this complication has been: Ice application to the chest in the form of two small ice-bags, left and right side below the clavicles; dry cupping with rubber-capped cupping glasses of suitable size, from eight to a dozen of them set on the chest, on both sides, from the clavicles to the ensiform process, and repeated two or three times in twenty-four hours. The patient rests in bed with the head well elevated, takes a teaspoonful of table salt two or three times the first day, and milk and water only for nourishment, controls cough with one-quarter-of-a-grain doses of phosphate of codeine. From the second day on for three or four days I give them of the fluid extract of arbor vitæ one drachm in a wineglassful of water three times in twenty-four hours, continuing the ice-bags, also repeating application of dry cups. At the end of a week the regular home treatment may be instituted.

The use of fluid extract of arbor vitæ for hæmoptysis I learned from the late Dr. Loomis; it appears to be of service. Ergot and acetate of lead in large doses are harmful; they are not indicated for this form of hæmorrhage anyway. To quiet the anxiety of the patient and his friends, reassure them of the absence of danger, and resort to the simple measures just described will be adequate treatment for most cases.

(6) The diagnosis of fresh and more or less febrile tuberculous infection of the lung having been made, and the patient been put to bed, the general irritability, harrassing cough, etc., are often such that I have not found it to be a good plan to resort at once to creosote or other drugs which may be believed to be inhibitory to the development and growth of the tubercle bacillus, but rather to resort for a week or two to such remedies as would be appropriate to a case of acute bronchitis with fever and severe cough. Nothing has served the purpose better than the following mixture:

R Chloroform water, 6 ounces;
Bicarbonate of sodium, 1 drachm;
Sulphate of morphine, 1 grain;
Cherry-laurel water, 1 drachm.

M. Sig. From one to two drachms in an ounce of water every three hours.

(7) So soon as the acute symptoms have subsided, or when they are absent, as in cases that have an insidious or subacute beginning, creosote is prescribed. Since 1888 this remedy has been employed by me, and the fair measure of success I have had in the home treatment of pulmonary tuberculosis has been due to the action of this drug, I believe, fully as much as to physiotherapy. It undoubtedly has an antiseptic and tonic effect, the former particularly in the secondary streptococcus and staphylococcus infections of tuberculosis. It has greatly helped in a number of cases under my observation to make the soil unfavorable to the growth of the tubercle bacillus, and it has also been demonstrated that a comparatively weak solution of it will inhibit further growth of the bacillus in a culture medium and produce agglutination. It is generally well borne by the patient even in large doses. But few patients have objected to its use and no harm has come from it in any of my cases. Capsules containing creosote mixed with oil I have not found of good service; I employ it in solution and according to this formula:

R Beechwood creosote, }
Alcohol, } each, 1 ounce.

M. Sig. 10 drops in half a tumblerful of milk or water three times daily an hour and a half after eating. Double the dose every week until the patient comes up to sixty drops *pro dosi*, which is about as far as I have gone.

The effects I look for, diminution or cessation of cough and expectoration, improved appetite, and gain in weight, have generally been procured in the course of two or three months by the doses mentioned, and I do not recollect getting better results by forcing larger doses. It is to be remembered that we meet with cases often enough which will not respond to physiotherapy and creosote at home because the infection is too virulent and spreads too quickly, and the patient becomes rapidly phthisical unless saved in time by sanatorium treatment in high and sunny mountain climates.

Of the derivatives of creosote I have made fair trials, also of ichthyol, but I have not been convinced of the power of these for making an impression upon the disease, and I believe them to be inferior to creosote.

(8) The class of tuberculous patients who

show phthisical habitus, have poorly developed muscles, and also weak hearts, need cardiac tonics, such as strychnine, with or without digitalis and quinine in small doses t. i. d. before meals. For the often troublesome dry cough I have found the phosphate of codeine in one-quarter-grain doses of good service.

(9) Whenever a stage of improvement has been reached where it has appeared to me timely and opportune to send the patient out of the city to continue the plan of treatment, with the main points of which he has now become familiar, I have done so. It goes without saying, as to convalescence and eventual restoration to health, that he will make more rapid advance in the uplands than by staying in the city, even with the best possible surroundings and best care. In the course of time I have advised single patients and entire families to remove from the Greater City of New York to the Oranges or to Morristown and Dover in New Jersey, if they could go no higher up from the sea level; always admonished them to keep on the lookout for light, airy houses, and to guard against wind and dust as much as possible. I give the preference, however, to the uplands of Ulster, Sullivan, and Greene counties, of New York, which abound in places suitable for incipient phthisis; often, also, I have had very fair results by sending patients to Milford, in Pike County, Pennsylvania, near Port Jervis. When a patient chooses to go so far as the Adirondacks, but refuses to become an inmate of a sanatorium there, I insist on his reporting, soon after arrival, to a physician and choosing a location by his advice. It does seem to me neither prudent nor right and proper to let a patient in delicate health go and locate three hundred or more miles away from home and be his own physician.

(10) By Dr. Knopf and others I have been informed that, in addition to caring for the tuberculous poor in private sanatoria to be built up by special societies founded in several large cities of our country, some of these societies have also taken up educational work by trying to instruct the people as to the meaning and importance of pulmonary tuberculosis. It is good news indeed, that men and women who thoroughly understand the subject of tuberculosis and have the ability to bring it before the people in such a way as to convince them of its importance and instruct them with reference to the requisite sanitary and prophylactic measures to combat the ubiquitous and most deadly enemy of mankind, should go forth and do this good and humane work. What I said some weeks ago at the annual gathering of a large body of physicians in the city of New York I will say here again: It is

the business of medical men to give instruction by popular lectures on this and similar important subjects to the people in regular courses, and I believe the time is fully ripe to do this, and do it well, throughout the country. Besides that, every dispensary ought to have now its own special department for the diagnosis and treatment of pulmonary tuberculosis, and a bacteriologist who is to be paid for his services should be one of the officers of the department.

And now, what results have I had? Have they been encouraging enough to continue on this road, and have I been right in advising others to follow as I have done for a number of years?

Leaving all hospital and dispensary cases out of consideration, for the reason that we are but seldom in a position to have cognizance of their subsequent history, I can count about one hundred and ten private cases that have been under my observation and care since 1885. All of them have been treated as above described, for every one creosote was ordered as the remedy to be taken steadily and for a long while, and at least fourfifths of them took it without objection or disgust and without harm to the kidneys or the gastro-intestinal tract; about one fifth could not or would not, take it, but had carbonate of creosote in capsule or carbonate of guaiacol in powder in sixteen-grain doses t. i. d. given to them instead. So far as I can tell now, about fifty of the whole number have been restored to health and regular occupation after a course of one, two, or three years' care and treatment. About twenty have been greatly improved, but have remained pulmonary invalids; about thirty of the whole number have died of phthisis pulmonalis. A few cases have been of striking interest, and with an abstract of their histories I will bring this paper to a close.

CASE I.—There is, first of all, the Shorb family, German-Americans. Father, piano maker, seventy years of age, living, not tuberculous; mother, sixty years of age, still living, tuberculous infection at thirty-five years. Many hæmoptyses in the course of years, but still in a fairly good condition, able to do housework. Seven sons, all of whom work in piano factories and every one of whom developed pulmonary tuberculosis between eighteen and twenty-six years of age. The oldest son contracted also syphilis when already consumptive and died. His wife, young and healthy at the time of marriage, became the mother of two children, which showed signs of hereditary syphilis, but recovered and are now fairly well, aged 7 and 8 years respectively. The mother, however, died of rapid consumption a year after her husband's death. The six other brothers weathered the first storms of tuberculosis bravely, carried out the treatment persistently, and all are able to work at their trade. For

the two most delicate ones I was able to procure employment out in Colorado and New Mexico; the news from them is satisfactory.

CASE II.—Two sisters, Mary Ann and Alice B., Americans. Father and mother healthy at the time these girls showed incipient tuberculosis. No other members of this rather numerous family have signs of it. These two patients never went away for a cure, but recovered by home treatment alone.

CASE III.—Alice F., American, dressmaker. Tuberculosis from her twentieth to her twenty-fifth year. Had home treatment only and recovered. She married two years ago and is now the mother of a healthy child and in good general condition.

CASE IV.—Marcus, Edward, William and Ida R. The mother of these four patients died of pulmonary tuberculosis at the time they were growing up. The father died of cerebral apoplexy about eight years ago. All four had well-marked attacks of tuberculosis, but made good recoveries by home and open-air treatment, and are now well.

CASE V.—Joseph R., American, commercial traveller, now forty years of age, single, tuberculous infection ten years ago. Home treatment and occasional sojourn in the Catskill Mountains for two years, then a sojourn in Colorado for six months, is now in good health.

CASE VI.—Joseph S., American, thirty-four years of age, married, pawnbroker. Severe attack of acute pulmonary tuberculosis concerning the entire upper right lobe ten years ago. Home treatment and sojourn in suitable place in the vicinity of New York for three years. Good recovery.

CASE VII.—C. P., Swede, carpenter, married, thirty-two years of age, tuberculosis of right apex at twenty-eight years. Also tuberculosis of culaneous bone and the sheath of the tendo Achillis. Home treatment only and surgical treatment in hospital. Complete recovery.

CASE VIII.—Albert T., American, twenty-three years of age, single, clerk. No hereditary taint. Last September and October a second and severe attack of pulmonary tuberculous disease, right upper lobe, with pleurisy of the left side. Home treatment for three months, followed by a sojourn at Lakewood, N. J., during February, March, and April. When last examined, two weeks ago, I found he had entirely recovered from the pleurisy and was greatly improved with regard to the tuberculous infection, free from fever and cough, but his sputa were not yet entirely free of bacilli.

CASE IX.—Josephine W., American, twelve years of age. Father died of phthisis five years ago. The upper lobe of her right lung showed extensive tuberculous infiltration three years ago, yet she has made great improvement in all respects by persistent and carefully supervised treatment at home and the girl is in a good condition at the present time.

CASE X.—Mrs. Mary R., thirty years of age, married. Father died of pulmonary phthisis fifteen years ago. Her right lung became infected two years ago after grippe. Tubercle bacilli demonstrated in sputa, though very small and

few. Had home treatment only and recovered.

CASE XI.—Charles D., American, single, merchant, now forty-six years of age. Became tuberculous fifteen years ago, and acutely so. Had home treatment exclusively for three years and is quite well and strong to-day.

CASE XII.—Joseph O., German-American, inn-keeper, married. A fine and strong-looking man when he became infected at the age of thirty years. For eight years I managed to see him through various relapses of his disease and to get him again and again in good shape by home treatment only, but it was impossible to keep him away from the saloons, and he finally succumbed. His wife has not been infected and is in good health now, but his oldest son took the disease at the age of nineteen years three years ago and died of rapid consumption.

CASE XIII.—Lizzie Fitz, twenty-six years of age, single, Irish, no occupation. No family taint, became infected two years ago. Carried out home treatment in a perfect manner these last twenty months and is quite well at the present time.

CASE XIV.—Esther S., Russian, twenty-two years of age, single, seamstress. No history. Became infected two years ago. Fair recovery by home treatment only.

CASE XV.—Martin C., American, twenty-four years of age, single. Good family history. Measles at ten, chronic otitis media on one side for at least ten years, never very severe; appendicular abscess eighteen months ago, successfully operated on, slow but full recovery, so that, two months ago, he looked quite well and was fully able to attend to business. From April 15 to May 20 of this year he had frequent dry cough but no expectoration, no temperature, no loss in weight. By repeated examinations a small focus of abnormal respiratory murmurs was finally made out over the right posterior apex and the patient was put to bed for ten days when he felt so well that he was allowed to go out again. On May 22d, however, he was taken with severe hæmoptysis. His case again proves the insidiousness of pulmonary tuberculosis as well as the peculiar state of long-continued latency of tuberculous infection. Though the loss of blood was considerable, fully a quart within forty-eight hours, followed by high fever and drenching perspiration, I insisted that there was no cause for alarm, applied the ice-bags and dry cups, gave small doses of the compound antipyretic powder and a little codeine to control cough, and ordered absolute rest and diet. At the time of writing this note—ten days after the attack—the patient is convalescent.

25 WEST FORTY-SIXTH STREET.

The Purchase of Liquors for Sick Soldiers.—As the result of a recommendation made several weeks ago by Commissary General Weston, the secretary of war has issued an order providing that the medical department, and not the subsistence department, shall purchase malt, vinous, and spirituous liquors when needed for sick soldiers.

SOME REMARKS ON TETANUS.*

By FIELDING LEWIS TAYLOR, M.A. (U.Va.), M.D.,

NEW YORK.

OF THE OUT-PATIENT STAFF OF THE HUDSON STREET HOSPITAL.

I shall preface my remarks by a brief summary of the histories of five cases of tetanus which were first seen in the Out-patient Department of the Hudson Street Hospital.

CASE I.—R. K., aged thirteen years, born in the United States, schoolboy, on June 7, 1899, sustained a small wound on the palmar aspect of the left hand, at the base of the thumb, from the wad of a toy pistol. The accident occurred at 3 o'clock in the afternoon, but the wound was not dressed until 8 p. m. The patient failed to return for re-dressings. On June 11th he complained of loss of appetite, which persisted.

About 10 p. m., June 12th, five days after the injury, while playing, he was seized with a sudden stiffness of the jaws and noticed slight swelling at the angles of the mandible. There was no tenderness or pain. At 4 a. m., June 13th, his aunt noticed backward bending of the head and spine. There were stiffness and resistance on attempting to put his head in the normal position, so she brought him at once to the hospital. His temperature was 99.6° F.; pulse 96, soft, regular and of good quality, and respiration 24. He had a slight spasm and assumed a position of opisthotonos during examination. Trismus was marked, and there was slight swelling at the angles of the jaw. The tongue was clean. The wound in the hand was an apparently shallow, granulating lacerated wound. Spasms now recurred every eight or ten minutes and lasted from eight to ten seconds. Opisthotonos was marked, and there were contractions of the muscles of the arms and forearms, legs, and thighs. Respiration was suspended during the spasms, and there were slight contractions of the pectoral muscles. Between the paroxysms, the muscles were slightly stiff. The patient was fully conscious and denied suffering from any pain whatsoever. Toward evening the convulsions were only two minutes apart. Some of the convulsions were very slight, but the slightest irritation greatly increased their severity.

At 9 p. m., under chloroform anæsthesia, Dr. Rambaud, of the Pasteur Institute, injected tetanus antitoxine into the posterior and anterior horns of the right lateral ventricle, 10 c. c. into each. Also, 50 c.c. were injected into the right median basilic vein at 99.8° F. The patient had several severe spasms during the night, in spite of chloral and Magendie's solution, and died at 10 a. m.

Just before the operation the temperature was 99.6° F., respiration 24, pulse 96; at midnight, temperature, 98; at 3 a. m., temperature, 107.2°; at 6 a. m., temperature, 106.2°.

An autopsy showed all the organs normal. There were slight areas of bloody extravasation around the insertions of the needle. The needle track of the anterior injection was about a quar-

ter of an inch from the anterior horn of the lateral ventricle.

CASE II.—P. C., aged twelve years, born in the United States, schoolboy, on July 4, 1899, received a wound in the left thigh, at the junction of the upper and middle thirds, on the inner aspect, from the wad of a toy pistol. He did not apply for treatment until two days later, when the wound was cleaned and irrigated with peroxide of hydrogen and a solution of corrosive sublimate. Stiffness of the left leg and thigh developed two days later, of which he took no notice, and he did not mention it when he returned for treatment, although subsequently, at the time of his admission to the hospital, he gave an unsolicited account of it. He returned daily for redressing. On July 13th the wound, which had been packed with iodoform gauze, assumed an unhealthy appearance and the surrounding tissues were red and indurated. On the 14th the tissues were incised, irrigated, and packed. At this time distinct stiffness of the thigh and leg was noted, but, as the boy complained of no pain, the parents refused to have him admitted to the hospital. Trismus was noted at 10 p. m., but he was still kept at home.

On the 15th opisthotonos occurred while he was on the way to the dispensary. When I saw him, at 11 a. m., there was opisthotonos when the patient was erect, but no spasms were produced by the irritation of examination. Temperature, 101.4°, respiration 28, regular and free; pulse 88, regular, full, and soft. Symptoms noted later were risus sardonicus, trismus, some muscular rigidity of the left lower extremity, exaggerated patellar reflex on the right side, and some slight and irregular twitching of the face.

Outline of Treatment.—The original wound was thoroughly laid open, and the parts were swabbed with Lugol's solution and put up in a 1-to-80 carbolic-acid-wet-dressing. Intracerebral injection of antitoxine by Dr. Rambaud and Dr. Bolton. Five c.c. were injected into the posterior horn of the right lateral ventricle and 5 c.c. into the anterior lobe of each side; 20 c.c. were also injected under the skin of the abdominal parietes. It is stated that no spasms occurred until twenty hours after the operation, and that trismus and rigidity were much less marked. However this may have been, the temperature, pulse, and respiration steadily rose until his death, at 3.40 p. m. the following day.

I wish to thank Dr. Lewis A. Stimson for permission to make use of the histories of these two cases subsequent to the patient's admission to the hospital.

CASE III.—J. G., aged fifteen years, schoolboy, on July 4, 1899, was wounded in the palm of the left hand by a wad from a toy pistol, which penetrated the palmar fascia over the hypothenar. The patient refused to have the wound laid open when he came to the dispensary. On the 10th he went to the office of Dr. C. C. Page for treatment. The wound was small and not painful and was discharging a slight amount of sero-pus. Upon pressing it, two small pieces of wad were

*Read before the West End Medical Society, June 1, 1901.

squeezed out. Two days later, July 12th, he returned to Dr. Page's office complaining of a sore throat and stiffness about the neck. He was sent to bed at once, chloroform was administered, and the wound was freely opened, curetted, and swabbed out with pure carbolic acid, followed by alcohol. A 1-to-80 carbolic-acid dressing was then applied and 40 c.c. antitoxine were administered subcutaneously. Trismus was marked at times.

13th.—Trismus, risus sardonicus, opisthotonos, stiffness of the extremities, and occasional general convulsions were noted. These symptoms increased in severity in spite of the free administration of chloral, chloroform, Magendie's solution, etc.

On the 15th I saw the patient with Dr. Page in the afternoon. Opisthotonos was well marked, the extremities were contracted, the jaws were set, the face was grinning and livid, and the entire body was covered with sweat, while violent convulsions occurred every few moments when the child was not under the influence of chloroform.

The patient died at 3 a. m. on the 16th, four days after the symptoms were first noticed. In all, 100 c.c. of antitoxine were administered, the quantity being limited by the purse of the family. This patient, though his case was quite as severe, lived three days longer than those above mentioned who were treated by intracerebral injections.

CASE IV.—L. A. L., fifty-three years of age, a French Hebrew, a cook, was wounded in the hand by the explosion of a firecracker on July 4, 1899. The wound was superficial and quite trivial, and was situated on the palmar aspect of the thumb, as well as I can recollect. He had read about the prevalence of tetanus, and first came to the Hudson Street Hospital on July 15th, eleven days after his injury, complaining of slight stiffness of the jaws and much exercised about his condition. He was referred at once to the French Hospital. On admission, his symptoms were a moderate degree of risus sardonicus, considerable rigidity of the muscles of mastication, difficulty in swallowing, and pain in the rigid muscles. His symptoms remained about the same for ten days, when they increased in severity, his pulse became steadily more rapid and weaker, and he died of heart failure on July 29th, twenty-five days after the receipt of the injury. He was not treated with antitoxine, as able consultants who saw the case regarded it as one of hysteria.

This is just the kind of case, as we shall see below, in which antitoxine seems to be of a good deal of service.

CASE V.—J. M. M., aged seventeen, was injured in the palm of the right hand on July 4, 1900, by the wad of a toy pistol. He came to the Hudson Street Hospital the same day, but did not return for subsequent treatment. On the 10th he was carried to the New York Hospital, suffering from trismus and risus sardonicus, and there he died on July 22d, the twelfth day of his illness. His temperature ranged from 101° to 104° during the

first half of his disease, and from 104° to 106° during the last half. In all, 290 c.c. of antitoxine were administered subcutaneously. A more complete history was, unfortunately, not obtainable.

This was the only case of tetanus that occurred among the patients treated at the Hudson Street Hospital during the summer of 1900, so far as I know. The terrible experiences of the previous summer had led me to insist upon certain procedures which possibly proved of some benefit in averting the serious consequences of these apparently trifling wounds. This case fell into the hands of a recent graduate, and very possibly the wound was not cleaned so thoroughly as it should have been.

The wounds made by the wads from blank cartridges are most frequently in the palm of the hand, and are much deeper than one would be inclined to think. They usually go down to, if not through, the palmar fascia and contain paper, of which the wads are made, together with more or less burnt powder. Under no circumstances is one justified in continuing to treat a patient who will not allow thorough opening and cleansing of the wound. I then inject from 5 to 10 c.c. of tetanus antitoxine. This injection should be repeated in a few days, if the wound does badly.

During the fortnight preceding and following the Fourth of July, 1899, thirty-two wounds from the wads of toy pistols were treated at Hudson Street Hospital. Of this number, three were followed by fatal tetanus. It is worthy of note that in not one of these cases would the patient consent to thorough opening and cleansing of the wound until after symptoms of this disease had developed. During this period about 2,000 open wounds were treated at this dispensary. Among them there were two other cases of tetanus, one, Case IV above mentioned, due to a powder burn, the other, that of a small boy, who came in with a severe cellulitis following a traumatic amputation of a finger. A few days later I learned of his death in Gouverneur Hospital from tetanus. During the days around the Fourth of July, 1900, twenty-seven wounds from the wads of toy pistols were treated at the same institution. All of these wounds that came under my care and that of my assistants were freely incised and cleaned, and then swabbed with pure carbolic acid followed by alcohol, and a wet dressing of carbolic acid, 1 to 80, was applied. In fourteen of these cases prophylactic injections of antitetanic serum were administered, in doses ranging from 4 to 10 c.c. None of these had tetanus, but, of the thirteen not injected, one, Case V, died of tetanus. As stated, I do not think that the local treatment of this case was all that it might have been. During a period of six years in which I had been connected with the Hudson Street Hospital these were the only cases of tetanus that I

had heard of there. During this time tens of thousands of open wounds had been treated there, so that apprehension on this score had almost ceased to exist prior to the summer of 1899.

Whether tetanus follows so frequently wounds from toy pistols because the bacillus is contained in the wad, has not been determined. To ascertain whether this was the fact, many boxes of cartridges were purchased in different localities in Manhattan and Brooklyn during the summer of 1899. As they were all manufactured by three companies, it was only necessary to make three series of experiments. The wads were carefully removed from fifteen cartridges of each maker and macerated in three bouillon tubes for several days. The tubes were then kept heated to 75°-80° C. for thirty minutes, to eliminate the less resistant organisms, as Kitasato succeeded in doing.

Then five nutrient agar plates were made from each of the three specimens and grown in the incubator under hydrogen from one to seven days. Several varieties of bacilli were cultivated, but none having the characteristic morphology of the tetanus bacillus was ever found. The same performance was repeated, both without preliminary heating and with heating to 75° C. for half an hour, for three successive days. The results in both instances were likewise negative. A very similar series of experiments, also with negative results, has been reported by H. Gideon Wells (*Philadelphia Medical Journal*, June 16, 1900). He also inoculated animals with wads, powder, and agar and bouillon cultures, both with and without previous heating. The results were likewise negative.

I wish to call attention to certain discoveries by various investigators which bear more or less directly on the treatment.

It is quite unnecessary to enter into a detailed description of the tetanus bacillus. It will be sufficient to call attention to these facts: It is anaerobic and very common about stables and in the dust of roads and streets. Its spores are very resistant to high temperatures and may be heated to 85° C. without injury. The ordinary antiseptic solutions used in surgery are much too weak to seriously affect its vitality. According to Alexander Lambert (*Medical News*, July 7, 1900), a mixture of a 1-to-1,000 solution of bichloride of mercury, five per cent. of carbolic acid, and half a per cent. of hydrochloric acid will kill the spores in ten minutes. A one-per-cent. solution of nitrate of silver will kill the spores in one minute, and a 1-to-1,000 solution in five minutes. A one-per-cent. solution of iodine trichloride, or Gram's or Lugol's solution is recommended to cleanse wounds. A 1½-per-cent. solution of carbolic acid, one per cent. of kresol, or ½ per cent. of formalin will destroy the toxins. They may be in-

jected about the wound for this purpose.

Vaillard and Rouget (*Annales de l'Institut Pasteur*, June, 1892, p. 385) give the details of a series of experiments by which they establish the fact that tetanus spores freed from toxins are innocuous when not accompanied by another bacterium, unless protected against phagocytes. In one of their experiments they found out, quite by accident, that the tetanus spores only became virulent when associated with two species of micro-organism contained in a certain specimen of tetanogenic earth, while they were quite innocuous when mixed with either species alone.

The point of entrance of the germ is held to be always an open wound or an abraded mucous surface. In tetanus following simple fractures and other subcutaneous wounds, it would seem probable that spores having gained entrance elsewhere become localized in the fracture and then, in company with other organisms, elaborate their toxins.

Like the bacillus of diphtheria, the bacillus of tetanus remains localized in the wound and produces toxins. The exact mode of action of these toxins on the nervous system is a much debated subject.

By mixing an emulsion of brain and spinal cord with tetanus toxin and centrifuging, Wassermann and Takaki (*Berliner klinische Wochenschrift*, 1898, No. 12, p. 187) showed that pretty much all of the toxin was carried down by the nervous tissue, while the supernatant fluid was practically harmless.

Roux and Borrel (*Annales de l'Institut Pasteur*, 1898, p. 226) showed that one twenty-fifth of the dose of toxin required to produce tetanus, when injected subcutaneously, would produce a train of symptoms which they term cerebral tetanus when injected into the brain of a rabbit. These experiments are supposed to prove the special affinity of tetanus toxin for the brain and spinal cord.

R. Stintzing (*Mittheilungen aus den Grenzgebieten der Medizin und Chirurgie*, Vol. iii, Nos. 3 and 4, pp. 461, 473) withdrew spinal fluid by lumbar puncture and found it more toxic than the same amount of blood. The same writer (*Münchener medicinische Wochenschrift*, 1898, No. 40, p. 1265), in giving a summary of his hypothesis based on his own work and that of others (*vid. Marie, Annales de l'Institut Pasteur*, July, 1897), considers that the organism of tetanus elaborates toxins at the point of colonization. These toxins are in part absorbed into the blood, but for the most part pass along the lymph-spaces of the adjacent nerves to reach the cord. Here, on account of the special affinity of the cells for the toxin, the latter becomes localized in the segment corresponding more or less closely to the region of the body in which the lesion is situated. Later, if the quantity of toxin is sufficient,

it is distributed by diffusion to other cells, and tetanus becomes generalized. Whether the changes described as occurring in the motor ganglion cells of the cord and medulla oblongata constitute the essential lesion of tetanus, he regards as doubtful, but he considers that these cells are the point of attack of the toxine. In support of Stintzing's hypothesis is also the fact that experimental tetanus always occurs first in the inoculated limb. That this is the case in man is not the rule, but it certainly occurred in Case II and in Moschovitz's case (*Annals of Surgery*, October, 1900). That local tetanus does not occur more frequently in man is held by Stintzing to be due to the fact that man's subarachnoid lymph-space is larger than that in the animals used in the laboratory, and hence allows the toxine to be disseminated more rapidly (*l. c.*).

Decapitation eliminates the cerebrum as the point of origin of the spasms. Courmont and Dayon (*Le Tétanos*, Paris, 1899) detail a number of experiments on animals to prove that tetanus will not occur if the sensory nerves to the infected area are divided. Brunner (*Deutsche medicinische Wochenschrift*, 1894, No. 5, p. 100) and Gumprecht (*Deutsche medicinische Wochenschrift*, 1894, No. 26, p. 546) find sections of the sensory nerves to be without influence. They both conclude, after the administration of curare and division of nerves, that the action of the poison is on the spinal cord.

Courmont and Dayon (*l. c.*) call attention to the fact that a certain number of hours must elapse between the injection of the toxine and the appearance of symptoms. By increasing the dose this period may be shortened, but cannot be eliminated. From this they maintain that the injected substance is a kind of enzyme which requires a certain time to elaborate the tetanizing substance.

The mode of elimination of tetanus toxine seems undetermined. According to some, the urine of patients suffering from tetanus contains tetanotoxine. Others maintain that it does not. The same conflicting views are held with regard to the liver and other excretory organs.

Antitoxine in Tetanus.—Behring and Kitasato came to the following conclusions:

First, the serum of immunized animals neutralizes *in vitro* the poison of tetanus.

Second, preventive injections save animals from the toxic effects of the poison.

They also endeavored to show that antitoxine would cure animals when symptoms had already appeared (*vid.* Ch. Dopfer, *Gazette des hôpitaux*, April 28, 1900). This they did not succeed in establishing so satisfactorily. It now seems pretty generally admitted that, when symptoms of tetanus are due to inoculation and development of the germ in the tissues, success depends upon the quantity of

serum injected and the time which has elapsed between the moment of infection and that of treatment. Serotherapy often fails when animals are so infected that tetanus develops rapidly. Behring and Kitasato regard the action of antitoxine as purely chemical, while Buchner holds that it acts only through the medium of the living body.

According to Roux and Borrel (*Annales de l'Institut Pasteur*, 1898, p. 225), antitoxine, when injected, remains in the blood, while toxine is extracted and fixed in the nerve centres. The antitoxine is efficacious against the toxine so long as the latter circulates in the blood, but is powerless when once the toxine has reached the cells for which it has a special affinity. Antitoxine limits the action of the toxine only. If the latter is far advanced, the disease will follow its course, for the toxine will be diffused from nerve cell to nerve cell in spite of the antidote.

After considering facts and hypothesis, these experimenters thought that by injecting the antitoxine into the brain in a case of tetanus it might be possible to immunize cells not yet reached by the toxine. After trying the method on animals, they concluded that the period of useful intervention by means of antitoxine was somewhat lengthened; that is, that, when it was too late to employ intravenous or subcutaneous injections successfully, it might still be possible to limit extension of the poison by diffusion by means of intracerebral injections. How far these conclusions from experiments on lower animals have proved of value when applied to man is still a matter to be determined.

Prophylaxis.—However skeptical some may be in regard to the curative power of tetanus antitoxine, that its prophylactic use is of great value admits of little question. From the 1st of August, 1895, to the 1st of June, 1897, Nocard distributed to veterinarians 7,000 bottles of tetanus antitoxine, containing 10 c.c. each, to be used as a preventive. Preventive treatment comprises two injections of 10 c.c. each, at an interval of from ten to twelve days. There was, then, enough serum distributed to immunize about 3,500 horses. He learned the results in 2,727 cases. These cases he divides into two groups. In the first group were 2,300 animals that received one injection at the time of operation, and another injection ten to twelve days later. Not one of these animals had tetanus. In the second group were about 400 animals that received the injection from one to four or more days after accidental traumatism. None of these succumbed to tetanus. One horse, injected five days after the accident, showed later tetanic symptoms of a mild character, but recovered completely in twelve days. During the same period, sixty-three correspondents of Nocard observed 259 cases of tetanus in animals

not injected, among which were 191 horses. One veterinarian had five cases of tetanus among eight castrated horses. From this time on, he injected in all operative cases and performed 163 castrations on horses without a single case of tetanus (Nocard, *Bulletins de l'Académie de médecine*, 1895 and 1897). Bazy, in France, quoted by Lambert (*New York Medical Journal*, June 5, 1897), had four cases of tetanus among patients upon whom he had operated. He then used prophylactic injections and had only one case, which occurred in a patient to whom he neglected to administer antitoxine. Lambert also mentions in this paper that an epidemic of tetanus at the Gebäranstalt at Prague was cut short by prophylactic injections.

The fourteen patients injected by me experienced no inconvenience whatsoever from the injections, though pains in the joints and rashes are reported as occurring sometimes. Thorough local treatment of the wound is, of course, of great importance.

Prognosis.—The prognosis in tetanus, according to most authorities, depends upon: 1. The length of the period of incubation. 2. The acuteness of the symptoms. Cases with a period of incubation of less than ten days or of very acute onset are decidedly the most serious.

Lambert (*Medical News*, July 7, 1900) states the mortality to be 88 per cent. in acute cases and 40 per cent. in subacute and chronic, treated by old methods.

In 262 cases collected by him since the introduction of antitoxine, 151 patients recovered, and 111 died—a mortality of 42.36 per cent. In 124 acute cases, 39 recovered, and 89 died—a mortality of 71.77 per cent. In 138 chronic cases, 116 recovered, and 22 died—a mortality of 15.94 per cent. Note the reduction in mortality in the chronic cases from 40 per cent. by old methods to less than 16 per cent. by the use of antitoxine.

Of 52 intracerebral injections collected by the same author 19 patients recovered, and 33 died—a mortality of 63.46 per cent. In the acute cases, three patients recovered, and twenty-one died—a mortality of 87.5 per cent. In the chronic cases, eleven recovered, and four died—a mortality of 26.66 per cent. In thirteen unclassified cases, five recovered, and eight died. In three cases in which subdural injections were practised two acute cases proved fatal, and one chronic case ended in recovery. Moschovitz (*l. c.*) collected 290 cases treated by antitoxine injected subcutaneously or into a vein; of this number 117 died, or 40 per cent. Of forty-eight cases collected by Moschovitz (*l. c.*) and said to have been of the severest type and hopeless, 52 per cent. ended in recovery after intracerebral injections. Abbe (*Annals of Surgery*, March, 1900) reports nine cases of tetanus, in five of which intra-

cerebral injections were used, with three recoveries.

Roux and Borrel teach that the higher in the cerebrospinal axis the lesion is situated, the smaller the chance of recovery in animals. Now, in man the first symptom noted is usually trismus, which certainly proceeds from centres situated at least as high as the medulla oblongata. The central injection, to be of service, then, it would seem, would have to be used very shortly after this symptom is noted. Borrel says that after the first twenty-four hours of tetanic symptoms intracerebral injections are useless. They are also considered by him useless if the pulse is above 110 and the respirations above 25.

The indications for treatment are based upon what has been written above. They are:

1. To remove the infection atrium, and so prevent the formation of more toxine.
2. To neutralize the poison in the blood.
3. To prevent the extension of the poison to the higher centres.
4. To quiet the cells already irritated.
5. To facilitate elimination.

I wish, before closing, to call attention to the Baccelli method of treating tetanus by means of hypodermic injections of carbolic acid. Ten minims of a 10-per-cent. solution are administered hypodermically at intervals of from fifteen to thirty minutes. Ascoli (*Bolletino della reale Accademia di medicina di Roma*, February, 1899, p. 495, quoted by H. C. Wood, Jr., *Merck's Archives*, p. 191, 1899) has collected and tabulated the following cases according to the method of treatment:

Method,	Cases,	Deaths,	Duration,	Per cent. of mortality.
Baccelli . .	34	1	25 days	3.2
Tizzoni . .	42	7	23 "	17.8
Behring . .	28	10	33 "	35.7

The tolerance of the system for carbolic acid in this disease is said to be remarkable. The urine soon becomes smoky. The color, according to Brunton, is due to pyrocatechin and hydroquinone, substances derived from carbolic acid, and bears no relation to the danger of poisoning. The disappearance of the sulphates from the urine, however, is a sure indication of danger. Their presence can be determined by acidulating the urine with acetic acid and then adding barium chloride in excess, when we get a copious white insoluble precipitate of barium sulphate.

173 WEST SEVENTY-THIRD STREET.

The Wayne County (N. Y.) Medical Society held its annual meeting on July 9th and elected officers as follows: President, Dr. Carr, of Williamson; vice-president, Dr. Winchell, of Rose; treasurer, Dr. Colvin, of Clyde; secretary, Dr. Arnold, of Clyde.

COMMON LAW RIGHTS AND THE PHYSICIAN'S PRESCRIPTION.

By J. WILKINSON JERVEY, M. D.,

GREENVILLE, S. C.

In the intricacies and labyrinths of forensic medicine, and the knotty problems of medical jurisprudence, one finds an endless chain of interesting propositions. It has been the fortune of war, in the fiercely raging struggle for existence and an honorable modicum of professional success, to find myself brought into apposition with one of these.

The question presenting itself in this instance is: *Where does the right of possession of a physician's prescription lie—with the patient, for whose use and benefit it is intended; with the druggist, for whose direction it is intended; or with the physician, who is responsible for its creation?*

Corollary to this may be asked: *What are the rights of physician, patient, and druggist in regard to copying and refilling any given prescription?*

These inquiries open up almost an infinity of possibilities for argument and suggestions of innumerable hypothetical circumstances which would perhaps materially influence conclusions hastily formed. I shall try to be brief, and cite only the most salient and pointed situations and arguments, this communication working upon the basis that all law is founded upon reason. Strange to relate, besides the common law of reason, little legal light has been shed upon these questions—perhaps because of injudicious prodigality in shedding judicial lustre upon other and oftentimes less important points.

Let us first come to a clear understanding of what a prescription really is. It is an instrument of convenience; that and nothing more to the physician and patient—of convenience, first, to the physician himself, and, next, to the patient. To the pharmacist it is, in addition, a protection. It is important that this should be understood, for the whole issue falls upon this point.

The physician is consulted primarily for advice. This may or may not include directions for treatment. It would be obviously ridiculous to assert that the physician could be legally compelled to put his advice into writing. For instance, his advice, after examination of the case, might be: "You need no treatment, do nothing." He has earned his fee (see Taylor's *Law in Relation to Physicians*, p. 141), yet it would be absurd to write and sign these directions. This negative line of treatment, however, results disastrously, let us suppose; but that does not indicate the necessity for compelling written advice in order that the patient might have a hold upon the physician. It would be as sensible to demand that the physician write, sign, and turn over to the mother of the colicky infant: "Don't let the

baby eat green apples, Limburger cheese, sawdust, Paris green, rough on rats, or tenpenny nails; and eau de Cologne, prussic acid, bug-poison, and benzine must be interdicted as drinks."

It can be laid down as a rule practically invariable that the physician is consulted on account of the confidence reposed in his skill and knowledge. It would be foolish, then, for the patient to say: "I demand your directions in writing, otherwise I am suspicious." Besides, as a rule, the patient is as wise, in regard to his dose, with the prescription in his hand as before he ever saw it. Should he insist on his demand, the physician need only refuse, charge him for examination, and dismiss the case. The next physician consulted could do likewise, and the case could go untreated indefinitely.

It is obvious, then, that the patient has no inherent right to demand possession of written directions, whether positive or negative, for the treatment of his condition. The physician's advice is sought and he gives it, for value received, either verbally or written, as he may see fit—as necessity or convenience may suggest. Thus far the patient must subordinate himself—that he cannot demand written advice if the physician does not see fit to provide it for any cause in his judgment whatever. The physician must, in reason, have every right to go to the pharmacist in whom he has most confidence, order the medicine he desires, and turn it over to the patient. The pharmacist can and will demand the written order of the physician, for his own protection and reference, but in so far as the patient is concerned, his consulting the physician implies confidence in, and voluntary submission to, the physician's orders, and he (the patient) has no rights or responsibilities in the matter beyond the taking of the medicine ordered for him, except as will be hereinafter shown.

Let us consider now the merits of the situation where the physician has written a prescription and handed it to the patient for presentation to a pharmacist for filling. Why is the prescription written? Primarily, you will say, for the use and benefit of the patient. Very good. But is the prescription, *per se*, of any value to the sick man? Obviously not. It merely plays the rôle of a note written by the physician and handed to the patient for transmission to the pharmacist. The conscientious and scrupulous physician reserves undisputed right to order the prescription filled by any pharmacist whom, for any reason, he regards as being most availably reliable. He could, and often does, personally hand his prescription to the pharmacist for filling, not permitting the patient to handle it at any time. This may be done for various reasons—perhaps in order to be sure that it has been properly compounded; perhaps to keep the patient in ignorance of what he is taking—this being frequently

not only permissible, but imperative; perhaps to prevent the possibility of its being tampered with before reaching the pharmacist.

Suppose A gives to B a check on his bank for any amount, for value received. B presents the check at the bank and gets what it calls for, the bank retaining the check. Is it likely that B would then be ass enough to demand a return of the check, or that, even if he did so, the bank would accede? or, would any court of justice even try such an absurd case? Nor would the bank give him a copy of the check with A's signature attached. The case of the prescription is identical. It is an order from physician to pharmacist for the compounding of certain drugs. It is handed to the patient, not as his property, but simply for transmission, and as a convenience—first, to the physician, who cannot spend his time mixing medicines or giving orders in person to the pharmacist; and, second, to the patient, who is in this way enabled to obtain his medicines without inconvenient delay. The physician is, and remains, responsible for the written prescription; and the druggist is, and remains, responsible for the manner in which it is compounded. The patient is responsible for neither. Why, then, should he claim, or be allowed to have, possession of something which, if tampered with or changed, by accident or design, might be of such serious import to others than himself? Is it said that he should have it for his own protection? Then I answer this is no argument, since it would always be open to legal or other proper investigation in the files of the compounding pharmacist.

"But," argues the patient, "I paid for that prescription, and it is my rightful property." He is mistaken in his premises. He has not paid for the prescription itself; he has paid for the advice embodied in the prescription. That he does not own it is customarily admitted by the surrender of it to the druggist when its equivalent in medicine is received. Who will deny the druggist's right to retain it? Common sense must admit the advisability of his doing so, and outside of more potent reasoning, it is seen that invariable custom has long since established his right to it. This point has been decided in the courts. In the State of Texas, in the case of *Stuart vs. Hirsch*, the Court of Civil Appeals held that a druggist had a right of property in prescriptions filed with him (cited by the *Journal of the American Medical Association*, November 10, 1900, p. 1249). The careful physician, of course, retains a carbon-paper fac-simile as a check for his own protection.

I have been unable to find, and I think there does not exist, a legal decision as to the patient's right of ownership; but, as the editor of the *Journal of the American Medical Association* (*loc. cit.*) says, in

answering a correspondent's inquiry, "the view held by the druggists and physicians appears to be that the patient has no property right in a prescription."

So much, then, for the right of possession of the original prescription. Now comes the question: Has the patient a right to demand, or has the druggist a right to furnish to the patient, a copy of the prescription? To either question my answer is, No! Unequivocally no. Under no law, of course, would the druggist have any right to copy a prescription and subscribe the physician's name. Yet, I believe, it is frequently done, upon the simple request of the patient. Though in these instances the intent is almost invariably harmless, yet it is, on principle, wofully wrong, and should by all means be discouraged. If the patient can give satisfactory assurance to the physician that the copy will be properly used, and not abused—that is, kept for his own personal use, for a condition he is thoroughly familiar with, and not bandied around among his relatives and friends in flagrant empiricism—if he can give this assurance, and reason appears to prompt his request, then the physician will probably not object to his retaining an authorized copy. However, there can be no intrinsic right lying with the patient for possession of this copy, and the physician may grant or refuse it on his own sole judgment of the merits or demerits of the case.

The reasons for this seem simple enough. It certainly does a physician no good, and it may do him a great deal of harm, to have a prescription with his name attached passed promiscuously about for service in all sorts of conditions where its use may not only be not indicated, but positively contraindicated. But even supposing it handed around only in proper cases—a wild and highly improbable hypothesis—is it not manifestly unjust that, for the price of one visit, the physician should be made to do service for all the friends, relatives, and acquaintances of the original lone patient?

Only recently a brother practitioner told me of an incident that occurred in his practice which we should do well to ponder, for doubtless, at one time or another, we have all been victims of the same kind of outrage. A man consulted this physician for gonorrhœa. He was given a prescription for which he paid the physician one dollar—and let me say right here that that was about as cheap a case of clap as any man should reasonably hope to have. At any rate, and be it said to the credit of the physician, that one prescription was all-sufficient. The patient obtained a copy of it, presumably from the druggist, and the doctor tells me that he knows personally of a dozen or so cases which have since been cured gratis by the use of that copy. Why, that is cheaper, and plainly better than "Big G," or "Young Men's Friend," or "Dick's Friend," or even "Old

Dr. Grindle!" Such conditions as these are unjust, outrageous, unbearable.

Again, the physician's prescription is the offspring of his study, of his thought and skill, the child of his brain. Would he permit the child of his flesh—his daughter, let us say—to be bandied about in improper fashion? Never! Each daughter is given into the keeping where it is right she should be, and there she must remain.

Are the children of our brains to be less zealously and jealously guarded than the progeny of our flesh? The evolution of the mind is the mark of civilization, while physical preferment is the one idea of the savage. Are *we* to value our minds as cheaper than our bodies? Can we deliberately relapse into savagery? This is food for thought, and should goad our pride. But is not the logic of the situation plain?

Little need be said concerning the druggist's right to refill any given prescription. Physicians do not, and, as a rule, would not, even if it could conveniently be done, copyright their prescriptions. Consequently, the druggist has a legal right to use the formula as often as he pleases, provided there is no intoxicant or other poison therein contained, which requires a physician's order for dispensation. But has no legal nor other right to allow the physician's name to remain on the container after refilling, or to use that name in any connection whatever with the refilled formula, except by the express wish or consent of the physician. The refilling, then, is done (when without the physician's order) solely on the pharmacist's own responsibility, and it might be a delicate legal problem as to whether or not, under such circumstances, the pharmacist would be liable for illegal practice of medicine.

To sum up, now, the common-sense and legal (so far as it has been defined) status of the physician's prescription:

1. The patient has no legal nor other right to demand a written prescription or written directions from the physician.
2. It is right and wise that the druggist demand and procure from the physician his written orders for the compounding of prescriptions.
3. The physician has the undoubted right to designate what pharmacist shall fill his prescription.
4. The written prescription is simply an order from physician to pharmacist. It is, through courtesy, and by virtue of custom and convenience, handed to the patient for transmission; but the latter has not, at any time, the slightest right of possession in the instrument.
5. The druggist has at least the right of permanent guardianship (perhaps of outright possession) of the prescription, and he must keep it on file for reference and for any form of proper investigation.

6. There can be no right, extenuation, or excuse for a copy of a prescription, with physician's name attached, to be taken by druggist, patient, or any one else, without the authority of the physician.

7. The careful physician should invariably retain a carbon-paper fac-simile copy of every prescription he writes.

8. The druggist has a legal right to utilize any formula that is uncopyrighted that may fall into his hands, but he cannot, unauthorized, use the name of its author in connection with it. In most States, however, statutes would bar his selling intoxicants or other poisons except by direct order of physicians.

9. If a druggist refills a prescription without the order of the physician who wrote it, he does so on his own responsibility, and he has no legal or moral right to leave or place the physician's name on the container.

So much for the *rights* of the prescription. Let us briefly look at its *wrongs*, and consider a remedy. I take it for granted that we all wish to protect our work; that there are none of us apathetic enough to tolerate willingly the misuse and abuse which are heaped upon our prescriptions; and that none of us are weak enough to enjoy a continuance of being imposed upon.

As to the causes which operate to bring about these wrongs, they have been widely discussed, and are familiar to all. Suffice it to say that the twentieth century druggist is ill-fitted to the twentieth century physician. The druggist copies prescriptions, refills prescriptions, prescribes across the counter in a vaguely empirical, enthusiastically panacea-like way, all with unblushing assiduity, and for the sake of a little favor or a few pennies—aye, there's the rub; the love of money is, indeed, the root of all evil! He advertises his patent medicines and secret nostrums, often going even to the length of saying: "Why pay a doctor a dollar or more for advice when you can get such and such a nostrum at our shop for half the price?" If a physician's prescription falls into his hands, and he thinks it suitable, he does not hesitate to put it up on a large scale, advertise it as a cure-all, and sell it by the dozen as "Dr. So-and-So's prescription for this, that, and the other."

In short, he kills the patient by a rapid method, and the fee for doing it slowly and decently is taken out of our meek, long-suffering mouths. No wonder our souls complain; no wonder our emaciated professional spirits cry out!

But for this condition of affairs we have our noble selves to thank. In our modesty we have disregarded our professional interests; in our diffidence we have not sufficiently regarded the interests of our clientèle; and in our unspeakable blindness and misplaced confidence we have allowed a rank and lux-

uriant commercialism to seize hold of the drug business, fighting us instead of befriending us, slapping us instead of supporting us.

It is time for us to fight and slap; only we shall operate in a dignified and becoming way. We must agree to support only ethical druggists. By an "ethical druggist"—rare bird, indeed—I mean one who agrees to confine his drug business to the putting up of physicians' prescriptions, doing no copying or refilling except by the physician's order, selling no drugs or medicaments whatever save on authoritative prescriptions, and so not dealing in any form of patent, proprietary, or secret preparations whatsoever. There would be no objection to such a druggist's selling soda-water, cigars and tobacco, perfumery, soaps, rubber goods, garden seeds, bird-food, tooth-brushes, brushes and combs, and other so-called druggists' sundries. There is money in these, and there are good big profits in legitimate prescription work. Should we agree to patronize exclusively with our prescriptions such a drug house as this, I am convinced it would be a marked success from the very inception, and I am equally sure that a competent and reputable pharmacist can be found to make the experiment.

The advantage of such a pharmacy to the profession I have made obvious above. It is for you, gentlemen of Hippocratic (I hope not hypocritic) faith, to answer the question. Have you the moral courage to give your professional support to such a desirable undertaking? Will you shake the old rut, and get on smoother, better ground before you get overturned and probably smothered? If you can make up your minds to do so, then let us get together and act. In the mean time, until this great desideratum is an established fact, I mean to have printed across my prescription blanks in bold, black-face type: "This prescription must not be copied or refilled except by my order."

While this will not be altogether prophylactic in regard to the evils just dwelt upon, yet I hope that in many instances it will serve as a reminder to the druggist of his moral obligations, and will be a warning to the patient that, all things considered, it would perhaps be really wiser to consult me before reloading at the druggists.

Note.—Since writing this article, I am gratified to be able to say I have been informed on excellent authority that a drug firm has for some years been doing a successful business in Baltimore on the lines proposed above.

125 SOUTH MAIN STREET.

A Hospital Closes for Lack of Funds.—The Germantown Homœopathic Hospital at Germantown, Pa., ceased to exist with the closing of its doors on July 9th. The reason ascribed by the officials is lack of interest by the board of managers and lack of funds with which to carry on its work.

A UNIQUE CASE OF DUPUYTREN'S CONTRACTION; OPERATION BY THE OPEN METHOD.*

By FRANK E. PECKHAM, M. D.,

ORTHOPÆDIC SURGEON, RHODE ISLAND HOSPITAL.

After operating in several cases of Dupuytren's contraction by the subcutaneous method and learning that the results are not always perfect and that recurrence is not unknown, and after reading reports of cases by A. H. Tubby where the open operation was done, I decided to make use of this method of treatment in the following case:

The patient was a policeman, forty-five years of age, who was sent into the Rhode Island Hospital in January, 1901. About six years before he had noticed a dimpling of the skin at the base of the third finger of the left hand on its palmar surface. The finger slowly became stiff and contracted, so that finally he was unable to straighten it. Two years ago the third finger of the right hand became affected in the same way, and as this condition became progressively worse, he sought medical advice. The finger on the left hand was flexed one half of normal and stiff. Dimpling was easily seen at a point about over the metacarpophalangeal joint and, upon any attempt to forcibly straighten the finger, there was pain referred to the site of the dimple and the palm of the hand. The finger on the right hand was contracted about one half as much as that on the left.

The operation was performed on January 27, 1901. On the left hand a longitudinal incision was made along the course of the tendon and a transverse incision just at the base of the finger. The flaps were then dissected up, special care being taken to get just the skin, leaving the fat tissue, as far as possible, *in situ*. At the site of the dimple was found a hard nodule in the fat tissue, with adhesive bands attaching it firmly to everything surrounding it; skin, fat tissue, tendon sheaths, and both tendons were firmly bound down, so that playing back and forth in their sheaths was impossible. This mass was about over the metacarpophalangeal joint and, when dissected out, measured about five sixteenths of an inch in diameter. The tendons were then freed by blunt dissection, but the finger could not be straightened, on account of the contracted tendon of the flexor sublimis digitorum. A lengthening operation was then done, making it from one half to three quarters of an inch longer, when the finger was easily placed in complete extension.

On the right hand a similar longitudinal and transverse incision was made, but, on dissecting down, the trouble was found to be in the tendon itself. The skin, fat tissue, and tendons were all firmly bound down at one place, allowing no movement whatever. After dissecting away the fibrous bands and loosening the tendons by the blunt dissector there were found two growths about one quarter of an inch apart in the tendon itself. The tendon was very much atrophied, the growth appar-

*Read before the American Orthopædic Association at its annual meeting, June 11, 12 and 13, 1901.

ently having taken place at the expense of the tendon tissue. About one inch of the tendon was excised, in order completely to remove the growth, and even then the finger could not be straightened until the deep flexor tendon was cleared from the fibrous adhesions. The proximal end of the divided tendon was so small and string-like that tendon suture was impossible, consequently the distal end of the flexor sublimis digitorum was grafted into the flexor profundus digitorum near the base of the finger. The wounds were closed with silkworm gut. Where the two incisions crossed, there was an area on each hand which healed by granulation, thus making the after-treatment quite prolonged, and it was not until March 25th that the wound was completely filled in, and the scar was not entirely free from scab until two weeks later. Both hands were placed on splints for several weeks, in order to prevent flexion from scar tissue, and when the splints were left off the joints were quite stiff, and passive motion was necessary for two or three weeks, in order to restore the flexibility.

It is now about four months and a half since the operation. The result in the left hand is perfect, motion in flexion and extension being normal. In the right hand the phalangeal joints can be only partially flexed, but a gradual improvement is taking place, giving promise of more complete flexion than exists at present. (This is the hand where tendon grafting was done.)

It was a disappointment that the after-treatment was so extended, but I think that can be avoided in the future by omitting the transverse incision, which will render healing by first intention much more probable, and such an incision had no special advantage in the case reported. Another time, also, the flaps could be dissected together with some of the fat tissue, thus favoring healing by first intention and without so much tendency to scab formation. After doing the subcutaneous operation it is very likely to be difficult to straighten the finger, and splinting is necessary for a long time. The case related would suggest that this may be due to a contracted tendon rather than to any joint stiffness, and an open operation would at once reveal such condition and allow of immediate correction by a lengthening operation.

In all of the cases collected I was unable to find any in which the growth was in the tendon itself, consequently in the right hand a unique condition existed. I would emphasize the caution given in Tubby's article regarding the necessity of a bloodless field for operation. On one hand the Esmarch and tourniquet were both used and the operation was done with great ease; but on the other only the tourniquet was used and, although there were no spurting arteries; yet the field was constantly obscured by the oozing of blood from below the tourniquet.

Reasoning from the conditions found in the

case related, it would seem that the open method of operating is to be preferred, in that it gives a chance to overcome all difficulties presenting, while the subcutaneous method can only deal with a few.

Pathological Report. By F. T. Fulton, M. D., Resident Pathologist, Rhode Island Hospital.—The specimen consists of two bits of tissue, one from a tendon, and the other from the subcutaneous fatty tissue of the palm.

The one from the tendon is elongated, and measures $2\frac{1}{2}$ cm. by 5 mm. by 2 mm. It is firm, reddish, and granular. The surface is shaggy as though the specimen had been adherent.

The other specimen is discoid in shape, 1 cm. in diameter and 5 mm. in thickness. It is paler than the first and firm; the surface is reddish and rough, and is covered with fibrous tags. It is surrounded by a small amount of fat tissue.

Histologically, the bit of tissue from the tendon is made up chiefly of long, slightly wavy, dense connective-tissue fibrillæ, between which are a moderate number of very slender, elongated nuclei. Attached to this at one place is a very small area which is made up of connective-tissue fibres more irregularly arranged and considerably richer in cells.

A section from the specimen from the palm shows it to be made up of a more or less encapsuled tissue composed of very irregularly arranged, considerably elongated, spindle cells. In some places in the section the tissue is very dense, almost hyaline, but only in small areas. The tissue is far more cellular than in the first specimen. It is scantily supplied with blood-vessels. There are nowhere in either specimen any indications of acute inflammation, nor are there any areas of infiltration with lymphoid or plasma cells.

The Harvard Medical School, will, it is reported, be moved from its present site in Boston to Brookline, a suburb of that city, where twenty-one acres of land have been secured for the use of the school. As has already been noted in these columns, J. Pierpont Morgan has undertaken to erect three new buildings for the school at an estimated cost of one million dollars as a memorial to his father, J. S. Morgan, who began his business career in Boston. The buildings to be erected are for administration, for anatomy, histology, and embryology, and for physiology and physiological chemistry.

The Upper Peninsula (Wis.) Medical Association.—The newly elected officers of the Upper Peninsula (Wis.) Medical Association are: President, Dr. W. R. Hicks, of Menominee; vice-president, Dr. Simonson, of Calumet; secretary and treasurer, Dr. S. Edwin Cruse, of Iron Mountain. The next annual meeting is to be held at Ishpeming.

A CASE OF TRAUMATIC RUPTURE OF THE INTESTINE.

By FREDERICK T. WRIGHT, M. D.,

CALUMET, MICHIGAN.

CALUMET & HECLA MINING COMPANY'S HOSPITAL.

I wish to report a case of traumatic rupture of the bowel, which is interesting chiefly by reason of the mistakes made in the diagnosis and treatment, mistakes which, viewed in retrospect, seem avoidable, but yet were natural enough during the progress of the case.

I was called to see the patient, M. H., on the evening of April 29th. He was a Finlander, fifty-seven years old; the family and personal history were negative so far as relates to this case. He could not speak much English, neither could his wife, who was taking care of him, which fact was largely responsible for the chief error in the case. As well as I could get the history of his trouble, it was that, about two hours before, he had slipped on a wet rail of the railroad track, had fallen, and struck his back on the rail. Subsequent investigation showed that he had slipped into a hole by the side of the track, and in falling had struck the end of a platform with his abdomen; but of this fact I was not, as I say, apprised at this time. The patient was in bed; there were no marks of violence, and a rather hasty examination discovered no lesions of any sort. He was lying on his back, showing a disinclination to move, not specially complaining of pain, and certainly in no condition of shock. His abdomen was rather full, somewhat tympanitic, and rather tender on palpation. Over the left inguinal region it was more tender than elsewhere; there was considerable rigidity. There was a left-sided incomplete inguinal hernia, easily reducible, which gave no special symptoms. The whole picture was that of a man who had fallen and hurt his back, and was "sore" all over in consequence of it. The fulness and hardness of the abdomen were not much more than is often seen in large, full-bellied men, and under the circumstances, with the incorrect history, I did not attach much importance to it. I prescribed six eighth-of-a-grain morphine tablets, to be taken not oftener than one every two hours, as his pain required.

I saw him again the next morning; his pulse was 80; temperature, 99.2° F. He had passed rather a painful night, but his general condition was much the same as that of the evening before. The rigidity of the abdominal walls was rather more marked, and the hernia showed a little more tendency to bulge. His leucocyte count, taken at this time, was 12,800. I prescribed magnesium sulphate to move his bowels, and left him with directions that I be called if his condition changed.

The next morning his temperature was 97.6° F., pulse 104. He had little pain, and the abdomen, though still distended, was not tender on palpation. He had vomited a little during the night, which should have put me on my guard. As his bowels had not moved, and I was still laboring under the delusion that I had to do merely with a case of bruised back, I ordered calomel in divided doses and

small doses of magnesium sulphate. I also left a glycerin suppository, to be given that evening in case his bowels did not sooner move. His leucocytes at this time were 15,450; his urine showed granular casts, evidently the result of a chronic affection.

The following morning, the third after his fall, the temperature was 97.8° F., pulse 84. He had passed a very comfortable night, said he had slept well and that his bowels had moved that morning. The pain and tenderness were practically gone, though marked tympany still existed. He had drank milk with considerable appetite, and in general seemed to be in so much better condition that I considered the case practically terminated. He gave no history of vomiting during the past twenty-four hours. To be sure, the existence of intestinal obstruction had occurred to me, but the evident amelioration of the symptoms, and the statement that his bowels had moved, caused me to dismiss this possibility. I also neglected to take his leucocyte count at this time.

I was called to see him again in the evening; his pulse was 90, temperature 97.8° F. His pain had greatly increased during the day. His whole abdomen was tender, especially so on the left side just below the umbilicus. There was increased distention with tympany beyond what had existed in the morning. His face appeared rather listless; it certainly did not seem to be the face of peritonitis.

I was informed that he had not vomited during the day, but "had spit up a good deal of yellow stuff." I also learned that I had been misled in regard to the bowel movement; his bowels had moved soon after midnight, some two or three hours after the insertion of the suppository; from the description given, the passages consisted largely of mucus. With this added information, and from the man's general condition, I made a diagnosis of intestinal obstruction, and ordered his removal to the hospital, my intention being to operate the following morning unless there should ensue a lessening of the serious symptoms. Two of my associates saw him at this time and concurred in the diagnosis and procedure. Upon his reception at the hospital, a high enema of soapsuds, olive oil, and turpentine was given. The expulsion of a large amount of gas followed, but no fecal matter came away. His leucocytes at this time were 7,100. I ordered one eighth of a grain of morphine hypodermically, and turpentine stupes to the abdomen. Five hours later the enema was repeated, with the same result as before. At this time he vomited a large amount of yellow matter with a pronounced fecal odor. His urine showed a large amount of indican.

At 9 o'clock in the morning, the fourth morning after the injury, he was seen by the entire staff of the hospital in consultation. His condition was not materially changed from that of the night before. His pulse was 96 and of good quality; temperature, 97° F. Although somewhat apathetic, he was in no sense delirious; he answered questions promptly and intelligently, considering that he understood but little English. There was still excessive distention of the abdomen with marked tympany. The pain seemed to be only moderate, and the tenderness on palpation was not at all marked; it was greatest on the left below the umbilicus. The diagnosis of in-

testinal obstruction was concurred in, and an immediate operation decided upon. One member of the staff thought that peritonitis might be present, but by no one else was an opinion advanced that there was any other condition present than obstruction. The leucocyte count, taken just before the operation, was 5,950. My own theory was that the existence of the hernia, together with the fall, had caused a condition of volvulus, and that this would be found to be responsible for the obstruction.

Upon opening the abdomen, as bad a condition of general peritonitis presented itself as it has ever been my fortune to see. The intestines were enormously distended, the portion first coming into view being of three times its normal diameter. There was intense congestion throughout, the peritoneal covering being, in places, in a condition of beginning necrosis and sloughing. In fact, during the manipulation of the intestines, several patches of the peritoneal covering did peel off. White fibrous patches were scattered over the peritonæum, and numerous white flocculent masses were floating in the abdominal fluid. The intestines were more or less matted together by light adhesions. The enormous distention of the intestine strengthened the belief that an obstruction existed. Following up the coils for the purpose of locating the obstruction, a mass of quite firmly adherent intestines was encountered in the left iliac fossa. Upon breaking up the adhesions, an abscess cavity was opened, from which came a considerable quantity of pus with a pronounced faecal odor. Further search in the abscess cavity, the walls of which were formed by the adherent coils of intestine, disclosed a longitudinal rent in the bowel one third of an inch long, from which the bowel contents were oozing. It was evident that the constriction of the intestine was at this place, and was caused by the adherence of the coils to each other, as after the adhesions were broken up the obstruction no longer existed. The tear in the bowel was about two feet above the cæcum, on the aspect of the bowel opposite the mesentery. The opening was closed with a purse-string suture, the abdominal cavity flushed out with large quantities of hot salt solution, and the intestines, a considerable portion of which had been removed from the abdominal cavity during the operation, replaced. The patient, however, who had been taking the anæsthetic badly from the start, showed alarming symptoms; and, in spite of restoratives, including intravenous injections of salt solution, succumbed before the operation was completed.

The history of the case, as disclosed at the operation, was probably about as follows: At the time of the accident the patient was struck on the abdomen in such a way as to cause a rupture of the intestine. The flowing of some of the intestinal contents into the abdominal cavity, which immediately followed, set up a general peritonitis, which process became most intense in the neighborhood of the intestinal wound. The peritonitis at this point led to the formation of adhesions between the coils of the gut, forming an abscess cavity, and leading also to the constriction of the bowel to an extent causing total obstruction of the portion above it, with an accom-

panying paralysis of the intestinal walls. At the same time the condition of general peritonitis persisted, being augmented by the condition of obstruction.

The interesting points in this case, as they appear to me, are as follows: First, the necessity of a complete history in cases in which the patient complains of pain in the abdomen after having suffered a fall or accident. One of the most eminent diagnosticians of Europe, Nothnagel, insists that no matter what other errors a practitioner may be guilty of, there is absolutely no excuse for an incorrect history. Had I learned at first, as I afterward did, that the patient had been struck on the abdomen, and that, immediately afterward, he complained of very severe pain in that region, and "felt as though something had split," I should probably have given the case a more searching examination and more particular attention. As it was, I was misled by the statement that he had fallen and struck the small of his back, and, rather hastily, jumped to the conclusion that I had to do merely with a painful contusion.

Secondly, I should have followed up the leucocyte count more closely. The count of 12,000 the first day, followed by 15,000 the second, should have put me on my guard. The general appearance of improvement on the third day misled me; had I at that time made another count, I have no doubt that I should have found a marked increase, which might have led me to a diagnosis more speedily. The fall to 7,000 and 5,000 just before the operation, which is precisely what was to be expected in view of the actual condition, did not seem incompatible with the condition of simple obstruction, toward which view of the case my mind was prejudiced.

Thirdly, it is interesting to note the extreme degree of peritonitis that existed with very mild general symptoms. The temperature was never above 99.2° F.; for three days it was subnormal; the pulse was never above 104, was always of good quality, and was in no respect a "peritonitis" pulse. The pain was never excessive, and even on palpation the tenderness was not particularly extreme. There was nothing approaching delirium, there was but little vomiting. The facies was not that of one affected with peritonitis; of the nine members of the staff who examined the patient prior to the operation, all men of experience in diagnosis, only one suggested its presence.

Fourthly, the case illustrates the necessity of early diagnosis and intervention in cases of perforation of the intestine. Had this case been correctly diagnosticated and operated upon during the first twenty-four hours, there would have been a reasonable chance of a favorable outcome. I am inclined to think that the leucocytosis itself would

have justified an early exploratory operation, even with an obscure diagnosis. As it was, after a delay of nearly four days, the operation was probably bound to be futile.

Fifthly, it demonstrates the difficulty of making a diagnosis, as to ætiology, in cases of obstruction. From the patient's condition, no one suspected a perforation. At the same time, I should have had in mind the frequency with which a perforation has been known to produce obstruction.

It is needless to remark that the administration of purgatives was an error. Had the correct diagnosis been established, and early, of course the treatment would have been radically different.

Correspondence.

LETTER FROM TORONTO.

The Annual Meeting of the Ontario Medical Association.—The Executive Health Officers of Ontario.

TORONTO, July 13, 1901.

The Ontario Medical Association met in its twenty-first annual session on the 19th and 20th of June, and it proved a very successful meeting. Dr. Angus McKinnon, of Guelph, the president, was in the chair, while Dr. Harold C. Parsons, of Toronto, acted as secretary. Dr. William Oldright, of Toronto, professor of hygiene in the University of Toronto, reported three recent cases of gall-stones, two resulting successfully after operation, while the third was abandoned after it was found that malignancy was present. They were all in women, aged fifty-five, sixty-five, and forty years respectively.

Dr. Herbert A. Bruce, of Toronto, presented a woman, thirty-four years of age, from whom he had removed the left upper jaw for sarcoma. In January of this year she noticed a slight swelling simulating a gum-boil on the alveolar portion of the left upper jaw. Dr. Bruce operated exactly three months later. The specimen was presented and described by Dr. Silverthorn. It had reached the size of an orange and contained spindle cells with a cartilaginous basis.

Ectopic gestation was the subject of a valuable and interesting discussion opened by Dr. R. W. Garrett, of Queen's University, Kingston, who directed attention chiefly to rupture within the tube, and dwelt upon the importance of being able to diagnose these cases before the occurrence of rupture. Dr. J. F. W. Ross, Dr. N. A. Powell, and others followed in this discussion.

Dr. MacKinnon delivered an able address from the president's chair, condemning the multiplicity of pharmaceutical preparations, Christian Scientists, "Dowieites," etc. He thought that the 2,500 medical men in the Province of Ontario should have in-

fluence enough to secure from the legislature an amendment to the Medical Act that would put an end to this trifling with human life.

Vaccinal protection against small-pox was the title of a paper read by the secretary of the Provincial Board of Health, Dr. P. H. Bryce. This elicited a valuable discussion and an important resolution later on in the course of the proceedings with regard to the question of the number of insertions to be made when vaccinating. The association especially approved of from three to five insertions, so situated that there would be no chance of coalescence.

Another important discussion took place on empyema. This was introduced by Dr. R. Ferguson, of London, who dwelt upon the importance of a bacteriological examination in these cases. In eleven years of his practice Dr. Ferguson had had to deal with nine of these cases. The surgical aspect was conducted by Dr. R. L. Turnbull, of Goderich, who considered that the preferable way of operating in these cases was to take out a portion of rib under strict antiseptic precautions. Dr. J. C. Mitchell, of Enniskillen, and Dr. N. A. Powell and Dr. Alexander McPhedran, of Toronto, took part in this discussion.

The open-air treatment of disease was a subject handled by Dr. George H. Carveth, of Toronto. His paper referred to treating cases in rooms with wide-open windows, on the veranda, or in tents on the lawn. Among other cases treated thus, he cited iritis, fracture, recovery from operations for the radical cure for hernia, etc. There was much difficulty in getting patients to return indoors when once outdoor life was established.

A discussion on gastric ulcer was opened by Dr. R. D. Rudolf, of Toronto, who dealt with the question medically. He referred chiefly to the relation that ulcer bore to cancer of the stomach, the employment of ergot, and the question as to whether these cases were good risks for the insurance companies when once the ulcer had healed. Dr. H. B. Anderson, professor of pathology in Trinity Medical College, dealt with the pathology of the simple round peptic ulcer, and included that at the lower end of the œsophagus and also in the duodenum. Dr. Henry Hewitt contributed an able paper to the surgical side of gastric ulcer and fully described his methods in operating in these cases.

Dr. T. Shaw Webster, of Toronto, read a paper advocating the vaginal route in certain pelvic disorders.

Dr. Charles Noble, of Philadelphia, was present by invitation and contributed an able paper on The Complications and Degenerations of Fibroid Tumors of the Uterus, with Reference to the Treatment of these Growths.

Among other papers presented were one by Dr.

J. T. Duncan, of Toronto, On the Importance of an Early Recognition of Locomotor Ataxia—Do the Eye Symptoms Assist us?; one by Dr. L. C. Prevost, of Ottawa, Statistical Contribution to the Use of Nitrous Oxide and Ether as an Anæsthetic—Intraspinal Cocainization; one by Dr. D. J. Gibb Wishart, of Toronto, on The Use of Adrenaline as a Hæmostatic; and one by Dr. Graham Chambers, of Toronto, which referred to a new idea apparent in the title, On the Relation of Hyperacidity of the Stomach to Billious Attacks, some Forms of Eczema, Muscular Rheumatism, and Gout.

The medical treatment of surgical tuberculosis was too often neglected, according to a paper contributed by Dr. W. B. Thistle, of Toronto.

Dr. Walter McKeown, of Toronto, dealt with the treatment of post-operative peritonitis by saline solutions and sulphate of magnesium.

Dr. S. Cummings, of Hamilton, gave a valuable demonstration of the Röntgen rays in the diagnosis of urinary and biliary calculi.

During the course of the meeting a resolution was adopted expressing regret for the non-payment by several practitioners in the Province of Ontario of the annual \$2 assessment of the Ontario Medical Council. This was passed unanimously and without a dissenting voice. The resolution further stated that the Ontario Medical Association regarded the imposition of this fee as most reasonable, and thought that the payment of the same should be made cheerfully by every member of the profession in the Province. The association will meet next year in Toronto. A list of officers appears in the *New York Medical Journal* for July 6th.

The Executive Health Officers of Ontario met in annual session on the 25th and 26th of June in the city of Brantford. Dr. W. T. Connell, the president, was in the chair, and Dr. P. H. Bryce, of Toronto, acted as secretary. An important discussion took place on the subject of small-pox, which has been epidemic in various sections of the Province for the past six months, and representative physicians from different parts of the Province united in testifying from their experience and observation that thousands of cases of so-called vaccination were utterly useless as a protection against the disease, which all had learned to fear. The causes were various, but were set down chiefly to the manufacturers, who carried refining too far, and who sacrificed the practical for the scientific part of it. The association decided to appoint a special committee to report on the subject at the next meeting, in 1902. In his annual address the president, Dr. Connell, pathologist to Queen's University, stated in regard to vaccination that, after investigating 5,000 cases in and around Kingston, where the vaccine was supplied by practically only two firms, that supplied by

one of them produced results exceedingly anomalous. Dr. Connell referred at length to the need of good lymph, and concluded by arguing for the establishment of county laboratories and the appointment of county medical health officers. One sanitarian strongly condemned kissing, on account of the danger of its conveying infectious diseases. A special committee was organized, one member from each county in the Province, for the purpose of having laws submitted to the people to establish county sanatoria for the treatment of the tuberculous. The following were the officers elected for the ensuing year: President, Dr. E. E. Kitchen, of St. George; vice-president, Mr. Thomas MacFarlane, Chief Dominion Government Analyst, of Ottawa; secretary, Dr. P. H. Bryce, of Toronto.

Therapeutical Notes.

The Treatment of Capillary Bronchitis and Pneumonia.—Dr. Leonard Weber (*Post Graduate*, June) says that in cases of capillary bronchitis and pneumonia he has successfully employed the hot mustard-bath when the patients were at their worst, and has succeeded in relieving the congested lungs and helping the overburdened heart, after other remedies had failed. In the hot mustard-bath we have two agents acting upon the surface of the body; first, the mustard, a powerful irritant, attracts blood to the integuments. The hot water, on the other hand, dilating the blood vessels, as it does when applied for a short period of time, helps to increase the amount of blood at the periphery. The surface of the body being large, a correspondingly large amount of blood is thereby drawn toward it, which must in a great measure relieve the obstruction of the pulmonary circulation. The cause of over-distention of the right ventricle of the heart being removed or considerably lessened thereby, the heart itself gets a chance to regain its propelling power and to properly receive and discharge the blood that is brought to it. The bath is also a powerful excitant and stimulant of the central nervous system, especially the vasomotor centre acting reflexly through irritation of the nerves at the periphery. In cases in which Dr. Weber had employed it, camphor and carbonate of ammonia had failed to relieve the comatose condition of the patient, but all alarming cerebral symptoms of the patient were materially improved soon after the first bath. Finally, the bath favors an exchange of the gases of the blood through the capillaries of the skin.

The bath is easily prepared; the materials for it can be easily procured in the households of the poor as well as the rich; its action should be prompt; there is no danger whatever in applying it as often as the urgency of the case may require, and it is a valuable means for fulfilling the vital indication in severe cases of pneumonia in children. Dr. Weber would look, other things being equal, for equally good success with it in the adult.

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THE "UNIVERSAL SPECIALIST."

This term has been applied in a jocular spirit to that absurd and worthless character who, according to his own or his henchmen's say-so, makes a specialty of diseases of the stomach whenever there seems to be an opportunity to secure the patronage of a dyspeptic, of nervous diseases when a neurasthenic may be added to his clientèle, and so on through the various systems and apparatuses and individual organs and parts of the anatomy. In a better sense, it may be bestowed on the well-trained and conscientious general practitioner of the kind suggested in a remarkable article entitled *How to Become a Good Physician*, by Dr. Keith Norman Macdonald, published in the July number of the *Caledonian Medical Journal*, of Glasgow. Dr. Macdonald's article is discursive and it contains many crudities of expression (very few of thought), but it also embodies much real philosophy set forth in almost epigrammatic form.

According to Dr. Macdonald—and we feel sure that he will be very generally sustained in his opinion—a man who is licensed to practise the healing art is not of proper usefulness to his community unless he can perform surgical operations, and, on the other hand, the man who, called out of bed at dead of night, drives into the wilderness and turns successfully in a case of placenta prævia is worthy of higher esteem than he generally meets with. A specialist in diseases of the eye and ear our author can tolerate, but further specialization among practitioners of our art he deprecates, as he does also the propensity of "the quality" to resort incontinently to some famous specialist without the advice of the family physician, which, he truly says, would be readily given in cases of real need. In short, Dr.

Macdonald would have the practitioner of medicine and surgery well-nigh all-sufficient, and, to enable him to become so, his training should be more practical and the curriculum of the medical school more restricted. For example, he says: "Anatomy is certainly the foundation of all rational medicine, but there is such a thing as too much of a foundation. We all know the parable of the man who built his house upon the sand—the rain and the storm came and washed away the foundation, and great was the fall thereof; and he [*sic*] who built his house on a rock which resisted the elements. At the same time it is not necessary to build on twenty rocks." Again, speaking of *materia medica*, he says: "If one knows the actions and uses of a remedy, it does not matter one straw whether it comes from Africa or America."

A distinction must be drawn between the open country and great centres of population. The country practitioner must be ready to meet every emergency, at least temporarily—and this demand it is that puts him really at the head of the profession—but the specialties will always flourish in large cities. This distinction Dr. Macdonald seems to have failed to make, but his article, nevertheless, has in it much that all medical men might ponder to advantage.

THE INFLUENCE OF ARSENIC ON NUTRITION.

In the *Journal* for June 29th, on page 1137, we gave the substance of certain observations by two Liverpool physicians, H. G. Brooke and Leslie Roberts, on the action of arsenic on nutrition. We mentioned their opinion that arsenic stimulated the nutrition of certain cells beyond their capability of endurance, so that the cells perished, and we gave some of their citations of observations tending to show the good effects of arsenic on nutrition in general. We added this comment: "The restorative properties of arsenic in certain nervous derangements are well known, and perhaps it may find a place in therapeutics as an actual restorer of tissue elements." This thought, we now find, occurred long ago to Dr. Abraham Jacobi, and has been subjected by him to such tests in practice as led him to say in his *Therapeutics of Infancy and Childhood*: "Thus there is a variety of effects the intrinsic nature of which may be found, uniformly, in the action of the drug" [arsenic] "on the function and

structure of the cells, which, though varying in different organs, have the same nutritive processes. Arsenic has a stimulating effect on cell-growth. In small and frequent doses it stimulates the development of connective tissue in the stomach, in the bone and periosteum, everywhere; in large doses, by over-irritation, it leads to granular degeneration. Like phosphorus, arsenic builds in small doses, destroys in large ones."

The foregoing quotation is from the second edition, the preface to which is dated December 16, 1897. The first edition, which preceded the second by only a little over two years, doubtless contains substantially if not identically the same teaching concerning arsenic. This we say with perfect confidence, the first edition not being at hand at the time of our writing, because Dr. Jacobi is not the man to make such important statements except upon the basis of long experience. We cannot doubt, therefore, that he long ago entered upon the observations on which his views are founded. We may remark, by the way, that the work from which we have quoted is fairly deserving of a far more comprehensive title than its modest author gave it; it is almost a text-book of medicine.

INFLUENZA, PNEUMONIA, AND PULMONARY CONSUMPTION.

We have of late grown painfully familiar with the effect of influenza in augmenting the mortality from pulmonary diseases, especially from pneumonia. An important paper entitled *The Pulmonary Form of Influenza*, by Dr. Howard Van Rensselaer, professor of therapeutics in the Albany Medical College, was read before the Medical Society of the County of Albany in January, and is published in the July number of the *Albany Medical Annals*. Dr. Van Rensselaer treats of influenza as affecting the various portions of the respiratory tract, including the nasal fossæ and the communicating sinuses, the larynx, the trachea, and the bronchi, but it is only that portion of his article which deals with pneumonia and tuberculous disease that we can allude to at present.

The pneumonia of influenza, says Dr. Van Rensselaer, is now looked upon by most observers as of the catarrhal type, although in most epidemics there is also a considerable number of cases of the lobar variety. At the bedside, he says, it is often impos-

sible to distinguish between these different inflammatory processes, and even at the post-mortem examination the distinction is difficult at times. Frequently there is a gradual spreading of the inflammation from one lobule to another, producing ever-enlarging patches of consolidation, and it often seems to extend from one lung to the other. In some cases resolution is going on in one portion of a lung while consolidation is beginning in another. In some instances the course is very much slower than that of ordinary pneumonia, while in others it is exceedingly rapid, crisis and resolution occurring as early as on the eighth day. Sometimes resolution is very incomplete and tardy; it may be so prolonged that the condition very closely resembles tuberculous disease, especially if the lesions are situated in an upper lobe.

Sometimes the pneumonia of influenza sets in with a distinct chill as the first symptom, without any previous manifestations of influenza, but more commonly it follows such manifestations or occurs during convalescence, and then its development is apt to be insidious. The physical signs are not the distinct ones of ordinary lobar pneumonia; at first one detects a small area of incomplete dulness, perhaps not larger than a silver dollar. Over such areas one may hear bronchovesicular breathing and vocal sounds, together with some very fine moist râles. Sometimes there is no absolute dulness or true bronchial breathing during the whole course of the case. The temperature rises suddenly to a high point at the onset of the pneumonia, and continues high until the crisis occurs. In cases that develop slowly there is generally not a true crisis, though pseudo-crises are sometimes observed, but defervescence is by lysis. There is apt to be profuse sweating almost from the beginning, and there are often peculiar spasmodic attacks of coughing. Instead of the flushed cheek of ordinary pneumonia, a flush is apt to spread over the forehead and about the nose and eyes.

In all countries, the statistics agree, says the author, an epidemic of influenza decidedly heightens the mortality from consumption, and this it does especially by the complication of pneumonia. "Latent tuberculosis is frequently awakened, healed consumption breaks out again, the chronic cases which are practically fever-free are changed into the hectic variety or hurried into a galloping consump-

tion, and often hæmoptysis occurs where it never appeared before." Leichtenstern is cited to the effect that persons well advanced in consumption, who have ordinarily a well-marked protection against acute infectious diseases, are not immune to influenza, and that "these same consumptives who contract grippe frequently get a pneumonia with it, which, with the exception of influenza" [but for the intervention of influenza?], "is of the very greatest rarity." Altogether, Dr. Van Rensselaer has given us a most instructive review of the relations of influenza to pulmonary disease.

A TYPE-KNIGHTED AMERICAN DOCTOR.

By an amusing typographical error in the *Centralblatt für innere Medizin* for June 22d, in an abstract of an article on Experimental Pancreatitis published in the *University Medical Magazine* for last November, the author's name is given as "Sir Flexner." We presume our distinguished countryman, Dr. Simon Flexner, is meant.

A NEW JOURNAL OF RESEARCH.

It is announced that the *Journal of the Boston Society of Medical Sciences*, a very valuable publication, is to be expanded so as to cover a wider field of activity than its present title admits of, and is to be called the *Journal of Medical Research*. It is still to be edited by Dr. Harold C. Ernst. Besides the society which it has hitherto represented, it will be supported by the American Association of Pathologists and Bacteriologists. We are glad to perceive this evidence of a growing demand for periodicals of such a high order.

THE JOURNAL OF PHYSICAL THERAPEUTICS.

This is the title of a small quarterly, now in its second volume, devoted to therapeutical agencies that are not drugs. It is published in London and edited by Mr. W. S. Hedley. It professes to be international in character, and therefore has also an American editor, Dr. Margaret A. Cleaves, of New York, who contributes to the July number an article on the electric arc. Among the other articles in the number there is one by Dr. Charles Lloyd Tuckey dealing admirably with the subject of "Christian Science."

THE LAKESIDE HOSPITAL, OF CLEVELAND.

A volume entitled *Clinical and Pathological Papers from the Lakeside Hospital, Cleveland*, has recently been issued. It consists of reprints of various articles by members of the hospital staff

which have lately been published in different medical journals. The papers are nineteen in number. Eleven of them are classed as clinical, and eight as pathological and experimental. They are all valuable contributions to our literature, and it is a matter for congratulation that they have been gathered into the first of a series of annual volumes.

"ZOMOTHERAPY" IN TUBERCULOUS MENINGITIS.

In a communication made to the *Société de biologie* recently (*Indépendance médicale*, June 26th) Richet and Roux seem to apply the term *somothérapie* to feeding with raw meat. Of twenty dogs affected with experimental tuberculous meningitis, eleven were fed on raw meat, and three of them survived; nine were fed on cooked meat, and but one survived, only to succumb to a subsequent injection of tuberculin, while those that had recovered under the use of raw meat resisted the tuberculin.

SPASMODIC SNEEZING DUE TO PREGNANCY.

Among the curious nervous disturbances occasionally incident to the state of pregnancy is obstinate sneezing. A well-marked example has lately been reported by Korn (*Frauenarzt*, 1900, No. 12; *Centralblatt für Gynäkologie*, June 22d). Without any recognized cause, a woman in the last month of her third pregnancy was affected with severe and almost incessant convulsive sneezing, which lasted for four days in spite of the use of morphine, chloroform, amyl nitrite, bromine, and trional. During the ensuing five days there was but trifling abatement, but then labor pains set in and spontaneous delivery occurred. The quantity of liquor amnii was very large. After parturition the woman sneezed no more.

IMPROVISED SURGICAL APPLIANCES.

To a great extent every practitioner should be capable of making splints, and the like, for an emergency, or at least of directing an ordinary artisan in their construction. No man, whatever his learning may be, is a satisfactory surgeon unless he has the faculty of improvisation in the matter of material appliances. A singular instance of deficiency in this respect is mentioned by Dr. Edward Wallace Lee, of St. Louis, in a valuable article entitled *Emergency Surgery in the Country*, published in the *St. Louis Medical Review* for June 29th. Says Dr. Lee: "I received a telegram not long ago from a young city surgeon who had gone to the country to practise, requesting me to send at once a Buck's extension apparatus. Of course I complied, but I wired: 'Make one.'"

MULTIPLE NEURITIS AS A SEQUELA OF WHOOPING-COUGH.

Paralyses occasionally supervene upon whooping-cough, and in a few instances they seem to have been associated with polyneuritis. Such cases have been reported by Möbius and Moussous, and in the July number of the *Revue mensuelle des maladies de l'enfance* one is recorded by Guinon. The patient was a girl five years old. It was not certain that the child had recently had whooping-cough, but Guinon has no doubt of it, for she had had some form of convulsive cough the paroxysms of which had occasionally given rise to vomiting.

TESTEVIN'S SIGN OF INFECTION IN CHILDREN.

Testevin, of Grenoble, believes that during the incubation of acute and chronic infectious diseases a peculiar reaction of the urine may be elicited which is characteristic of infection and is the more pronounced if the infection is severe. Any albumin that may be present in the urine is to be removed. The urine is then acidulated, a third of its volume of ether is added, and the mixture is agitated briskly. In a short time a collodion-like pellicle of varying thickness, consistence, and adhesiveness forms on its surface. Modena, of Pavia (*Gazzetta medica di Torino*, 1900, Nos. 41-43; *Centralblatt für innere Medizin*, June 29th), has observed it invariably in twenty-one cases of infectious diseases, and has never found it in the urine of healthy children. Nevertheless, he does not regard it as of any diagnostic or prognostic value.

AN EIGHTEENTH CENTURY CURE FOR RABIES.

Dr. Henry William Stoy figures prominently in a paper entitled *Some Doctors of the Olden Time*, by J. H. Redsecker, Ph. M., read some months ago before the Lebanon County (Pennsylvania) Historical Society. It seems that Dr. Stoy was a preacher, though he won most of his laurels in medicine. In particular, he was accounted great in the prevention of rabies. The following entry from Washington's memoranda is cited by Mr. Redsecker: "Oct. 18, 1797. Gave my servant, Christopher, to bear the expenses to a person at Lebanon, in Pennsylvania, celebrated for curing persons bit by wild animals, \$25.00." The person referred to was Dr. Stoy, and his remedy consisted of an ounce of the herb of red chickweed, four ounces of theriac, and a quart of beer, all well digested, the dose of which was a wineglassful. The red (or purple) chickweed, *Arenaria rubra*, was reputed to be antivenomous, nervine, and stimulating. The theriac employed was that of Andromachus, the *electuaire thériacal* of the French *Codex*.

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, were reported to the surgeon-general during the week ending July 12, 1901

Smallpox—United States.

Illinois.....	Ottumwa.....	June 1-29.....	8 cases.	
Kansas.....	Wichita.....	June 29-July 6.....	4 cases.	
Louisiana.....	New Orleans.....	June 29-July 6.....	2 cases.	
Massachusetts.....	Fall River.....	June 29-July 6.....	7 cases.	
".....	New Bedford.....	June 29-July 6.....	1 case.	
".....	Worcester.....	June 29-July 6.....	4 cases.	3 deaths.
Michigan.....	Detroit.....	June 29-July 6.....	1 case.	
Nebraska.....	Omaha.....	June 29-July 6.....	6 cases.	
N. Hampshire.....	Manchester.....	June 29-July 6.....	1 case.	
New Jersey.....	Newark.....	June 29-July 6.....	4 cases.	1 death.
New York.....	Dunkirk.....	June 29-July 6.....	1 case.	
".....	New York.....	June 29-July 6.....	91 cases.	25 deaths.
".....	Buffalo.....	June 29-July 6.....	2 cases.	
N. Dakota.....	Glaston.....	June 29-July 6.....	5 cases.	
".....	Lakota.....	June 29-July 6.....	1 case.	
".....	Ludgerwood.....	June 29-July 6.....	2 cases.	
".....	Valley City.....	June 29-July 6.....	12 cases.	
Ohio.....	Cincinnati.....	June 28-July 5.....	1 case.	
".....	Cleveland.....	June 29-July 6.....	18 cases.	2 deaths.
".....	Toledo.....	June 29-July 6.....	1 case.	
Pennsylvania.....	Philadelphia.....	June 29-July 6.....	2 cases.	
".....	Pittsburgh.....	June 29-July 6.....	4 cases.	
Rhode Island.....	Providence.....	June 29-July 6.....	1 case.	
Tennessee.....	Memphis.....	June 29-July 6.....	1 case.	
".....	Nashville.....	June 29-July 6.....	3 cases.	
Washington.....	Clallam County.....	June 18.....	3 cases.	
Wisconsin.....	Green Bay.....	June 30-July 7.....	4 cases.	

Smallpox—Foreign.

Austria.....	Prague.....	June 15-22.....	2 cases.	
Belgium.....	Antwerp.....	June 8-15.....	4 cases.	1 death.
China.....	Hongkong.....	May 18-25.....	2 cases.	1 death.
Colombia.....	Panama.....	June 25-July 1.....	5 cases.	1 death.
Egypt.....	Cairo.....	June 19-17.....	2 cases.	
France.....	Paris.....	June 15-22.....	11 deaths.	
Germany.....	Berlin.....	June 18.....	2 cases.	
Gibraltar.....	Gibraltar.....	June 16-23.....	1 case.	
Great Britain.....	Glasgow.....	June 21-28.....	10 cases.	1 death.
".....	London.....	June 15-22.....	1 case.	
India.....	Bombay.....	June 4-11.....	5 deaths.	
".....	Calcutta.....	June 1-8.....	12 deaths.	
".....	Karachi.....	May 26-June 2.....	1 case.	
Italy.....	Naples.....	June 16-23.....	149 cases.	
Netherlands.....	Rotterdam.....	June 15-24.....	3 cases.	1 death.
Russia.....	St. Petersburg.....	June 8-15.....	1 death.	
Switzerland.....	Geneva.....	June 1-15.....	3 cases.	

Yellow Fever.

Colombia.....	Bocas del Toro.....	June 29.....	1 death.
Cuba.....	Havana.....	June 22-29.....	1 death.
Jamaica.....	Kingston.....	June 1-30.....	1 death.

Cholera.

India.....	Bombay.....	June 4-11.....	2 deaths.
".....	Calcutta.....	June 1-8.....	63 deaths.
Straits Settlement.....	Singapore.....	May 18-25.....	1 death.

Plague—Foreign and Insular.

Africa.....	Cape Town.....	To June 15.....	714 cases.	338 deaths.
China.....	Amoy.....	May 11-28.....	1050 cases.	1050 deaths.
".....	Hong Kong.....	May 15-25.....	200 cases.	87 deaths.
India.....	Bombay.....	June 1-8.....	149 cases.	86 deaths.
".....	Calcutta.....	June 1-8.....	40 cases.	40 deaths.
".....	Karachi.....	May 26-June 2.....	45 cases.	41 deaths.
Turkey.....	Constantinople.....	July 3.....	2 cases.	
Hawaii.....	Honolulu.....	June 25.....		1 death.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending July 13, 1901:

DISEASES.	Week end'g July 6		Week end'g July 13	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever.....	21	14	24	9
Scarlet Fever.....	220	33	148	25
Cerebro-spinal meningitis.....	2	0	0	4
Measles.....	275	18	210	15
Dysentery and group.....	153	24	155	25
Small pox.....	61	25	66	33
Tuberculosis.....	190	152	207	148

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army from June 6 to June 13, 1901:

ARTAUD, FRANK E., Major and Surgeon, will proceed to San Francisco for transportation to Manila.

ASHBURN, PERCY M., First Lieutenant and Assistant Surgeon, will proceed to Fort Assiniboine, Montana, for duty.

EDIE, GUY L., Major and Surgeon, will proceed to Columbus Barracks, Ohio, for duty.

GRAY, WILLIAM W., Major and Surgeon, will proceed to Fort Thomas, Kentucky, to relieve WILLIAM O. OWEN, Major and Surgeon, who will proceed to San Francisco for transportation to Manila.

MAZZURI, PAUL, Captain and Assistant Surgeon, is relieved from duty in the Department of Cuba, and will proceed to San Francisco for transportation to Manila.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending July 13, 1901:

ATKINSON, R. T., Assistant Surgeon. Ordered to the Washington Navy Yard.

BALCH, A. W., Assistant Surgeon. Ordered to the *Wabash*.
ORVIS, R. T., Assistant Surgeon. Detached from the Naval Hospital, Mare Island, California, and ordered to the *Pensacola*.

PECK, A. E., Assistant Surgeon. Detached from the *Pensacola* and ordered to the Asiatic Station, to relieve F. L. BENTON, Assistant Surgeon.

RICHARDSON, R. R., Assistant Surgeon. Detached from the Naval Hospital, New York, and ordered to the Naval Hospital, Newport.

WHITING, J. R., Assistant Surgeon. Detached from the *Dixie* and ordered home to await orders.

The College of Physicians at Chicago to be Rebuilt.—Plans have been ordered for the rebuilding of the College of Physicians, of which the two upper floors were recently destroyed by fire. The work will cost \$40,000.

Foreign University News.—Dr. Eugenie Rost, of the Imperial Health Office, has become a tutor in pharmacology and toxicology at Berlin.—Dr. Julius Heller, formerly assistant to Professor George Lewin, has been made tutor at Berlin.—Dr. Keller has been made professor of otology at Rostock.

Graduates Appointed Assistant Surgeons in U. S. Army.—Dr. George M. Ekwurzel and Dr. Edmund D. Shortlidge, graduates from the medical school of the University of Pennsylvania, have been appointed assistant surgeons in the United States Army, with the rank of first lieutenant. Dr. Ekwurzel is a son of Dr. William Ekwurzel, of Philadelphia, while Dr. Shortlidge is a native of Wilmington, Del.

Eighty Vacancies in the Army Medical Corps.—The recent appointment of forty-five assistant surgeons in the army leaves upward of eighty vacancies in that rank yet to be filled. The large increase in the number of medical officers provided for in the reorganization of the army presents opportunities to an extent never heretofore afforded for young physicians to enter the military service. Previous service is not a prerequisite to candidacy, physicians from civil life having an equal chance for appoint-

ment with those who have been or are now in service. Examinations will be resumed in Washington early in September next.

A Vacancy in the Harvard Medical School.—Harvard Medical School has three assistants who devote half of their day to research, with a view to becoming trained in physiological research and in the management of large laboratory classes in experimental physiology, the remainder of their time being spent in studying laboratory methods and in giving instruction in laboratory work. Each assistant receives \$400 annually. Up to a recent date one of these appointments was still open for the next collegiate year. Properly qualified men desirous of applying for the position should address Professor W. T. Porter, 688 Boylston Street, Boston.

Formaldehyde in Milk Furnished to a Hospital.—Poison was recently found in the milk furnished the patients in the County Hospital at Chicago. Samples submitted to the city chemist, Adolph Gehrmann, upon analysis were shown to contain quantities of formaldehyde sufficient to cause or hasten the death of sick persons. Patients had complained of the milk, and declared it "tasted funny." The warden, Daniel D. Healy, agreed with them, and promptly had samples sent to the city laboratory. The report rendered by the city chemist unqualifiedly condemns the milk for all uses, and leaves the venders of it liable to prosecution by the health department.

A Woman Physician Loses Action for \$100,000 Medical Fee.—Dr. Emma Nickerson Warne, who brought suit against the estate of Francis T. Wheeler, of Chicago, to collect a medical fee of \$100,000, has lost her case in the Probate Court. Mr. Wheeler was an old millionaire. She said he had promised \$100,000 to her, but failed to mention her in his will. Mr. Wheeler was taken sick in 1893 and was a confirmed invalid up to the time of his death, last year. Mrs. Warne was engaged to treat him in 1895 for the rest of his life. For three years before he died he became so helpless that, Mrs. Warne testified, she was compelled to remain with him almost continuously. The case will be appealed.

Nurse Accused of Performing Duties while Ill with Diphtheria.—The Brooklyn health authorities are investigating the case of Miss Helena Heinrichs, a pupil of the Brooklyn Training School for Nurses, who, it is said, has been seriously ill with diphtheria since June 24th, and during part of the time was kept at work. The Brooklyn Training School is attached to the Brooklyn Hospital. It is said that Miss Heinrichs has been compelled to perform her duties in the surgical ward since she became ill, and the case has not been reported to the authorities as the law requires. In this way the lives of many patients were endangered. Miss Heinrichs is now isolated in her room at the school, under treatment, and will be kept there until she recovers.

New York City's Death Rate Breaks the Record.—The report of the Board of Health of New

York City for the week ending July 6th discloses a new high-rate death record. The death rate for the entire city for the week was 40.82 per 1,000 of the population. This was more than double the normal death rate. The total number of deaths for the week was 2,767. For the corresponding week last year the total was 1,524. In addition to 989 cases of sunstroke, there were 228 deaths from diseases of the nervous system and 127 from heart disease. Disease of the stomach and bowels caused 319 deaths. The deaths from these three causes were nearly double the normal rate, indicating that the hot weather was really the cause in many of them. The death rate by boroughs for the hot week was: Manhattan, 42.14; Bronx, 37.11; Brooklyn, 40.48; Queens, 32.26; Richmond, 43.15. The borough of Richmond usually has a lower death rate than the other boroughs.

The Fourteenth International Medical Congress.—Preparations have already begun for the Fourteenth International Medical Congress, which will be held at Madrid from the 23d to the 30th of April, 1903. The executive committee has elected the following officers: President, Professor Julian Calleja y Sanchez; general secretary, M. Angel Fernandez Caro y Nouvilas; treasurer, M. José Gomez y Juna. The presidents and secretaries of the respective sections are to be members of the executive committee. The membership fee has been fixed at 30 pesetas, which sum should be forwarded with the application for membership to the general secretary, in care of the Faculty of Medicine, Madrid. Upon receipt of this fee, the secretary will forward the membership card, which will insure the recipient all the courtesies which will be extended to the members of the congress. Ladies belonging to the families of the members and accompanying them to the congress will be entitled to the reduced fares and to participate in the various fetes and ceremonies of the congress on the payment of 12 pesetas, for which tickets for ladies will be issued. The congress will be divided into sixteen sections as follows: 1. Anatomy, including anthropology, comparative anatomy, descriptive anatomy, normal histology, and teratology. 2. Physiology and physical and chemical biology. 3. General pathology and pathological and bacteriological anatomy. 4. Therapeutics, pharmacology, and materia medica. 5. Internal pathology. 6. Neuropathy, mental diseases, and criminal anthropology. 7. Pædiatrics. 8. Dermatology and syphilography. 9. Surgery and operative surgery. 10. Ophthalmology. 11. Otology, rhinology, and laryngology. 12. Odontology. 13. Obstetrics and Gynæcology. 14. Military and naval medicine and hygiene. 15. Hygiene epidemiology and technical sanitary science. 16. Medical jurisprudence.

The Wood County (Ohio) Medical Society was organized on July 10th at Bowling Green, Ohio, with a membership of twenty-five. The following officers were elected: Dr. J. C. Lincoln, of Bowling Green, president; Dr. Black, of Bradner, vice-president; Dr. F. D. Halleck, of Bowling

Green, secretary; Dr. Cranston, of Rudolph, treasurer; board of censors, Dr. St. John and Dr. Mathers, of Bowling Green, and Dr. Deibert, of Millbury.

Information Concerning Pulmonary Tuberculosis Sought.—The New York State Department of Health now has ready for sending to physicians throughout the State the blanks intended for the purpose of obtaining some fundamental facts regarding pulmonary tuberculosis. Dr. Daniel Lewis, State commissioner of health, in his circular letter which accompanies the blanks, says: "We wish to learn with such accuracy as possible the number of the population of the State thus affected. In addition to this, as a secondary consideration, we would like to learn something of the conditions which surround them, as indicated by the questions as they may apply to individual localities. It is not our purpose to obtain a personal registry of consumption nor to institute a system of sanitary inspection or isolation. We wish only to accumulate data along the lines indicated, which will make our knowledge of the problem before us in our State more definite for the control of this great source of mortality. The medical profession is fully aware of its importance, and we count with confidence on the co-operation of every one to whom this is sent, not only to contribute at his command that the questions indicate, but to give such further facts or add such suggestions a may seem to him important. It was at first planned to secure this information through health officers; we relieve them of this task by addressing ourselves directly to individuals, but would ask their official help to make the work complete. May we ask each one to not fail in response, so that there may be no break in this somewhat costly enterprise."

Leprosy in the United States.—According to a Washington dispatch in the *New York Tribune*, the surgeon-general of the Marine-Hospital Service is not ready to publish the results thus far obtained under his direction in the attempt to enumerate the known cases of leprosy in the United States, as the returns are far from complete. But sufficient material has already been secured by the experts who have been diligently investigating for the last two years to indicate that there are at least one thousand lepers in this country, most of them immigrants from abroad, and to warrant strong recommendations to Congress for their segregation. The commission, consisting of Surgeon J. H. White, chairman, and Passed Assistant Surgeons G. T. Vaughan and M. J. Rosenau, have been working under Congressional authority since 1899, making a scientific investigation of the extent of the disease in America. They sent circular letters to physicians, health officers, hospital superintendents, and others in six hundred localities, covering the entire country, asking for reports and information regarding leprosy patients. Eight thousand circulars have been sent out, and only two thousand replies have been received. From these, 277 lepers have been located and their names and addresses obtained. About one hundred are known to live in New Orleans, many of whom are well-to-do persons of good fam-

ilies. In Minnesota about twenty cases have been reported, the disease there being found mostly among the Scandinavians living in the rural districts. In New York seven cases have been reported, while in Chicago only three have been found so far. In San Francisco fifteen cases are known, twelve of which are confined in the pesthouse. There are fifteen in North Dakota, and only two in South Dakota. In New Mexico there are at least a dozen, and Baltimore reports three cases. The remainder are scattered throughout the country. Owing to the fact that three fourths of the circulars have brought no replies, especially from suspicious districts, the authorities estimate that only about one fourth of the cases of leprosy have been reported. The commission will almost certainly recommend to Congress in its forthcoming preliminary report in December that national lazarettos be established in several parts of the country—one, perhaps, at New Orleans, one in New Mexico and another in Minnesota or Montana. A generous appropriation will be asked, large enough to cover the erection of fine isolated buildings, attractively equipped with every imaginable convenience for the comfort and pleasure of the sufferers. By this means it is hoped to overcome the general antipathy to isolation of the diseased, and thus remove the greatest obstacle in the way of preventing the disease from spreading. Not the least interesting result accomplished by the investigation is the conviction of the experts that, notwithstanding the widespread distribution of leprosy patients in the United States and the increase in the last decade, there is little ground for alarm.

Charges of Neglect against a Brooklyn Hospital.—William B. Perry, of Paterson, N. J., has made serious charges against the Kingston Avenue (Brooklyn) Hospital, where his child, Theodore S. Perry, three years old, died on July 7th. He says it caught scarlet fever when in the Orthopædic Hospital, and after it was transferred to the Kingston Avenue Hospital, it caught diphtheria and measles there. He says the hospital was not in sanitary condition. Dr. Morris, the superintendent of the hospital, said the child received good care. As to the charge that the hospital is in a bad condition, he courts the fullest investigation.

A New Bellevue Hospital for New York.—The State Board of Charities passed a resolution on July 10th in favor of the erection by the city of New York of a new and modern hospital in place of Bellevue Hospital, and also that the compensation of the attendants and other employees in Bellevue Hospital should be reasonably increased, "so as to secure the services of competent and satisfactory employees." This important action of the State Board of Charities was avowedly taken because the reports of inspection made to the board, and the recent report of the medical board of Bellevue Hospital, indicate that the main buildings of Bellevue Hospital are unfit for a modern hospital, and should be replaced at the earliest possible moment with a new and modern hospital. Commissioner Keller, of the Department of Charities, is in thorough accord with the State Board of Charities in regard to the need

of a new hospital, but he seems to think that the recommendation to increase the salaries of employees at Bellevue is unnecessary. He will make a recommendation in his report in August for a new hospital to cost about \$2,000,000 and to accommodate about twice as many patients as the present building.

Hospital Buildings and Endowments.—The will of the late Esek A. Jillson, of Providence, R. I., bequeaths \$4,000 to the Rhode Island Hospital.—Assurances have been received from the contractors that the Homœopathic Hospital in Brooklyn will positively be ready for the reception of patients on September 15th. It is being overhauled at a cost of \$45,000.—The sanatorium for the treatment of consumptives is to be built by the Hartford (Conn.) Hospital, the legislature having appropriated \$25,000 for the purpose and an amount nearly as large having been contributed by voluntary subscription.—The Hartford (Conn.) Hospital is to build a new children's ward, the funds having been provided by Mrs. Louis R. Cheney in memory of her sister, Miss Eliza Trumbull Robinson. The building is to be of the best modern hospital construction and equipment.—Plans for a hospital, to cost \$100,000, were discussed by the directors of the American Medical Missionary College, Chicago, at their annual business meeting, on June 25th. The necessary funds will be raised by subscription.—William Middendorf, of Baltimore, has given \$10,000 to the Old Dominion Hospital, at Richmond, Va.—The formal opening of St. Francis' Hospital, at Evanston, Ill., took place on June 29th.—The Pulte Medical College, Cincinnati, O., will shortly build a \$10,000 emergency hospital.—An annex is to be built to the Alexican Hospital, at Elizabeth, N. J., at a cost of about \$15,000.—The cornerstone of the new St. Ann's Hospital for the Treatment of Consumptives, at Chicago, will be laid in the near future. The building will cost \$150,000 and will accommodate 300 patients.—To commemorate its seventy-fifth anniversary the Hebrew Mutual Benefit Society, of New York, has voted the sum of \$2,500 to the new Mt. Sinai Hospital.—The contract has been awarded for the erection of the hospital at the Osawatomie (Kansas) Insane Asylum. It will cost \$30,500.—Abram Shimmer, of Waverly, Iowa, has offered \$5,000 to the Lying-in Hospital, at Chicago, if it will raise an additional \$10,000. The money is to be used for a dispensary building.—The cornerstone of a home for the nurses of the Charity Hospital of New Orleans was laid with appropriate ceremonies on June 25th. It will cost \$50,000.—The Sisters of Charity of Montgomery, Ala., have bought a site for \$23,000 and will erect a hospital thereon at a cost of \$50,000, of which \$10,000 has been subscribed by citizens.—The cornerstone of St. Edward's Hospital, at New Albany, Ky., was laid with impressive ceremonies on June 28th.—Plans have been prepared for an addition to the Upper Peninsular Hospital for the Insane at Newberry, Mich.—The contract for the erection of the new St. Luke's Hospital, at St. Louis, has been given, and work will begin as soon as plans are accepted.—The New York Medical

College and Hospital for Women, One Hundred and First Street, near Central Park West, is asking subscriptions for the new hospital building to be erected adjoining the present college building. Destitute women and children are cared for both in the hospital building and in the homes of the poor.—Dr. Lawrence F. Flick, president of the Pennsylvania Society for the Prevention of Tuberculosis, and Dr. Thomas, a member of the Committee on Plans, with Dr. Trimmer, of White Haven, have been recently inspecting the land for the proposed new hospital for consumptives on Green Mountain, Pa. The legislature has appropriated \$100,000 for the hospital. The intention is to use a farm house, placing beds therein and increasing the capacity by erecting tents.—Plans have been filed at New York for a new seven-story stone and brick hospital to be erected on the present site of the Babies' Hospital, corner of Lexington Avenue and Fifty-fifth Street. The new Babies' Hospital is to cost \$90,000, and will be a year in building. Construction is to begin at once.—A commission of appraisal has been appointed in the proceedings to be taken by the city of New York to acquire land situated in Lenox Avenue, between 136th and 137th Streets, for the purpose of erecting a new city hospital. The value of the property to be acquired is about \$400,000.—Ellis Island, in New York Harbor, is to be enlarged to allow the establishment of a marine-hospital thereon.—The contract for the erection of three large buildings in connection with the sanitarium for consumptives at Rutland, Vt., has been awarded by the trustees, the price being \$75,000.—A site has been purchased in Pittsburg for the East End Charity Hospital at a cost of over \$100,000. The hospital is to cost \$500,000.—The formal opening of the new Presbyterian Hospital, at Atlanta, Ga., occurred on July 1st.—The Manhattan Maternity and Dispensary has been incorporated to establish and maintain in New York city a maternity hospital to supply medical attendance and to maintain a training school for nurses. The directors are Daniel S. Lamont, Cornelius Vanderbilt, Percy R. Payne, Frank L. Polk, Moses Taylor, Harry S. Thompson, and William Thorne.—The will of William Hooper, of Cincinnati, Ohio, makes a bequest, to go into effect after the death of Mrs. Hooper, of \$100,000 toward the founding of a new free homœopathic hospital and dispensary for the poor.—The new wing of St. Anthony's Hospital, at Denver, Col., was dedicated on July 2d. The addition cost \$40,000, the operating room alone involving an expense of \$10,000.—A tract of 215 acres has been purchased in the Blue Mountains, near White Haven, Pa., by the Free Hospital for Poor Consumptives of Philadelphia. It is upon this site that the proposed sanitarium, arranged on the cottage plan, will be erected, unless Governor Stone cuts out the appropriation of \$110,000. By the terms of the bill \$100,000 of the appropriation will be used for the construction of the hospital buildings. The remaining \$10,000 will go to the treatment of the poor consumptives in Philadelphia.—The will of Henry G. Fay, of Brooklyn, contains a bequest of \$5,000 to the Sencé Hospital, of that borough of New

York city.—Further particulars regarding the Manhattan Maternity Hospital and Dispensary have been made known. It will establish a new and complete maternity hospital on the east side in New York city, through the generosity of an unknown philanthropist. The amount of the endowment is reported to be \$1,000,000. Dr. J. C. Edgar, who was formerly on the staff of the Mothers' and Babies' Hospital, which has passed out of existence, and who is now traveling in Europe, will be at the head of the new institution. It is the intention to have the hospital opened in the early winter, and it is rumored that eventually the buildings will cover a block and will include a training school for nurses.—Work on the new buildings to take the place of the present Salem (Mass.) Hospital, will begin in the fall.—Subscriptions are being received for a new St. Peter's Hospital at Albany, N. Y.

Births, Marriages, and Deaths.

Born.

WILSON.—At Fort McDowell, California, on Wednesday, June 26th, to Dr. William H. Wilson, United States Army, and Mrs. Wilson, a son.

Married.

CASTLER—MATTHEWS.—In Newburgh, N. Y., on Wednesday, July 10th, Dr. Frank R. Castler, of New York, and Miss Maude Matthews.

HIGGINS—HAMILTON.—In San Francisco, on Monday, July 8th, Dr. M. V. Higgins, of Cambria, California, and Dr. Vera Hamilton.

IRWIN—JENKS.—In Chicago, on Tuesday, July 9th, Dr. Elmer Ayres Irwin and Miss Emma Louise Jenks.

NEVINS—WILLIAMS.—In Lansford, Pennsylvania, on Monday, July 8th, Dr. John C. Nevins, of Summit Hill, Pennsylvania, and Miss Jennie Williams.

SHAHAN—BURNS.—In Norwich, Connecticut, on Wednesday, July 10th, Dr. Dennis Shahan and Miss Theresa N. Burns.

Died.

BRAMAN.—In Rochester, on Friday, July 5th, Dr. Aaron N. Braman, in the seventieth year of his age.

CHEATHAM.—In Chesterfield Courthouse, Virginia, on Saturday, July 13th, Dr. Thomas J. Cheatham, in the seventy-fourth year of his age.

GARDINER.—In Gloucester City, Pennsylvania, on Friday, July 12th, Dr. Richard Gardiner, in the fifty-first year of his age.

HAYS.—In Hannibal, Missouri, on Monday, July 8th, Dr. Edgar Hays, in the sixty-fourth year of his age.

HOLMES.—In Frederick City, Maryland, on Monday, July 15th, Dr. Edward Holmes, in the forty-fourth year of his age.

LEUTHSTROM.—At "Pine Lake," Hartland, Wisconsin, on Tuesday, July 2d, Dr. Charles A. Leuthstrom, in the eighty-third year of his age.

MOSES.—In St. Louis, on Sunday, July 7th, Dr. Gratz A. Moses, in the sixty-second year of his age.

SIMMER.—In Philadelphia, on Tuesday, July 9th, Dr. Edwin P. Simmer.

WEAVER.—In Norristown, Pennsylvania, on Friday, July 12th, Dr. John D. Weaver, in the forty-fifth year of his age.

WESTON.—In Washington, on Friday, July 5th, Dr. Edmund Weston, in the seventy-first year of his age.

WISE.—In Morgan City, Louisiana, on Wednesday, July 10th, Dr. J. H. Wise, in the fifty-sixth year of his age.

Pith of Current Literature.

Boston Medical and Surgical Journal, July 11, 1901.

Two Cases of Pregnancy Complicated by Mitral Insufficiency. By Dr. Henry D. Chadwick.—The author's experience in these two cases has inspired in him a dread of mitral insufficiency in pregnancy. He believes that the only proper treatment of such cases is to watch the patient closely from the beginning; and, when lack of compensation is shown by pulmonary congestion, as manifested by cedema and persistent cough, it is not only justifiable but one's duty to one's patient to advise and urge upon such an unfortunate mother the necessity of saving her own life by terminating her pregnancy as speedily as possible.

Albuminuric Retinitis and Uræmic Amaurosis, with Especial Reference to their Occurrence in Pregnancy. By Dr. Edward W. Clapp.—In retinitis albuminurica occurring early, abortion should be considered if the retinitis is of a severe type, especially if hæmorrhagic, or if a slight retinitis progresses under treatment; remembering that in these cases the life of the child is uncertain anyway, and that the mother runs grave risks of eclampsia if the pregnancy goes on to term. In retinitis coming on after the sixth month it is best to wait and watch carefully; especially in a first attack, and not to induce labor unless some other albuminuric symptom demands it. In subsequent attacks, the damage to vision and the severity of the retinitis may turn the scale in favor of premature delivery, even when slight eclamptic symptoms are present.

Congenital Pelvic Malposition of Left Kidney in a Woman. By Dr. John W. Dewis.

A Case of Extra-uterine Pregnancy; Diagnosis at End of Second Month; Operation; Recovery. By Dr. Oscar J. Pfeiffer.

American Medicine, July 13, 1901.

Removal of the Female Urinary Bladder for Malignant Disease. By Dr. Matthew D. Mann.—The author believes he is warranted in saying that in certain cases of malignant disease total extirpation of the urinary bladder is a justifiable operation, offering no serious difficulties to an experienced abdominal surgeon, and giving the patient a chance for a comfortable continued existence. As much can be said as for any other operation for the removal of organs affected with cancer.

Total Extirpation of the Urinary Bladder. By Dr. J. Wesley Bovée.—Until a more satisfactory plan of disposal of the ureters is found, cystectomy should never be undertaken for conditions other than exstrophy, when partial extirpation of the organ is possible. Even a very small portion of the bladder into which the ureters may be debouched, is practically free from the great danger of infection incident to bowel grafts, and, further, such disposition of the ureters is more easily executed. For exstrophy the Maydl and the Pozzi operations are quite satisfactory, though the danger of infection seems ever present. Rectal graft of the ureter in its continuity and skin grafting of this duct are highly dangerous. Uretero-colpocostomy is practically free from ascending infection, though it gives far from

perfect results. The urethral graft of the ureter seems free from infection, but the constant dribbling of urine is but slightly ameliorated by the use of a urinal. The Mauclaire-Gersuny operation is worthy of a further application, inasmuch as it provides for both sphinctered bladder and bowel.

Ankylostomiasis in the United States. Report of a Case. By Dr. Herman B. Allyn and Dr. M. Behrend.

Phlebitis Following Abdominal Operations. By Dr. Albert Vanderveer.

Report of a Case of Carcinoma at the Cardiac End of the Œsophagus, a Distance of Twenty-one Inches from the Incisor Teeth, in a Man Five Feet, Three Inches Tall. By Dr. C. D. Spivak.—In this case, besides the abnormally long Œsophagus, interest attaches to the diagnosis made chiefly by the aid of insufflation: the appetite preserved until within three days of the patient's death. There was no pain and no ache in any part of the body. The function of the bowel was not impaired up to within the last week. The breath was not offensive. There was absence of dilatation or diverticulum in the lower end of the Œsophagus. There was metastatic involvement of the pylorus.

Impoverished Blood and Its Relation to Insanity. By Dr. J. W. Wherry.

Medical News, July 13, 1901.

The Diseases of Nutrition in Infants. By Dr. T. M. Rotch.—There is no doubt, the author believes, that if less attention was paid to the use of drugs in the various non-organic disturbances of the gastro-enteric tract in early infancy, and a more enlightened method of feeding was adopted by laymen and physicians, it would be possible to eradicate this entire group of diseases from its place among the various pathological conditions of early life, and thousands of lives would easily be saved where they are now recklessly thrown away.

The Medicinal Treatment of Summer Diarrhœa. By Dr. Thomas S. Southworth.—The author warns against overtaking the impaired digestion after an attack; and, to this end, he advises that the child's appetite be allowed to remain a little in advance of the strength of the food supplied. Recovery from a sharp attack of summer diarrhœa is a slow matter, and extreme care should be exercised for ten days or two weeks at least. Some children, moreover, do not again recover their former digestive powers until the advent of cool autumnal weather, and must be most carefully guarded in their diet, lest they develop other acute attacks, which may lead to an ileo-colitis or a condition of chronic intestinal indigestion.

The Hygienic Treatment of Summer Diarrhœa of Infants. By Dr. Henry C. Hazen.

After-treatment of Summer Diarrhœa of Infants and Children. By Dr. William M. Taylor.—As to prepared foods, the author believes the most satisfactory to be pure modified cow's milk, using as a diluent barley-water, previously dextrinized by a diastase or maltine. By beginning with a percentage milk, a food that will agree with the child is always attainable. Kumyss is of value, as are also inunctions of cod-liver oil. Tonics are nearly al-

ways indicated, and the author believes the syrup of ferric iodide to be the best of all, producing fewer unpleasant effects than any other.

The Clinical Features and Treatment of Acute Bronchitis in Children. By Dr. Charles O'Donovan.

Empyema. By Dr. John A. Hartwell.—Children are specially liable to empyema following pneumonia. Unless promptly relieved by drainage of the pleura, the prognosis is bad. In the author's cases pneumonia caused empyema in fifty per cent. Tuberculous family history exerts little influence on empyema. In one sixth of the cases the empyema was sacculated. The pneumococcus was found in fifty per cent.; the streptococcus in thirty-three and one-third per cent.; the staphylococcus in eight per cent.; the tubercle bacillus in four per cent.; no bacterium in sixteen per cent. The pneumococcus produced the most virulent infection. Operation is indicated as soon as diagnosis is made.

Sexual Neurasthenia in the Male; A Plea for a More Accurate Use of the Term; Treatment of the True Form, with Citation of Cases. By Dr. Ramon Guit  ras.

Masturbational Neuroses. By Dr. William C. Krauss.—(See *New York Medical Journal*, April 20th, p. 703.)

Medical Record, July 13, 1901.

Hydrophobia and the Pasteur Methods. By Dr. Charles Winslow Dulles.—The author does not share in the opinions of the Pasteur followers. He favors a dog-muzzling law and its thorough application, because he considers it proper to adopt any reasonable measure to allay a fear which is genuine, even though it be exaggerated, and because the most innocent attacks by dogs are sometimes followed by most disastrous consequences. He believes that we should abandon the use of caustics, and especially of the nitrate of silver, in the treatment of suspected bites, and the use of narcotics and violent restraint in the management of the fully developed disorder.

The   tiology of Alopecia. By Dr. Delos L. Parker.—The author believes that alopecia is caused by a self-infection in which *trychotoxicon* is taken up by the blood from the air-cells of the lungs, where it has been elaborated during decomposition of organic matter normally present in respired air. The author states that, in a period of ten years, the observation of thousands of cases has never failed to give him ocular proof of the existence or non-existence of costal breathing, according as the individual under observation was or was not free from alopecia.

The Future Treatment of Hay-fever. By Dr. H. Holbrook Curtis.—The author's experience seems to indicate that, in the majority of cases, a preparation of ragweed is a valuable adjunct in the treatment of hay-fever, and he believes that possibly a tincture of golden rod or some other plant may be found efficacious in those cases in which the ragweed seems to have no appreciable effect. The attack may be prevented by giving from two to ten drops of the tincture or fluid extract of *Ambrosia*

artemisifolia t. i. d. in water during the two weeks preceding the paroxysm.

The Present Status of the Carcinoma Question. By Dr. N. Senn.—Carcinoma is a tumor resulting from an atypical proliferation of epithelial cells from a matrix of embryonic cells of congenital or post-natal origin. As carcinoma always originates from epithelial cells, primary carcinoma in mesoblastic tissue is impossible unless a matrix of embryonic epithelial cells has become displaced during the development of the embryo, or embryonic epithelial cells have become buried in mesoblastic tissues after birth, by injury or disease. The histology and histogenesis of carcinoma speak against the parasitic origin of this disease. A radical operation for carcinoma should never be attempted, unless the local conditions and general health of the patient are such as to promise an equivalent for the immediate and remote risks to life and comfort involved in the operation.

Philadelphia Medical Journal, July 6, 1901.

The Eye and Ear Examination of Railroad Employees. By Dr. William Thomson.

Dystocia from Coiling or Occlusion of the Umbilical Cord. By Dr. Edward P. Davis.—The conditions prevailing when the cord is coiled about the f  tus are different from those in cases where the cord is short without coiling, or where it is occluded by prolapse or by amniotic adhesion. If the cord is coiled and the child so low in the birth-canal that it can be delivered with forceps, there is always the possibility that the cord may be stretched sufficiently to allow the head to escape without separating the placenta. If the cord were short without coiling, the child could not be rapidly delivered without separating the placenta or injuring the cord very materially. In distinguishing between the two, the cord murmur is valuable, for while a normal cord coiled about the f  tus gives rise to a murmur or *souffle*, a short uncoiled cord gives rise to none.

Emphysema of the Frontal and Ethmoidal Sinuses and Orbital Abscess. By Dr. Thomas R. Pooley.

Spinal An  sthesia. By Dr. Angus McLean.

Report of a Lipoma Removed from the Cheek under Medullary Narcosis. By Dr. A. W. Morton.

The Recognition of Early Symptoms Indicating Dangerous Forms of Insanity. By Dr. W. K. Walker.

July 13, 1901.

The Father Riegel Murder Case. By Dr. William G. Porter.

Coxalgia. A New Form of Treatment, with Report of Cases. By Dr. E. H. Coover.—Since cold bathing and sponging and the local application of ice and refrigerating media are of such use in allaying inflammation, why do not similar methods apply to the treatment of coxalgia? The author asserts that, in hip-joint disease, the action of cold is to allay inflammation, arrest suppuration, and promote a healthy nutrition. It shortens the stages and lessens the severity of the disease, and, if cases are taken in time, there will be

little or no deformity, and the danger of wasting the strength of the body and of a fatal issue resulting in consequence is made very remote indeed. It is a rational method of arresting this most formidable disease when it accomplishes so much in inflammatory conditions of other parts of the body. The author does not assert that cold destroys the bacteria, but rather that it renders them inactive and gives Nature a chance to restore broken-down tissue. In the reported cases the results are encouraging.

The City's Obligation to Provide Special Education for Defective Children. By Clarence E. Meleney.—The author contends that the marvelous success, after slow and patient, but scientific, instruction and training, accomplished in institutions for the feeble-minded is a justification for and incentive to more extensive facilities for such schooling.

Remarks on the Treatment of Eczema. By Dr. W. R. Inge Dalton.—The alimentary canal should be kept as antiseptic as possible by means of the administration of naphthalin, charcoal, and ipecac. In the so-called strumous diathesis the author has been pleased with the effects of

R Ammonium sulpho-ichthyolate.. 3 drachms;
 Arsenious acid. 4 grains;
 Licorice powder, enough to make 180 pills.
 M. Sig.—One or two after each meal.

Skin Grafting by means of Freezing, with Reports of some Cases. By Dr. Gaston Torrance.

Report of a Case of Complete Right Oculomotor and Complete Left Trifacial Paralysis. By Dr. C. A. Veasey.

Photo-mechanical Reproduction. By Dr. B. H. Buxton.

Journal of the American Medical Association, July 13, 1901.

Address of the Chairman in the Section in the Practice of Medicine. By J. M. Anders, M. D., LL. D.—Abstracted in the report of the Section in the Practice of Medicine in this issue of the *Journal*.

Appendicitis. By Dr. John B. Deaver.—Abstracted in the report of the Section in the Practice of Medicine in this issue of the *Journal*.

Preliminary Work. By Dr. Eugene S. Talbot.—A paper read in the Section in Stomatology of the American Medical Association.

The Literature of the Pulp. By Dr. Vida A. Latham.—The nerves of the pulp are divided into central and parietal nerves. Although belonging to the parietal system, its outermost stratum forms a system in itself. More strongly developed nerve fibres of the central system form no proper flexus in the pulp; those of the parietal system form a plexus temporarily in the young pulps. Medullary sheaths of the pulp are secondary formations, only determined positively in teeth that have been cut. The odontoblastic zone is traversed in the most varied directions by nerve fibres.

Methods in the Preparation of Teeth. By Dr. Martha Anderson.—Read before the Section in Stomatology.

Periods of Stress and their Dental Marks. By Dr. James J. Kiernan.—Read before the Section in Stomatology.

Infectious Diseases. By Alice M. Steeves, D. D. S.—Read before the Section in Stomatology.

The Treatment of Cutaneous Cancer. By Dr. M. L. Heidingsfeld.—Abstracted in the report of the Section in Cutaneous Medicine and Surgery of the American Medical Association, in this issue of the *Journal*.

Relations of Syphilis to Blastomycetic Dermatitis. By Dr. Henry G. Anthony.—Abstracted in the report of the Section in Cutaneous Medicine and Surgery, in this issue of the *Journal*.

A Case of Erythroderma Squamosum. By Dr. A. Ravogli.

British Medical Journal, July 6, 1901.

An Address on Our Duty to the Consumptive Bread-earner. By Sir J. Burdon Sanderson.

The Arrest of Pulmonary Tuberculosis. By Dr. C. T. Williams.—According to the author, pulmonary tuberculosis may be arrested in several different ways. The tuberculous mass may be encapsuled in a fibrous envelope, and all connection with the bronchus shut off. Another form of arrest is where a tuberculous nodule or mass becomes obsolescent and is surrounded by chronic local pulmonary emphysema, which often prevents the detection of the tubercle by physical signs. This is one of the commonest endings of tubercle, and the owner of the lungs which have gone through this process is generally a short-breathed individual with a large, motionless chest, and often liable to wheezing. A not infrequent and conspicuous form of arrest of consumption is that in which a cavity, situated in the upper lobe of one lung, undergoes contraction. The increase of fibrosis causes a shrinking of the whole lung, the walls of the cavity approximate, and in some cases meet and cicatrize. Complete cicatrization of a cavity is very rare, but its contraction is very common. In addition to the fibrous transformation of tubercle, there is the calcareous degeneration, which is often seen in necropsies. Calcareous matter undoubtedly indicates the obsolescence of tubercle, but it is found oftener in the bronchial glands than in the lung tissue itself. A patient may be expectorating cretaceous matter and at the same time present signs and symptoms of active disease proceeding. There is less liability to relapse in early cases of tuberculization than in those in which a cavity has formed. In conclusion, the author reviews the statistics of the arrest of pulmonary tuberculosis, and throws some doubt upon the favorable results alleged for sanatoria, notably those in Germany, in the way of cures. "Arrest" is a more appropriate term than "cure," and should only be applied when all general symptoms have ceased, when there are no longer cough and expectoration, night sweats or wasting, and either the physical signs are absent altogether or, in the case of former cavities, signs of consolidation or contracted cavity have replaced those of the active cavity.

The Use of Inspection in Diseases of the Lungs and Pleuræ. By Mr. J. Sawyer.—Among the

points brought out in this article are the following: Inspection enables us to judge of the size and of the shape of the thorax, to watch the movements of the thoracic parietes, to observe the beat of the heart, and to ascertain the character of the respiration. The sitting posture is usually to be preferred. Inspection of the chest from above is useful in the detection of hypertrophous pulmonary emphysema, of cardiac enlargement, of pleural expansion or retraction, and of pulmonary shrinkage. It is especially useful in the detection of shrinkage of the apex of a lung. Lateral deviations from symmetry are often more apparent in inspection from below than from other aspects. The aid given by inspection in determining the various morbid changes in the form of the chest, and the healthy and morbid movements of the walls of the chest, is reviewed; also the possible modifications of the respiratory movements. In young children inspiration depends mainly upon the contraction of the diaphragm. In women the movement of the upper part of the chest in inspiration and in expiration is more obvious than that of the lower portion; in men the movements of the lower portion of the chest are more apparent. Absence of a visible cardiac beat is not necessarily a morbid sign. Relatively to that of the inspiratory, the duration of each set of expiratory movements is increased whenever the exit of air from the lungs is impeded, either from impairment of pulmonary elasticity or from obstruction in the air passages.

On the Diagnosis of Pleural Effusion by the Röntgen Rays. By Dr. H. Walsham.—The author calls attention to the fact that the Röntgen rays offer a certain means of diagnosing the presence of fluid in the pleural cavity; further, they show the composition of that fluid, whether it be pus or serum. The shadow cast by pus is much more dense than in the case of a serous effusion. He cites two cases which illustrate the above-mentioned facts, and gives skiagrams from both.

Four Cases of Primary Thrombosis of Cerebral Veins and Sinuses in Children. By Dr. T. Fisher.—The morbid anatomy of hemiplegia of acute onset occurring in children still remains in great measure a mystery. Encephalitis is possibly responsible for some cases, while thrombosis of veins and arteries may be present in others; but *post-mortem* evidence of the existence of either inflammation of the brain substance or of acute affections of the cerebral vessels is small. The author reports four cases of acute hemiplegia in children, in all of which thrombi were found in the cerebral vessels at the necropsies. Such primary thrombosis is difficult to understand; where it occurs as a complication of some disease, it is capable of explanation. Infection of some kind would be the most probable cause of the thrombosis; a possible explanation might be that it is set up, not by a blood infection, but by a toxine absorbed from the stomach or intestines. If the theory of cerebral vascular thrombosis is rejected as a cause of infantile hemiplegia, it seems necessary to look upon the presence of encephalitis as the only reasonable alternative.

Syphilitic Meningomyelitis; Erysipelas; Recovery. By Dr. E. F. Trevelyan.—The author reports the case of a woman, aged twenty-three years, in which the diagnosis of an incomplete mye-

litis involving the lumbar enlargement and part of the lower dorsal cord was based upon the presence of spastic paralysis, loss of sensation, paralysis of the sphincters, and bedsores. The presence of pains and cramps in the legs showed that the meninges were also involved. The meningomyelitis was believed to be syphilitic for the following reasons: 1. There was not only undoubted evidence of past syphilis, but the patient still presented manifestations of active syphilis when the paralysis supervened. 2. The presence of paralysis combined with rigidity and exaggeration of the reflexes is known to occur in spinal syphilis. 3. The absolute absence of any other effective cause.

The importance of the recognition of cases of spinal syphilis is twofold—namely, on account of its relation to (a) prognosis and (b) treatment. Unless the actual lesions present in the membranes or cord are syphilitic (gummatous) in character or perhaps due to syphilitic vascular disease, little hope of any good should be expected of antisymphilitic treatment. It should always be tried, but if it affords no relief in a few weeks, should be abandoned, as it may possibly do injury instead of good.

Case of Cerebral Tumor at the Parieto-occipital Fissure. By Dr. R. T. Williamson.—The case here reported shows that a tumor at the most anterior part of the occipital lobe and at the parieto-occipital fissure may produce convulsions commencing in the leg on the opposite side, through the extension of the growth into the most posterior part of the superior parietal and quadrate lobules for about half an inch. This would coincide with the view that the leg centre extends backward both on the convex and on the median surfaces of the cortex (in the superior parietal and quadrate lobules) almost up to the parieto-occipital fissure. Another point of interest was the impaired power of dorsiflexion of the left foot noted a short time before death. This was due to the involvement of the most posterior part of the superior parietal and quadrate lobules.

Lancet, July 6 1901.

The Practical Points in the Treatment of Threatened Asphyxia. By Dr. R. L. Bowles.—The third of three lectures upon this subject, begun in the *Lancet* for June 22, 1901. In drowning, beyond and above all accidents affecting the respiratory process, is the prominent and palpable fact that the lungs are stuffed and filled with froth, fine foam, and fluid, varying in quantity, quality, and consistence, according to the circumstances attending the disaster. Such formation of foam is due to the violent respiratory efforts during the first minute of submersion. The amount of air respired is entirely a secondary consideration in cases of drowning. The matter of primary importance is to insure a free open-air way, to see that there is no obstruction anywhere *en route*, and that nothing is present in the lungs to prevent the air from penetrating freely the finest bronchi and from reaching the alveoli themselves. In the first lecture the author gives a summary of his work with Marshall-Hall, in 1855, and compares it with that done by Silvester at the same period. In the second lecture numerous examples are given which show conclusively that in

cases of drowning in man, water exists in the lungs, and that it is only very gradually, and after a long time, effectually expelled. The Silvester method (in the prone position) does not get rid of this water; it would be better to lay the patient on one side and to trust to Nature alone, than to have recourse to measures which would cause the forcible inspiration of air before the evacuation of water had been successfully effected. The advantages of the Marshall-Hall method of resuscitation are as follows: (1) It is a very "ready method"; (2) the instructions are easily understood by laymen; (3) on account of the immediate adoption and continued use of the prone-lateral position, this method keeps the pharynx clear; (4) it empties the stomach and gradually clears the lungs of the watery and frothy fluids; (5) the pressure on the back exerts a favorable influence on the heart; (6) the safety of the patient is more perfectly assured, one lung being kept quite free; and (7), when more air is required it can be introduced by raising the upper arm each time the patient is turned on his side. In the third lecture the author considers the question of stertor and the management of the apoplectic and comatose conditions. His general conclusions are: 1. That a "laryngeal stertor" may be added to the three forms formerly defined. 2. That these three forms which have a most important connection with the apoplectic state, are the palatine, the pharyngeal, and the mucous stertor. 3. That these varieties are the immediate result of a local mechanical condition, which may always and at once be changed, to the great relief of the patient. 4. That it is necessary to keep the patient on one side, that that side should not be changed, and that the paralyzed side should be downward. 5. That mucus and other fluids gravitate into the lower lung. 6. That the fluid crossing from one lung to the other becomes churned into foam, and causes obstruction. 7. That the lung is not injured by remaining full of fluid for a long period. 8. That these principles apply to all conditions in which blood, mucus, or fluid exists in the lungs, and also to all conditions allied to the apoplectic, whether there is mucus or not.

A Contribution to the Pathogenesis of Cancer.

By J. Marnoch, M. B.—The author reports a series of thirteen experiments which show that when epidermis under varying conditions is transplanted into, or buried beneath, a tissue of mesoblastic origin, even though it may continue to live, it does not manifest the properties of a cancerous growth. The transplantation experiments were performed upon rabbits and guinea-pigs, and were uniformly negative. We are therefore bound to conclude that a cancer tumor is not merely epidermis which has found its way deeply into the underlying parts, but that the epithelium entering into the composition of these tumors must, for some ulterior reason, be endowed with specific properties, not merely of proliferation, but of burrowing into foreign parts. Whether this particular property is parasitical or not remains as yet unsettled. The experiments also bear upon the subject of epithelial transplantation or skin grafting; we are almost forced to believe that the exposure on the surface, whatever the influence be which is brought to bear upon the epidermis, is the main factor which determines whether transplanted epidermis will live and grow or not.

A Case of Tuberculous Ischio-rectal Abscess and Fistula, with Lardaceous Disease of the Kidneys. By C. H. Leaf, M. B., and Dr. H. W. Syers.—The authors report the case of a man, aged thirty-two years, suffering from tuberculous disease of the rectum, ischio-rectal abscess, and fistula. The abscess was opened and scraped, and the internal sphincter muscle divided. The patient did well for two months, when his feet and legs began to swell. The urine was found to contain large quantities of albumin, but no casts, and was abundant in amount. From these facts, together with the presence of marked œdema, a diagnosis of lardaceous degeneration of the kidney was made. The heart and vessels were perfectly normal. The authors disbelieve that in tuberculosis a special toxine is produced, which initiates kidney changes, and hold that the so-called "large white kidney" is merely a more or less marked form of amyloid renal disease.

The Physical Causes of the Slighter Forms of Mental Defects in Children.

By Dr. F. M. Pope.—The author has investigated a large number of cases of defective mental states in children, and concludes that the most frequent causes in children who have no family history of hereditary brain disease, are: (1) As a predisposing cause, birth from a comparatively aged mother; and (2), as an exciting cause, some acute illness, most frequently one or more of the exanthemata, to which infectious children of elderly mothers appear to be particularly liable.

The Treatment of Glaucoma by Excision of the Superior Cervical Ganglion of the Sympathetic.

By A. L. Whitehead, M. B.—The author reports the case of a man, aged twenty-three years, suffering from glaucoma, in which excision of the superior cervical ganglion of the sympathetic was followed by great benefit. The effects of the operation are immediate and secondary. The immediate effects are relief of pain, contraction of the pupil, congestion and lacrymation of the eye, reduction of tension, and unilateral sweating of the head; the secondary effects are progressive reduction of tension, gradual improvement in vision, slight ptosis and some sinking of the eyeball into the orbit. In glaucoma simplex the results are more satisfactory than in inflammatory cases.

On the Pathological Changes in a Case of Progressive Muscular Atrophy.

By Dr. R. T. Williamson.—The author reports a series of six cases of tetany observed by him. Of these, four were in children, only two of whom showed any signs of rickets. Both the adult cases were in women suffering from dilatation of the stomach. Such cases are due to absorption from the stomach of toxins due to fermentation of the food; these act on the cells in the motor region of the brain. A similar explanation may be given of its occurrence in infants in association with diarrhoea and gastro-enteritis.

Case of Multiple Epithelioma of the Tongue in a Woman, Aged Twenty-five Years, Resulting in Spontaneous Amputation of the Greater Part of the Organ. By T. E. Hayward, M. B., and R. G. Henderson, M. B.

A Case of Extensive Enterectomy. By A. E. Barker, F. R. C. S.

Preliminary Note on the Direction of the Air Currents in Nasal Respiration. By C. A. Parker, F. R. C. S.—Observations were carried out in order to determine the exact course which the air takes within the nose during nasal inspiration and expiration. During quiet inspiration in a normal nose the air traverses the middle, the superior, and probably the fourth meatus, and never the inferior meatus. Spurs and deviations of the septum only interfere with inspiration when they are in the way of the entrance of air into the middle meatus. Polypi, however, interfere considerably. In expiration, the air traverses the inferior meatus chiefly, and any hypertrophies causing stenosis of this passage render expiration uncomfortable and difficult.

Wiener klinische Wochenschrift, June 13, 1901.

Pus without Bacteria.—Dr. Karl Kreibich says that a purulent degeneration of an exudate consisting of multinuclear leucocytes may take place in serous cavities without the presence of bacteria. Pus formation is a quantitative stage of inflammation and not a qualitative step in the process. In the skin, non-bacterial pus may form because (1) the skin is a specially good reagent to the inflammatory factor; (2) because the inflammation may express itself as small, circumscribed blebs. An influx of leucocytes, which in a serous cavity would evoke no pus, can easily do so in the small blebs of the skin.

Vaginal Atresia and Double Vagina. By Dr. J. Hofbauer.

Reflex Cough from Foreign Body in the Ear.—Dr. Max Breitung reports such a case, in which the removal of a piece of cork from the ear of a child resulted in instant cessation of the cough.

Wiener medicinische Blätter, June 13, 1901.

Treatment of Nephro-lithiasis.—Dr. Otto Stockmann says that meat is injurious to such patients on account of the great quantity of soluble phosphates it contains. Salt meats, thoroughly cooked meats, and milk, are permissible. The vegetables are notoriously beneficial. The administration of calcium carbonate and calcined magnesia in doses of fifteen grains, thrice daily, has been found of excellent value, not only in changing the reaction of the urine, but in producing an elimination of the colics, the constipation, and the depressed spirits. The diuretics, together with Vichy, Wildungen, Fachinger, or Salvator water, are also indicated.

Use of Meat Juices. By Dr. Julian Marcuse.

Münchener medicinische Wochenschrift, June 16, 1901.

Pathological Changes in the Bile. By Dr. L. Brauer.

Tendon of Deer for Sutures and Ligatures.—Dr. H. Greife, of Moscow, recommends the use of this material. It is cheap, can be easily sterilized, and with the device he has invented for transplantation and keeping, is easily employed after sterilization. The method of sterilization consists in get-

ting rid of the fat by soaking the tendon in ether for two days. It is then kept in juniper oil for one month; the oil is dissolved out by ether (two days), and alcohol (two to seven days). The tendon is then kept in a 1-to-2,000 solution of bichloride of mercury for two days and is preserved in seventy-per-cent. alcohol.

Extragenital Syphilitic Infection of the Lips. By Dr. Lieven.

Typhoid Infection from the Cadaver.—Dr. William Fünrohr reports an infection of himself with typhoid fever after performing an autopsy on a patient dead of the disease. He doubts if he acquired it from his hands, but believes that infectious material reached his face while he was washing out the intestines. He had seen no cases of the disease clinically.

Gonorrhœal Exanthemata in the New-born.—Dr. Jens Paulsen says that gonorrhœal diseases of the skin of new-born infants are much more frequent than similar eruptions in adults suffering from the disease. They are caused by the gonococcus, and are metastatic from ophthalmia or are direct cutaneous infections. In severe cases, glandular involvement and suppuration may appear. The prognosis is good.

New Sterilizable Laryngeal Mirror. By Dr. G. Trautmann.

Pathological Deliria. By Dr. Karl Heilbronner. (*Conclusion.*)

Wiener klinische Rundschau, June 16, 1901.

"Conjugate Sensations." By Dr. Erwin Stransky. (*Continued.*)

Nosocomial Gangrene. By Dr. A. Brabec. (*Concluded.*)

Bronze Diabetes (conclusion).—Dr. A. Murri says that diabetes and a bronzing of the skin may coexist without the presence of a cirrhosis of the liver; bronze diabetes is not, therefore, an expression of a hepatitis. While hepatic symptoms are sometimes present, there are forms of the disease in which they are absent and which are curable. When a hepatitis, diabetes, and hæmochromatosis coexist, it is not necessarily the picture of a single disease; they represent changes in the metabolism of different character, although they may have a single origin. The origin must be sought in some general dystrophy of the cells of the organism which interferes with proper metabolism.

Gazzetta degli Ospedali e delle Cliniche, June 2, 1901.

A Contribution to the Study of Pancreatic Cytotoxines. By Dr. C. Tarchetti and Dr. F. Badano.—In view of the many important researches that have been recently published on the subject of cytotoxines, the authors undertook to study the effects of serum, which shows a specific toxic effect upon the pancreas. Several observers have been working upon this question simultaneously with the present authors. The authors proceeded as follows: A large dog was

killed by exsanguination during the act of digestion, and its pancreas was removed. An emulsion of the pancreas was then prepared. Quantities of this emulsion, varying from 5 to 20 cubic centimetres, were now injected into the peritoneal cavity of four rabbits. In three of these the injection was followed almost immediately by paretic phenomena and a severe dyspnoea, leading to death in fifteen or twenty minutes. The rabbit which had remained alive was bled, and 20 cubic centimetres of its defibrinated blood were injected into the peritoneum of a young dog weighing 16.4 kilogrammes. The examination of this dog's urine gave no evidence of glycosuria, and when the dog was killed, after a period of observation, no lesions were found in the pancreas. The only two symptoms noted in this dog were jaundice and albuminuria. The authors do not doubt that the serum of the rabbit into which emulsion of dog's pancreas had previously been injected was toxic, for the last dog was perfectly well when the injection was given. Yet the pancreatotoxine did not show any specific action upon the pancreas, whereas it affected the liver and kidneys, which were found to be in a state of subacute inflammation, thus accounting for the albuminuria and the jaundice.

A Modification of Mallory's Stain for Connective Tissue. By Dr. S. Patellani.

Local Infection with the *Bacillus Pyocyaneus*. By Dr. Nicola Valerio.—The author studies the influence of the *Bacillus pyocyaneus* in certain skin diseases and the effect of certain antiseptics upon the growth of this germ. He finds that zinc oxide affects chemically the pyocyaneus and arrests its chromogenic action. Iodoform was also found to inhibit the chromogenic action of the germ and to destroy its vitality. Corrosive sublimate, even in a 1-to-1,000 solution, gave negative results. The author believes that the effect of zinc oxide on this germ is due to the formation of a soluble salt of zinc in the presence of the pyocyaneus in tissues or cultures.

Journal Akouscherstva i Gienskich Boliesney,
March, 1901.

The Chief Events in the History of Obstetrics. By N. I. Ratchinsky.—The author gives a brief sketch of the principal factors in the development of obstetric art and science. In speaking of the history of obstetrics in Russia, he says that nothing is known as to the status of this branch of surgery until the middle of the eighteenth century. In one of the chronicles there is mention of the name of an English obstetrician, Jacob, who was noted for his success in the reign of Ivan the Terrible. The first school for midwives was established in Moscow in 1754 at the initiative of Kondoidi, a Greek physician who had settled in Russia. Another school for midwives was opened in 1771 in St. Petersburg. The first instruction in obstetrics to medical students was given in 1783, and the lectures at that time were exclusively in German. [From these dates it will be seen that old Russia was, after all, not much ahead of our own country in the matter of obstetric instruction.]

A New Method of Operative Treatment in Dysmenorrhœa with Congenital Antelexion of the Uterus. By Dr. Th. A. Alexandroff.—In these cases the indication for treatment is clear, for there is a definite mechanical condition to deal with. The cases depending on congenital antelexion are usually characterized by severe pain, and the dysmenorrhœa appears at the very first menstruation, carrying with it sterility. The author has modified Defontaine's operation with the idea that the chief disadvantage of the latter method consists in the fact that the uterine cavity remains open and is thus exposed to infection by all kinds of bacteria. His method is as follows: A semilunar incision is made at the side of the cervix in the vaginal vault; the mucosa of the vaginal portion is dissected from the stroma itself, as in hysterectomy, until the internal os is reached, as testified by a sound in the cavity. Pott's knife is then introduced into the canal, and the mucosa is incised perpendicularly in the median line from the internal os to the external; the muscular layers are then cut obliquely, from left to right. The right edge of the mucosa is now sutured to the left edge of the muscular layer, beginning at the internal os, and the separated vaginal mucosa is sutured over the wound. A drain is introduced into the cervix, and the vagina is tamponed with sterilized gauze. The first incision in the cervix is made in the median line in order to avoid injuring the vessels of the uterus, and the second is made obliquely so as to furnish a flap which, when sutured into place as described, will increase the size of the cervical canal.

A New Instrument for Packing the Uterus. Tamponator Uteri. By Dr. I. M. Fedoroff.—The author describes a uterine packer which resembles in some respects the packer introduced here some time ago. The instrument is in the shape of a hollow uterine sound which has been split in half. In the groove moves a gauze carrier, which has a barbed end with a number of teeth, the movement being brought about by the usual arrangement of three rings at the handle. The gauze is slipped into the packer through an opening at the lower surface near the distal third of the instrument, and thence it is pushed by the barbed carrier to the extremity, which is shaped like the end of an ordinary uterine sound. The teeth in the carrier move on the rack-and-pinion principle along teeth arranged in the opposite direction in the bottom of the grooved sound.

The Ætiology of Eclampsia from the Point of View of Stroganoff's Infectious Theory. By Dr. V. A. Brjesinsky.—A study of 135 cases, occurring in 7,755 labors. Of these, 51 cases developed within the hospital, and 84 were eclamptic when they were brought in. The author concludes as follows concerning the ætiology of this affection: The cause of eclampsia remains, as heretofore, unexplained. The symptoms which accompany it are explained by the coexistence of all hypothetical causes of the disease, including Stroganoff's infectious theory. The proof of the latter by statistics requires an enormous material, which cannot be at present secured without special arrangements. There is no doubt that, in future, a thorough investigation of the condition of pregnant and parturient women, as well as of

newly-born children during and after the attacks of eclampsia, will shed much light on the question.

Researches on Pain in Labor and in the Puerperium. By Dr. N. N. Schipoff.—It has been found in the lower animals that individuals of the male sex are more sensitive to pain than those of the opposite sex. Sergi stated that women and children were less sensitive to pain than men, but were more irritable to external stimuli. The sense of pain has been investigated by Lombroso, Filippi, Turia, and others, and the accurate results thus obtained showed that the above statement is true. The author gives an account of a series of experimental studies of pain by means of the algesimeter, devised by Buch, and modified by Metchutovsky and Bechtereff. He found that the sex of the child did not have any bearing upon the amount or duration of pain in labor. No difference was noted in the amount of pain suffered by primiparæ and the amount borne by multiparæ. A long labor has no perceptible influence upon lowering the intensity of pain. The pain is usually more intense on the left or the right side, not equal on both sides. The sensitiveness to pain during labor often fluctuates considerably within a few minutes. The intensity of the woman's cry during labor does not always correspond to her sensitiveness to pain or to the amount of her suffering. The sensitiveness to pain during labor fluctuates within wide limits; in some cases it is fully present, in others, there is complete anæsthesia. As a rule, the sensitiveness to pain is lowered in both labor and puerperium. The author offers as an explanation of this that the parturient woman suffers less on account of the anæmia which develops during pregnancy. Anæmic regions are less sensitive to pain than hyperæmic ones. The severe exhaustion from the efforts of labor also lowers the sensitiveness to pain. The difficulty in breathing during labor, producing a beginning of carbon-dioxide poisoning, also tends to lower the sensitiveness of the parturient woman. It is possible that the organism of the pregnant woman develops special toxins which tend to diminish sensitiveness to pain. There is a certain proportion of women whose sense of pain is not disturbed during labor or during the puerperal period.

A Tumor of the Placenta. By Dr. M. I. Levinovitch.—The report of a case of fibroma telangiectoides of the placenta.

Vratch, May 19 (May 31, New Style), 1901.

On the Diagnosis of Tuberculous Peritonitis in Children; with a Report of Fifty-four Cases. By Dr. A. A. Kisjel.—The author calls attention to the fact that the lesions found in the peritonæum and the omentum in tuberculous peritonitis of children are frequently more severe than would appear on simple palpation of the abdomen. The parents often state that the disease began a few weeks before the child was seen for the first time. On laparotomy it is found in such cases that the disease must have existed for a considerable length of time. Most writers speak of increased tension of the abdominal wall and of pain on palpation as early symptoms, and say that in the later stages hard masses, due to infiltration with tuberculous tissue, may be felt in

the peritonæum. The author adds that, even in the earliest stages of the disease, one can feel that the peritonæum is abnormally thickened and painful on pressure—symptoms that are absent in the early stages of peritonitis of other than tuberculous origin. A considerable amount of practice in palpating the normal peritonæum is required to distinguish this thickening. In thirty-five cases laparotomy was performed, and in most instances the thickening was found to be more pronounced than would be supposed from external examination. The presence of pleuritic fluid in these patients suggests the use of the aspirating-needle, and points to the probability of tuberculous peritonitis. In eighteen autopsies on children with this disease, there was tuberculous pleurisy or bronchopneumonia in twelve instances. In many cases the anæmia is remarkably rapid and progressive. Chronic serous peritonitis is much less common than tuberculous peritonitis, and cases believed to be the former often prove to be the latter in the end, when the peritonæum is examined microscopically. (*To be continued.*)

Brandt's Method of Treatment in Diseases of Women and Some of Its Peculiarities. By Dr. D. D. Sandberg-Debele.—The method of Thure Brandt, of Stockholm, has found many adherents among the foremost gynæcologists of the day. The Clinical Institute in St. Petersburg gives courses in gynæcological massage. Yet, most physicians are not sufficiently acquainted with the method and with its advantages. The author has used this method in twenty-five cases, in which no drugs or other methods of treatment were employed. His material embraced endometritis, parametritis, oophoritis, displacements of the womb, fibromyomas, coccygodynia, and salpinngitis. (*To be continued.*)

Röntgen-photography before the Court. By Dr. L. P. Passover.—The author reports a very interesting case which came under his observation. A recruit showed on examination swelling and œdema of the left ankle and foot, and stated that, some time previously, he had sustained an injury by the fall of a very heavy weight upon this foot. He was suspected of malingering by the military surgeons—an offense which is criminal in Russia, in view of the compulsory military service. It was alleged that he had produced the œdema by bandaging his limb, and the ecchymoses by puncturing the skin or injecting some irritants. He was sent to a hospital for observation, but nothing suspicious was discovered. In spite of this, he was sentenced to a term of imprisonment, after trial before a justice of the peace. His counsel appealed the case, and a second trial was held, with the same result. At a third trial, the author testified as an expert in his favor and showed skiagraphs of the man's feet, which proved that there had been a fracture of the sustentaculum tali caused by the injury, producing a sinking of the tarsal arch and disturbances in the circulation. The prisoner was acquitted. Had Röntgen rays been employed by the military surgeons at first, the unfortunate man would not have been obliged to stand three trials and three years of anxiety and suspense.

On the Influence of Compressed Air on Men who Work under Water. By Dr. B. A. Liuboff.

(*To be continued.*)

Proceedings of Societies.

AMERICAN MEDICAL ASSOCIATION.

*Fifty-second Annual Meeting, Held in St. Paul, on
Tuesday, Wednesday, Thursday, and Friday,
June 4, 5, 6, and 7, 1901.*

Section in the Practice of Medicine.

The Chairman's Address, by Dr. J. M. Anders, of Philadelphia, pointed out a few lines on which our organizational and professional progress must be conducted. Dr. Anders laid great emphasis upon the interdependence of certain sections of the general association. He said that if the American Medical Association hoped to be one of the great powers of the country it was of grave importance that the proposed reorganization scheme should be promptly effected, and that due effort should be made to establish and maintain proper respect and forbearance between the various sections, to the end that they might work in perfect harmony with one another.

Appendicitis: Pathological Anatomy, Diagnosis, and Treatment, was the title of a paper by Dr. John B. Deaver, of Philadelphia. The author stated that the appendix was probably the most vulnerable of the abdominal organs, and this from several causes: 1. It was a structure in the process of retrograde metamorphosis; it was deficient in blood, nerve, and lymphatic supply; it was long, but its calibre was small, hence its drainage was easily interfered with; and, lastly, it was subjected to traumatism by the movements of the psoas muscle, upon which it usually lay. Therefore it was apparent that the appendix might become a very target for the destructive micro-organisms, where from any cause these were incited to activity; and it was especially noteworthy that a hollow glandular organ remained intact only so long as the production and evacuation of its secretion continued normal. When this function was deranged there were serious results: First, retention, stagnation, and decomposition of the appendicular contents; secondly, pressure, leading to impairment of the appendicular wall; thirdly (and most important), the bacteria, especially the colon bacilli, were so increased in number and virulence that they were able to penetrate the coats of the appendix and to set up their irritant processes in varying degrees. Such was in brief the pathogenesis of appendicitis, a complex process essentially progressive in character.

The following classification was suggested as convenient and well founded:

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| Acute appendicitis: | { | First, catarrhal.
Second, interstitial.
Third, ulcerative.
Fourth, gangrenous. |
| Chronic appendicitis: | { | First, catarrhal.
Second, interstitial.
Third, obliterating. |

He admitted frankly, however, that we were not always able to distinguish clinically the different

pathologic varieties of appendicitis. He had never seen much good from the efforts of Nature to cure. In the case of an abscess, its tendency to infect the peritonæum was a grave menace, and even if it ruptured into a hollow viscus, like the intestine or bladder, the situation was not much better. After giving a short sketch of certain features of the pathology of appendicitis, he emphasized especially two points: 1. The practical non-existence of any form of inflammation which, by obliterating its lumen, rendered the appendix harmless. 2. The appalling rapidity and suddenness with which the appendix might suffer bacterial invasion and necrotic degeneration with resulting general peritonitis. Upon these two facts were based the proper treatment and the justice of claiming appendicitis as a purely surgical affection. He stated that our patient required pathologists for the living, rather than pathologists for the dead; they needed diagnosticians of disease by the bedside infinitely more than recognizers of morbid tissue at the laboratory.

In all inflammations of the appendix not entirely chronic there were three *cardinal symptoms*, viz: Pain, tenderness, and rigidity. Of these, pain was in every variety the most significant. It had certain characteristics. Above all, it was paroxysmal, cramp-like, and colicky, and might at intervals almost disappear. It was usually first referred to the umbilical and epigastric regions, becoming localized in the right iliac fossa only after the lapse of several hours, and, in some cases not at all. It was upon this point that egregious errors had been committed; so many had he seen that he would like to have blazoned upon every housetop this sentence: "The pain of appendicitis is neither always nor necessarily referred to McBurney's point; and the pain elsewhere by no means excludes appendicular inflammation." Few men, he said, learnt the art of palpation and thus many cases of appendicitis were overlooked. We should first examine away from the seat of disease and slowly and gently approach the tender area. A localized spot of extreme tenderness was probably the surest indication of pus formation; conversely, abrupt cessation of such pain was apt to denote complete gangrenous change and paralysis of the peripheral nerve filaments by toxine absorption. In addition to tenderness, palpation determined the presence and degree of rigidity.

The symptoms of appendicitis were seldom in proportion to the appendicular lesions; therefore it should suffice to diagnose early the inflammatory involvement, which was of itself proper enough indication for rational treatment. There was but one treatment for appendicitis—namely, the aseptic scalpel of a surgeon, and it should be called upon as promptly as the diagnosis was made.

Some Phases of Malaria. By Dr. J. B. McElroy, of Stovall, Miss.—The author described in detail a case in order that he might discuss some of the phases of malaria suggested by it. In speaking of immunity, he said that there were 24 whites living on the plantation where he resided last year; of this number, 41 per cent. were infected with malaria. There were 184 blacks, and of these 61 per cent. were infected. He tabulated 20 cases of pernicious malaria that he had seen since June, 1900. Among these, 60 per cent. were in negroes. He had seen the comatose, convulsive, cardialgic, gastric, choleric

form, hæmorrhagic, and hæmoglobinuric types occur in negroes.

The Chemical and Microscopical Examination of the Blood. By Dr. W. D. Kelly, of St. Paul.—The blood serum, containing serum albumin and serum globulin, is subject to chemical changes in puerperal septicæmia, and in certain febrile diseases the globulin is less subject to change than the serum albumin. Pathological variations in the phosphates are but slight, and in the chlorides not very great, although this principle is chiefly responsible for the isotonic relation of cells in serum. In anæmia there is usually a high percentage of chlorides. The larger the proportion of plasma the greater is the percentage of chlorides in the blood. In the plasma are chiefly found the sodium salts; these are usually increased in watery blood. Potassium found in the red cells is diminished in hydræmic conditions. Chaureau, Seegen, Cavazanni, and others found in normal blood traces of glucose, which was increased by a diet of carbohydrates and diminished by muscular exercise. In the red cells is found the diastase; also in the serum, and Precka and others believe it to have the power of coagulating the blood; it is inhibited by nuclein and increased by sodium sulphate and chloride. Fat has been demonstrated in the blood after a hearty meal. Free fat, both in health and disease, has been frequently found. Acetone has been found in fevers. Jaksch demonstrated fatty acids in the blood in leucæmia, acute yellow atrophy of the liver, and in infectious diseases.

In cholæmia, the poisonous symptoms that develop have been referred by most authorities to the presence of biliary acids. Isotonic tension and increased resistance of the red blood cells are peculiar characteristics of red blood in jaundice. Bile acids affect the union of hæmoglobin with the stroma of the red cells, rendering the hæmoglobin more easily soluble, and this accounts for the solution of red cells in jaundice, as well as in other conditions. Icteric blood has also an increase in the nitrogenous bodies. Well-marked cholæmia may be detected by the inspection of serum or foam on heating to 50° C. Bilirubin may be changed to biliverdin by that process. In the rabbit, by the intravenous injection of glacial acetic acid, the author has been able to get an acid reaction several hours afterward by the phenol phthalein test. The specific gravity of the blood is increased by sweating, lack of food, and muscular exertion; and it may be decreased by freely imbibing water or fluids. Homberger has found that albumins and chlorides behave differently after changing osmotic conditions. If a little acid is added to the blood, albumin and phosphates pass from red cells to the serum, while chlorides pass from serum to cells; but when alkalies are added the opposite conditions are induced.

In order that a satisfactory examination of the blood may be made, the following things are requisite: The apparatus must be absolutely clean. The various stages of the process must be performed rapidly, because the cell-coagulation of the blood will interfere with any of the tests. The work must be done accurately. Making large quantities of the stain and keeping some in glass-stoppered bottles, will standardize the solution, so that one will receive the minimum variations in intensity of stain. Fixing a specimen by continuous heat, with as slight a

degree in variation in distributing the heat as possible, is of value.

Pernicious Anæmia: Report of a Series of Cases By Dr. Thomas McCrae, of Baltimore.—Dr. McCrae gave a report of forty cases that had occurred in the service of Dr. Osler, at the Johns Hopkins Hospital during a period of between ten and eleven years. During the same time there were about 12,500 medical patients. Of the 40 patients, 32 were males and 8 females. Two were colored. The ages varied from ten to seventy years, the largest number occurring in the fifth decade. As to the ætiology, worry and mental strain were only present in 3 cases. Pregnancy was associated in one. Oral sepsis was not invariably present in the recent cases. Among the symptoms, the most frequent were weakness, change of color, and loss in weight. The latter symptom occurred in more than one half of the cases, and emaciation was marked in 10 cases. Pigmentation of the skin was found in 8, and petechiæ in 4 instances. In the abdomen, the liver was felt in 2 cases, and the spleen in 6, but in none was the enlargement at all marked. When the cases first came under observation the hæmoglobin averaged 30 per cent., the red cells 1,560,000, and leucocytes 6,929 per cubic millimetre. Of the 16 cases with a count below 1,000,000 only 4 recovered. The average differential count for 36 cases was multi-formi uninuclears 61 per cent., small uninuclears 31 per cent., large uninuclears and transitionals 4 per cent., eosinophiles 2 per cent., and a fraction of 1 per cent. of myelocytes. The average number of nucleated reds per 1,000 leucocytes was 37, of which 23 were normoblasts, 5 were megaloblasts and 9 were intermediary forms. In a comparison of the fatal and the non-fatal cases the average percentage of small normoblasts was rather higher in the cases that recovered, but the number of megaloblasts was eleven times greater in the fatal cases. There were nervous manifestations in 14 cases. These varied from slight disturbances to complete paraplegia. It was not possible to group these cases under any division, as the symptoms were so varied. The prevailing type, however, was of a more or less spastic condition, with some incoordination and marked sensory disturbances. In some the nervous symptoms seemed to vary with the state of the blood. As to diagnosis, the distinction from gastric cancer might be difficult. In this the higher count of the red cells usually found, the lower color index, lower percentage of small uninuclear cells, and the absence of megaloblasts were all important factors. Certain cases showing some features of splenic anæmia were hard to place; of these, 3 were cited. They had a prolonged course, markedly enlarged spleen, ascites in 2 instances, and the general blood conditions of pernicious anæmia. They were not included in this series. The average duration of 17 fatal cases was twelve months. In 8, the course was under six months. One patient recovered and came under observation seven years later with cancer of the stomach, and one was in good condition six years after the onset. The author summarized the treatment as rest, fresh air, good food, and arsenic.

The Leucocyte Count in Hæmorrhage. By Dr. George Douglas Head, of Minneapolis.—Dr. Head desired to place on record some experimental work upon the leucocytes in hæmorrhage which had given

results somewhat different from the generally accepted views. In his experiments upon dogs the same law seemed to govern the increase or decrease of leucocytes in the circulating blood as in man. Where there was a leucocytosis of digestion, or following septic infections, it was the same in dogs as in man. The variation of leucocytes in the circulating blood of man was the same as in dogs. In all probability the conclusions arrived at from his experiments in dogs, he thought, would apply equally well to the human beings. He formulated his results as follows: 1. In dogs a diminution in the number of white cells in the circulating blood immediately follows a profound hæmorrhage. 2. This initial leucopenia is followed sooner or later by an increase in the number of leucocytes in the circulating blood. This is the so-called post-hæmorrhagic leucocytosis of all writers. 3. This leucocytosis of hæmorrhage continues for at least seven days, and, in some cases, much longer.

Discussion.—Dr. W. T. Higgins, of Cortland, N. Y., stated that Hunter's success in the treatment of this disease seemed to offer something in favor of his theory. He had treated every case on the lines laid down by Hunter with success. Not only a sepsis of the mouth, but also of the upper air passages should be secured.

Dr. McCrae, of Baltimore, said that brilliant results had been obtained from the use of arsenic. In 1880 he had had a patient who was alive and well to-day. Another patient whom he had treated had returned six years afterward with cancer of the stomach. He had seen recovery ensue in cases treated with arsenic, fresh air, good food, rest, Epsom salts, and the employment of oral asepsis.

(To be concluded.)

The Section in Cutaneous Medicine and Surgery.

This section has just completed what is probably the most successful meeting in the history of the association since the Dermatological Section was established.

The Chairman's Address.—Dr. William L. Baum, in his opening address, gave a rather complete historical review of dermatology traced down through the centuries, paying special attention to the epidemics of the fifteenth century and the various phases through which leprosy had passed.

Taking up the question of lues, which he regarded as one of the serious problems of the twentieth century, he traced the various views which had been entertained concerning its nature; some regarding it as a local disease, others as a constitutional affection with local expression or as a disease born of debauchery, or, finally, as one which had been shown in recent times to rage most fiercely against the innocent. The view at the present time was gaining strength, he said, that it was best not to regard it as a disease associated with debauchery and venery, since so many instances were constantly occurring of its being contracted in accidental ways.

It had been pointed out that the manifestations depended in no small degree upon the constitution of the individual and also upon the general condition of the health at the time of infection.

The importance of early diagnosis and early treatment was touched upon and also the peculiar pre-

disposition to severe forms, especially those involving the nervous system. The bacteriology was a portion of the subject which still had to be worked out. In treatment it was advised to avoid an excess of mercury, and more attention should be given to the treatment of side issues, toxæmias, etc. Syphilophobia, with its mental effects, was at times as much to be guarded against as the physical effects of the disease itself.

The Pathology and Treatment of Cutaneous Cancer, with Special Reference to its Non-parasitic Nature. By Dr. M. L. Heidingsfeld, of Cincinnati.—The ætiological portion of this paper was illustrated with a series of lantern slides, and there was passed round for inspection a gross specimen of skin measuring five inches by four inches, which had been removed by means of a paste applied by a Cincinnati quack, for the removal of what he called cancer at the back of the scalp. The skin had been carefully examined and the microscope showed the lesions to be those, not of epithelioma, but of a pigmentary papillary syphilide. The nature of the paste employed for the purpose could not be ascertained. A picture was shown of the patient after the extensive wound had healed, showing a disfiguring scar. Similar lesions elsewhere situated upon the body had promptly given way to anti-luetic treatment. The local agents usually employed included arsenic, zinc, lime, and mineral acids. The paste advocated by the reader contained arsenic and gum arabic, with cocaine added, and ten per cent. of glycerin; the latter also, it was stated, diminished pain. This paste was left on from twelve to thirty-six hours and usually one application sufficed. It seemed to exert a specific influence and had the advantage that it spared healthy tissue and was followed by prompt healing.

Discussion.—Dr. Corlett, of Cleveland, said that he had employed electrolysis almost exclusively in the treatment of superficial epithelioma of the skin for the past twenty years. He usually removed the growth at one sitting under an anæsthetic, and used eighteen cells. The results were generally good.

Dr. Zeisler, of Chicago, characterized all these methods by paste as unsurgical and preferred the knife in the hands of a competent surgeon, or curettement, followed by the application of full-strength solution of nitrate of silver.

Dr. Foster, of St. Paul, said that he had had some good results by the use of superheated hot air, using Frank's apparatus. This had caused radical destruction of new growths with ideal results. He used a compressed air tube, applied to the apparatus which he found to propel the air more forcibly than the usual hand bulb.

Dr. Montgomery, of California, said that he never used arsenic weaker than fifty, nor stronger than seventy-five per cent. He also applied the actual cautery and caustic potash, but expected never to give up arsenic.

Dr. Lieberthal, of Chicago, said that it was essential to cause as little pain as possible. He thought the X-rays were applicable only to smaller lesions.

Dr. Pusey, on the other hand, spoke of the great extent of the lesion in the case which he had reported as cured by X-rays, and he thought this mode of treatment especially applicable to cases unsuited to operation.

Dr. Brayton, of Indianapolis, said that the view that arsenic possessed a selective influence on cancer tissue was wholly erroneous, having no pathological and no clinical support. He used the sharp finger-nail largely in destroying small growths, and then applied Fowler's solution.

Dr. Allen, of New York, spoke warmly in favor of arsenical pastes and solutions, giving the technique of his method. He dwelt upon the value of combining orthoform with arsenic, which greatly decreased the pain caused by the latter. He did not confine himself to any routine method, but employed electrolysis, the knife, and various caustics, sometimes in succession, and had used the X-rays.

Dr. Brayton doubted the sedative effect claimed for orthoform, and said that the drug was capable of producing a dermatitis of severe character.

Dr. Heidingsfeld, in closing, said that the bad prognosis mentioned in his paper was not the result of his own experience, but was drawn from the literature of the subject.

Syphilis in its Relations to Blastomycetic Dermatitis was the title of a paper read by Dr. Anthony, of Chicago. He thought that many cases occurred under the designation "tuberculosis verrucosa cutis." He referred to a picture in Taylor's recent work on syphilis, page 733, labeled "late syphilis," which he thought might have been an instance of blastomycetic dermatitis engrafted upon syphilis. We frequently saw vegetations upon the specific nodules; these disappeared under the free use of the iodides. If due to pyococci alone, they would be of more frequent occurrence. Clinically, the cases encountered might resemble rodent ulcer or the syphilis cutanea vegetans of Kaposi, which resembled in its histopathology the common wart.

In all cases of blastomycetic dermatitis heretofore reported there had been a negative history of syphilis; he thought that there was little evidence that blastomyces were the cause of the disease called blastomycetic dermatitis.

Discussion.—Dr. Hyde and Dr. Montgomery, of Chicago, spoke of their rather large series of cases observed conjointly. Dr. Montgomery spoke of a unique case of visceral lesion with recurrent attacks of pneumonia. Many photographs taken in former years and labeled as suspected syphilis or tuberculosis would now be recognized as instances of blastomycetic dermatitis.

Dr. Zeisler said that he had almost reached a point where he could regard the disease as one *sui generis*.

Dr. Brayton had seen three cases, and believed the disease to be a clinical entity. He had found, under cultivation, that the yeast plants discovered in lesions produced different forms. There was no good explanation why these cases had appeared in such numbers in Chicago. It might be that there were certain areas where these yeast plants grew more favorably because of local conditions. He had without success attempted to inoculate his own skin with blastomyces. Complete local destruction readily cured a given case.

Dr. Herzog, of Chicago, said that the disease differed from carcinoma in the formation of miliary abscesses in epithelial plugs; giant cells also appeared, and it was in the miliary abscesses that the blastomycetes were found. They formed no spores.

The affection might be engrafted upon either syphilis or tuberculosis, but he doubted whether the blastomycetes were the true cause. He looked upon the affection as a symbiosis and considered that the true micro-organisms had not yet been found. Botanists were not yet ready to classify the organisms discovered, several of which seemed to be pathogenic.

Notes of a Case of Keratosis Follicularis (Psorospermiosis) were given by Dr. Zeisler, of Chicago. Twenty cases had been found in the literature. Dr. White, of Boston, was the discoverer of the disease. Darier, of Paris, wrote upon it later in the same year. He recorded a unique case observed in a boy now twenty-one years old, which was first seen at the age of eight years; after an attack of measles, the whole surface became covered and upon the trunk the seborrhœic lesions assumed a blackish hue, upon the limbs there were vegetating lesions. The patient was still under treatment. Attempts had been made to increase skin activity by pilocarpine.

Extragenital Chancres was the title of a paper by Dr. Bulkley, of New York. He had seen many hundreds of cases of innocent or marital syphilis and about two hundred instances of extragenital chancre. He had recently seen four accidental infections in physicians. It seemed to be more common in the lower walks of life and was usually not recognized until there was an eruption. In one of the physicians there was paraplegia and great severity of the symptoms. Rectal chancres were at times acquired in a strictly accidental manner. The aim of the paper was to illustrate the fact that syphilis was not always a venereal disease.

Discussion.—Dr. Baldwin, of Chicago, had traced infection in four cases of dentists. He had found that in only one text-book used by dental students was the danger of syphilis of the mouth and mucous patches pointed out. Contrary to Dr. Bulkley's view, he had found most cases in the better classes; filth had nothing to do with the question. The majority of the infections he had thought due to mucous patches and chancres. Dentists should have more extended clinical teachings, so that they could recognize mucous patches and chancres in their patients. The mucous patch was of much more importance, since it was more common and most lasting.

Dr. Schmidt, of Chicago, spoke of a chancre of the lower lip, which formed an enormous protrusion, which only subsided under large doses of the iodides.

Dr. Campbell had seen four instances of chancre on the tonsil during the past year, and thought all text-books should lay more stress upon the secondary manifestations coming early and occurring first upon the chest and about the umbilicus, so that this could be used as confirmatory evidence.

Dr. Corlett had found venereal disease frequent in dental students and thought that as a class they should receive more adequate instruction in this branch.

Dr. Allen spoke of unusual extragenital chancres and showed pictures of unusual forms. He related instances in which the initial lesion had been mistaken for some other disease and the neighboring enlarged glands excised. In one instance a whole family had been infected by a child who had contracted a chancre of the mouth from a wet nurse.

Dr. Bulkley, in closing, said that physicians should instruct dentists, and he instanced what had been done in this direction in New York by lectures, clinics, etc. He felt that patients should keep away from dentists so long as they were in an infective stage.

Rhinoscleroma.—This paper, by Dr. Allen, of New York, was illustrated by two cases, photographs and paintings of which were shown. The patients had been under observation for a number of years. The disease was extremely rare in this country, and while of undoubted bacillary origin seemed to possess little or no danger of transmission. The bacilli had been cultivated. Both patients were foreigners, who had contracted the disease before coming to America. In one patient necrotic changes had occurred and had produced decided deformity from loss of tissue.

The Election of Officers resulted as follows: Dr. Stelwagon, of Philadelphia, was elected chairman for the ensuing year, and Dr. Baum, of Chicago, and Dr. Allen, of New York, were elected as representatives of the section in the reorganization scheme.

Section in Diseases of Children.

SYMPOSIUM ON SCHOOL HYGIENE.

(Concluded from page 92.)

Diagnosis of the Backward Child. By Dr. A. W. Wilmarth, of Chippewa Falls, Wis.—The term backwardness is so vague that it is very difficult to formulate any definition that will exactly describe the backward child. There is really no sharp line of distinction between the normal and the so-called backward child. No standard of mental activity has been fixed or can be fixed. A child is not necessarily dull or backward because he cannot follow the curriculum formulated in the schools. However excellent this may be for the average child, there are many boys who have been classified as dull ones who have turned out to be most successful men afterward. What they may lack in memorizing they perhaps make up in reasoning and acuteness of judgment. The estimate of mental strength must be formed from the power of attention, the strength of memory, the efficiency in the method of reasoning which comes to us all instinctively in our early days, and which is known as "common sense." On the other hand, abnormally slow perception, lack of power to fix the attention, distorted judgment, feeble memory, or a decided lack of moral sense are mental symptoms which should tend to place the subject in the backward class. If the cultivation of these powers does not result in a reasonable time on the different methods, it indicates, not only a backward child, but a feeble mind. The lack of articulate speech is perhaps the most significant physical symptom indicative of lack of mental growth. Gait and posture are of some value when taken in connection with other symptoms. In the backward child, observations would tend to show that the sense of touch and sensibility to pain are less acute, which would tend to indicate a lack of tone in the general nervous system. The family history may generally give some clue, as the individual is the sum total of his ancestral traits. The lack of moral sense is so radical a defect, when a child will

persistently do evil and not good in spite of all efforts to lead him into right paths and right methods of action and thought, that one is forced to regard it as a perversion of mental development.

The first thing in the development of the child's brain is the awakening of the power of attention. Without this, all attempts at education are futile. Next come memory and inquisitiveness, and on this the child's probable capacity for acquiring information can be gauged. The will-power later exhibits itself, then the reasoning power, the value of ideas, and respect for the rights of others. A child may have a weak memory and make a poor showing in school, and yet have acute reasoning powers and the ability to make good use of what he does learn. Such a child should not be classed as backward. Education, however, will not completely remove in a few years weaknesses which may have been generations in developing.

Speech as a Factor in the Diagnosis and Prognosis of Backwardness in Children. By Dr. G. Hudson Makuen, of Philadelphia.—The subject is an important one and it is very necessary that there should be a definite and uniform nomenclature in its discussion. After defining the backward child, and pointing out some of the difficulties in the way of making a correct diagnosis and prognosis, the author enters into the study of speech as an aid in backward children in arriving at conclusions with reference to their exact mental condition. Speech is a tool of the mind. Children are dependent upon good speech for the normal development of their faculties.

It is not possible to determine at a glance the backwardness of a child, but the child must be carefully studied and analyzed and its psychological processes watched. The condition of backwardness is not always due to a central lesion, but may be the result of arrested cerebral development due to some abnormality in the structure of the peripheral organs. A common cause may be some abnormality of structure in the peripheral organs of speech. The speech centres and the ideation centres are so closely related to each other that any impairment of the one generally results in a corresponding impairment of the other. The best method of arriving at an approximately correct prognosis in cases of backward children is to apply the speech test, or, in other words, to ascertain by careful study and experiment to what extent the faculty of speech may be improved. It will be found, usually, that those who are susceptible to training in what may be called the refinements of speech are the ones that give promise of the best results, and that the possibilities for general improvement will be proportional to the capacity for speech development.

A Plea for the Backward Child. By Dr. C. F. Wahrer, of Fort Madison, Iowa.—The line between a normal and an abnormal child is a little hazy, and many a child a little backward in his studies has been condemned as a dunce, or even as a defective, by the hasty observer, and the fallacy is due to contrasting him with the very bright, or so-called forward, child. If the child is unusually observant and has a good memory and power of expression it is called bright, or even precocious, and in comparison all other children seen more or less dull. The very bright child is taken as a standard of compari-

son instead of the medium child. There is often nothing the matter with the child who is considered slow. His powers are latent, and may be really developing in a different direction from the course expected. The mistake may be made of rating high the child with good memory, but of ephemeral mental development, and giving a low estimate for the duller, slow pupil whose powers though latent, yet, when made manifest, show the strong and unswerving intellect of a perfectly balanced mind. Instances are cited of Shakespeare, Milton, Sir Walter Scott, Edison, Peter Cooper, and many others, who were proclaimed stupid, dull, and hopeless dunces during their early school days. The ordinary "tests" and curricula of the schools are not calculated to develop the mind, but only to show what can be accomplished with a good memory. Where are the bright boys and girls who were such splendid reciters and stood at the head of the classes, furnishing the valedictorians and salutatorians? Do they become the President, judge, bishop, or eminent man of science? No, they do not. It is the steady light of the persevering man, working out his own evolutions and developing its own processes of reasoning. Thus, it is not how early, but how well, a given person develops, and how effective are the results of his development.

Some Considerations Regarding the Hygiene of Early School Life. By Dr. J. Noer, of Stoughton, Wis.—Children work too much, too soon, and badly, that is to say under unfavorable hygienic surroundings. We are reminded of the long list of studies, the rushing through of courses, the long duration of hours, and the useless studies, the method of teaching unscientific in its disregard of the laws of physiology and purely in favor of psychology, and the evil of home tasks, which rob the children of their short periods of recreation. The fact that mental and physical abnormalities exist in school children must be realized, and also that these abnormalities are always aggravated, if not indeed produced, by pedantic and pseudo-educational methods of teaching. It is eminently proper for the physician to interfere in matters relating to school hygiene. The protests of medical men may be summarized as follows: There is no evidence by which educational values may be determined, except through the study of material manifestations transmitted through the nervous system. Education produces nothing new in the child. It simply unfolds and brings into intelligible activity the latent forces in the nervous system. One of the most important prerequisites for a good education is good nutrition. Vigorous intellectual activity is possible only through the medium of brain cells that are well nourished and physiologically active. All methods, therefore, which ignore the physical development are faulty and open to criticism. There is such a variability in individuals that it becomes absurd to attempt to lay out a uniform system of training and education applicable to all alike. The early discovery of the dull, the backward, and the defective child, and their segregation for special training, is one of the problems of public importance in school life. The child is an exceedingly immature and delicate animal undergoing important developmental changes. His delicate tissues and plastic nerve cells are easily warped and injured by long-con-

tinued mental and physical efforts, and, for this reason, children are often injured by injudicious school-work. Cases of this sort are of common occurrence. These abnormal consequences can and must be prevented, and the child's intellectual development must be allowed to proceed without detriment or hindrance.

Discussion.—Dr. Work thought that the cry that came up from all parts of the country proved that there was something radically wrong with the school system, and it was not confined to any one locality. The classification of scholars should be according to their intellect, and schools fitted to their needs should be selected for children. He was particularly impressed with some of the facts brought out in Dr. Darnall's paper with regard to the close-fitting and often unhygienic dress of the girl. The two important factors in all dress were equal pressure and equal warmth. Another most important factor was the food of the child, which often was badly and carelessly prepared. Regular habits should be taught the child with regard to baths, elimination, eating, etc. Every child should be taught what the organs of the body were, and for what purpose they were intended, how they should be taken care of, and how they might be injured. If a child went to school without a proper evacuation of the bowels or bladder, he could not study properly. His intellect was dull and clouded. If a child did not have plenty of water to drink, his mind would be more or less affected from the lack of it. The greatest trouble in most of the schools was not so much with the school as with the child. It was because we had not got trained mothers who understood these things themselves, to teach the child at home. The duty of the profession was to educate the mothers of the community how to take care of the health of their school children.

Dr. A. W. Wilmarth referred to the importance of special training for the backward child and the work that might be done by schools set apart especially for this purpose. Such a school had been provided in Philadelphia and in a few other localities.

Dr. Learned thought that the highest ideals of development might be arrived at by plenty of outdoor exercise and good air, and plenty of sleep. It was a mistake to start the children to school so early, and to begin to burden their little minds, pushing them always to an extreme and keeping them on a tension. The child would learn faster and more thoroughly, and really make more progress in the long run, if he were not started to school until he was eight or nine years of age at least. The child's brain was fatigued and stunted by overwork when he was started so early.

Election of Officers.—The officers elected for the ensuing year were: President, Dr. H. M. McClanahan, of Omaha, Neb., and secretary, Dr. Frank X. Wales, of Chicago. The section chose as its two delegates Dr. A. C. Cotton and Dr. Samuel W. Kelley.

Report of a Special Committee.—A committee consisting of Dr. Victor C. Vaughan, Dr. Charles Douglass, and Dr. John C. Cook, was appointed to investigate certain charges against Dr. Edwin Rosenthal, who, it was asserted, had used his official position for advertising certain products. The report of the committee was as follows:

MR. CHAIRMAN AND MEMBERS OF THE SECTION.

Gentlemen: Your committee appointed for the purpose of deciding whether or not Dr. Edwin Rosenthal, chairman of this section in 1900, used his official position for the purpose of advertising the products of a certain drug firm, begs leave to submit the following brief statement of the facts presented in the case, and of the findings determined upon.

Dr. Rosenthal's address, as chairman of this section in 1900, contained a statement of the results obtained by the antitoxine treatment of diphtheria. In this statement, he reported 325 cases treated with the antitoxine of one manufacturer, and less than 900 cases treated with the products of all other manufacturers, and the results seemed to show the superiority of the product of the firm that furnished the lowest number of cases. This firm has used Dr. Rosenthal's address widely for advertising purposes. Dr. Rosenthal assures us that this use of his paper was not only without his consent, but that the firm have continued this use of his address after receiving a protest from him. Your committee offers the following findings, which are respectfully submitted to the section:

1. That the conclusions stated in Dr. Rosenthal's paper, being founded upon cases so unequal in numbers, are wholly without value in showing the relative merits of the products of the different manufacturers.

2. That Dr. Rosenthal, as chairman of this section, did use his official position to advertise a certain firm of manufacturers of antitoxine. Whether this improper use of his official position was intentional or unintentional, we cannot decide from the evidence before us.

3. That this section will look with disfavor upon any firm of manufacturing chemists which uses for advertising purposes any paper, parts of papers, or statements written or verbally made by any member of this section in its proceedings. Respectfully submitted,

VICTOR C. VAUGHAN,
CHARLES DOUGLASS,
JOHN C. COOK.

Section in Obstetrics and Diseases of Women.

(Concluded from page 93.)

The Increasing Sterility of American Women. By Dr. George J. Engelmann.—This investigation is based upon numbers which may seem too small to admit of deductions as to conditions existing throughout a great country, but I feel justified in doing so, as the data are exact and cases are carefully sifted, and, in addition, many details are corroborated to a decimal by independent observers in far distant points; by Dr. Wilbur, in the census of Michigan, and Dr. Abbott and Dr. Kuszynsky, in that of Massachusetts; by the careful observations of Dr. Chadwick in Boston, and for the eighteenth century by town records from Massachusetts communities. Certain data are taken from each, as no one investigation covers all the points I have developed, and some have never before been presented, so that no record for comparison exists; all are indirectly corroborated by correlated facts. Whatever view may be thought of the results obtained, the

data presented certainly suffice to indicate the imperative need for further and more extended investigation in this direction.

The sterility of woman has increased hand in hand with the much-discussed decrease of fecundity, everywhere to some extent, but in the United States to an excessive degree, as fecundity has diminished more rapidly than in other countries. From a sterility of two per cent. in the eighteenth century, and a fecundity of five children to the marriage (conditions better than those obtaining in any other country and such as led to the Malthusian theory of super-fecundation, the fear of overpopulating of the earth's surface), after a lapse of one century, from first we have passed to last, and the other extreme is now presented; sterility greater, and fecundity less than that of the woman of any other nation, unless it be France, who for this reason must yield her proud position of one-time supremacy and retrograde to the rank of a second-class power.

Among the laboring class in St. Louis, 21 per cent. of all marriages are sterile, 24 per cent. among the higher classes, but of foreigners, only 17 per cent.; throughout the State of Massachusetts, Americans 20.2 per cent., foreigners 13.3 per cent., and in the city of Boston nearly 25 per cent. Among the laboring class, American-born, the fecundity in the eighteenth century, five children to all marriages, at the beginning of the nineteenth century 4.5, is now and was at the end of that century 1.8 to 2.1; in Missouri 2.1, in Michigan 1.8, in Boston 1.8, somewhat more among American-born of foreign parentage, while it is much more among foreigners—*e. g.*, the Irish, in St. Louis 4, in Boston 3.5, in Michigan 5; the Germans, in St. Louis 3.4, in Michigan 6, and in Massachusetts, for all foreigners, 4.9 children to the marriage. Fecundity is somewhat less among the native Americans, also among the higher classes, least of all among college graduates, 1.6 children to the married couple; in England 1.5, while for the population at large it is 4.2.

I have called attention to the frequency of miscarriage and divorce as concomitants and causes of sterility, mainly to emphasize that barrenness is not altogether due to physical causes, to pelvic disease amenable to local treatment, and that sterility is but too often artificially produced, the result of moral causes or the sequence to intentional miscarriage and the methods which precede it, the prevention of conception, both of which competent investigators have shown to be far too frequent. Divorce in Canada shows 1 to 63,000 marriages; in England, 1 to 11,600; in Germany, 1 to 13,000; in France, 1 to 12,500; in all the United States, 1 to 185; in Massachusetts, 1 to 13.8, and Rhode Island, 1 to 8.2 marriages.

Miscarriages are found in the proportion of 1 to 2.8 labors at term among Americans; while 1 to 5.5 is the usually accepted standard. Among Americans of American parentage, the frequency is somewhat greater, 1 to 2.7; among American-born of foreign parentage somewhat less, both in St. Louis and Boston; 1 to 3 among negroes, worse.

There is an absolute and primary barrenness due to utero-ovarian disease, mainly to atresia, gonorrhœa, and to endometritis, with acrid discharge destructive to the spermatozooids; this is here for the first time clearly distinguished from relative, or sec-

ondary, sterility—i. e., conception and miscarriage. This primary sterility is much less frequent, 12 per cent. among Americans, from 10 per cent. to 11 per cent. among foreigners, which means relative sterility for Americans 9 to 12 per cent., for foreigners 3 to 6 per cent., showing that among American-born there is a much greater proportion of sterility, of childlessness due to abortion; this may be due to disease or to traumatism, more often accidental, authorities say, for not much of the barrenness of woman is intentional. All sterility was, in the American colonies, 2 per cent.; in parts of Russia it is to-day 2.8 per cent.; in Norway, 2.5 per cent.; hence, primary barrenness can certainly, in this country, not exceed 8 per cent.—my records show 9 per cent.—8 per cent. of 20-23 per cent. of the childless. Even in absolutely primarily barren marriages sterility is once in four or five cases due to the male, showing that absolute sterility in woman is not common; and that sterility is not mainly due to utero-ovarian disease is evident from its rapid increase, hand in hand with the astounding progress of gynecological science, which, we have every reason to believe, would reduce the number of childless women to a minimum were sterility referable to tangible physical causes.

Sterility is a sad affliction for the innocent sufferer, and for her our best efforts must be exerted; but if so rarely due to pelvic malformation and disease, why do I present these thoughts to the gynecological section of a medical society? It is because we must seek to stay the progress of this abnormal state—because men and women are in ignorance of the suffering prone to follow wilful and self-inflicted sterility; and it is this subject which claims a prominent chapter in the gynecology of the future—preventive gynecology.

The death rate of nations has steadily decreased in the last decade by the development of preventive medicine, and so may sterility decrease and birth-rate increase with the progress of preventive gynecology.

Cæsarean Section as a Method of Treatment for Placenta Prævia. By Dr. W. J. Gillette, of Toledo, Ohio.—The author said that the mortality for mothers by the improved methods of Braxton Hicks, version and forceps, etc., during recent years, had been lowered generally from twenty-five or thirty per cent. to about fifteen and a half per cent.; for placenta prævia centralis, the maternal mortality had been reduced from forty or fifty per cent. to twenty-two and a half per cent. but the mortality for children yet remained at fifty per cent., according to statistics gathered by the author. Seven cases of placenta prævia so far operated on by the classical section were successful in three instances, and two by the Porro-Cæsarean section (one of which was done by the author), were both entirely successful. Porro-Cæsarean section was recommended by the author in cases where the uterus would not properly contract, for otherwise there was likelihood of further hæmorrhage, sepsis, and shock. Classical section was recommended when the patient had not lost much blood and was able to withstand a prolonged operation. The first classical Cæsarean section was done by Bernays, of St. Louis; the first successful Porro-Cæsarean section for placenta prævia was done by Lawson Tait; the second, by the author.

So far, Cæsarean section had only been regarded as an emergency procedure. The profession must recognize that in a certain class of cases Cæsarean section was demanded, and that it would reduce the foetal mortality from fifty per cent. to at most ten per cent. without increase of danger to the mother over that at present incurred by the methods now in use.

The Practice of Obstetrics as it Is and as it Should Be.—Dr. Gustave E. Zinke, of Cincinnati, said that physicians and surgeons, whether obstetricians or not, who had carefully studied the character of present obstetrical methods, were unanimous in the opinion that such methods were not what they should be for mother, child, or physician. Some sources of the dissatisfaction were too little recompense, and objection to midwives. What was the remedy? The writer believed that it was not the question of time, pay, or midwives, but, rather, how and where could the best results be obtained? The practitioner might be well versed in the theory and practice of obstetrics, both in simple and instrumental cases, but it was of no avail, unless asepsis and antisepsis could be properly carried out, whatever the surroundings. He compared the difficulties of delivery of women at their homes and in lying-in hospitals, showing the greater advantages to both women and physician, by delivering in the hospital. The most humble, but well-prepared and properly conducted, maternity hospital was far superior to the most luxuriously furnished and mostly favorably situated home even if provided with all modern sanitary arrangements. He divided the population into two classes, the wealthy, the middle class, and the poor, and gave reasons why each class would be better off in the maternity hospital than at their homes. The wealthy, who could command a skilled obstetrician and nurse and all conveniences occasioned an immense amount of care to the physician to provide the necessities for an aseptic labor, and even then he could not equal the facilities of the hospital. Patients were apt to think modern methods too troublesome and expensive, when they saw so many women pass through confinements with apparent safety without all these arrangements; furthermore, since, in spite of such preparation, there was an occasional loss of mother or child, even by most skillful men.

Of the middle class, nearly the same might be said; with poorer preparations and surroundings perfect asepsis could not be obtained, remuneration was smaller, and responsibility greater.

The third class were worse than the two preceding; with bad surroundings and lack of skilled nursing, it was a wonder that any of the mothers escaped the dangers surrounding them. Of late years, in the larger cities, obstetrical clinics had somewhat improved their condition.

The best evidence that the practice of obstetrics was not what it ought to be lay in the fact that we had not a single specialist in this anywhere. Why? Lack of proper remuneration, the severity and responsibility associated with unmerited blame, unjust criticism, injury to health, etc., were some of the reasons why the present methods of private practice of midwifery were unsatisfactory. The argument against the maternity hospital, that there was a greater danger of sepsis in hospitals than at

home, was not true of the modern maternity hospital. The argument of woman's love for home was only a sentiment, but when she understood that the hospital was the safest place for her, she would seek it of her own accord. Hospitals had become popular for capital operations, because the results were better than in operations formerly done at home. Should not childbirth be considered a capital operation? Who knew what would be the results in any such case; if there were complications where could we meet them with so much success as in a specially equipped maternity hospital? The simple abdominal section had less danger for the patient than a normal case of labor, yet the abdominal surgeon operated at the hospital. Then why should a labor case not have the same opportunity? Some doctors objected to the hospital for fear of losing patronage and on conservative grounds. These prejudices could be, and must be, overcome. The author stated that where he had delivered the wives of prominent citizens and professional brethren, the difference between home and hospital was keenly appreciated and the verdict invariably in favor of the hospital. The family physician would not suffer by the hospital, as he could have full charge of his own cases. Patients might choose their own physician, who sustained the same relation to his patient; his work was made easier, safer, and more satisfactory; he need no longer trouble himself with minor details, and the help he might want was there and well trained. All instruments, dressings, etc., would be ready for his use. He had only to look to his own aseptic condition, and he was ready for work. His results would be better and the work more agreeable than when the patient was delivered at home. The maternity hospital was the remedy for the betterment of the practice of obstetrics. Where it did not exist, the practice must be carried on as in the past.

Letters to the Editor.

THE TREATMENT OF THE MORPHINE HABIT.

529 HAMPSHIRE STREET,
QUINCY, ILL., June 23, 1901.

To the Editor of the New York Medical Journal:

SIR: I should be glad if some subscriber who has had experience in the treatment of the morphine habit of many years' standing would describe his method of treating the condition.

ISAAC S. LEE, M. D.

Book Notices.

Manual of Diseases of the Ear, including those of the Nose and Throat in Relation to the Ear. For the Use of Students and Practitioners of Medicine. By THOMAS BARR, M. D., Lecturer on Diseases of the Ear, Glasgow University, etc. Third Edition, Revised and partially Rewritten. With 236 Illustrations. Glasgow: James Maclehoose & Sons, 1901. Pp. xxiii-429. [Price, \$4.]

The clear and concise language which characterizes Dr. Barr's writings make it a pleasure to read this work, a fact which has no doubt aided

in the favorable reception accorded to it in the past. Some parts of the book have been rewritten, but the most important changes have been made in the chapters devoted to the consequences of purulent diseases of the middle ear and to their operative treatment. The material in the sixty-four pages occupied by these chapters is not by any means all new, but the author has indicated, without much direct reference to contemporaneous literature, the modern advance in the treatment of these conditions. The brief historical sketch at the beginning of the chapter on Operative Treatment impresses the reader profoundly that the great advance in this branch of surgery during the past twenty years has been almost wholly made by English and Scotch surgeons, an impression which is probably due to the fact that the few references made are almost exclusively to certain surgeons of the United Kingdom. Professor Macewen may very properly be considered the originator of the modern operative treatment of cerebral and cerebellar abscesses, and Mr. Lane was the first surgeon successfully to remove a septic thrombus from the lateral sinus; but while these pioneers should receive their full credit, the labors of surgeons who have rendered their technics more nearly perfect are deserving of recognition. The most serious criticism on this chapter is that the space granted it is too small, for if the improvements in technics which have been lately developed had been given in greater detail the work would have been rendered much more valuable. As a whole, this work is an excellent, masterly production which calls for warm commendation.

Food and the Principles of Dietetics. By ROBERT HUTCHINSON, M. D., Edin., M. R. C. P., Assistant Physician to the London Hospital, etc. With Plates and Diagrams. Pp. xviii-548. New York: William Wood & Company, 1900.

This volume contains much that should interest the practitioner of medicine who wishes to know how and why to feed his patients. The early part of the work deals with the analysis of the various articles of diet ordinarily employed and with the chemistry of these foods. In the later chapters the author takes up the subject of cooking, the principles of artificial feeding in infancy and childhood, and feeding in disease. While his principles of diet in disease are those universally accepted and taught, they are treated in a most thorough and convincing manner. On the subject of infant feeding, the author does not agree with other writers, but his conclusions are most logically reached. The methods of artificial and forced feeding in disease are thoroughly described. The book is worthy of a place in the physician's library, and, what is more, is worthy of being read and studied.

Aphorisms, Definitions, Reflections, and Paradoxes, Medical, Surgical, and Dietetic. By A. RABAGLIATI, M. A., M. D., F. R. C. S. Ed., Consulting Surgeon, Bradford Children's Hospital, etc. New York: William Wood & Company, 1901. Pp. xiv-291.

In this philosophic plea for the simplification

of medicine the author urges strictness of accurate observation, the exercise of painstaking judgment, and the careful collation of the facts of observation before rendering an opinion. He believes that a true philosophy of medicine and surgery may be created through the knowledge of the circulation of the blood and fluids of the body, and that this knowledge depends on that of the relations of the body to food, air, and exercise. There are 552 aphorisms, some of which afford interesting reading.

BOOKS, ETC., RECEIVED.

Principes du diagnostic gynécologique. Par le Docteur G. Fraisse. Livre I. Avec figures dans le texte. Paris: Félix Alcan, 1901. Pp. iv-348.

Das Wachstum und die Verbreitungswege des Magen-carcinoms vom anatomischen und klinischen Standpunkt. Von Dr. med. Robert Borrmann, I. Assistenten am Pathologisch-anatomischen Institut. Mit 16 Tafeln und 21 Abbildungen im Texte. Jena: Gustav Fischer, 1901. Pp. 376.

Transactions of the American Association of Obstetricians and Gynecologists. For the Year, 1900. Volume XIII.

Practical Surgery for the General Practitioner. By Nicholas Senn, M. D., Ph.D., LL.D., Professor of Surgery, Rush Medical College, in affiliation with the University of Chicago, etc. With 650 Illustrations, many of them in Colors. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 9 to 1133. (Price, \$6.)

Diseases of the Intestines. By Dr. I. Boas, Specialist for Gastro-intestinal Diseases in Berlin. Authorized Translation from the First German Edition, with Special Additions by Seymour Basch, M. D., New York City. With Forty-seven Illustrations. New York: D. Appleton & Company, 1901. Pp. xii-562.

The Hygiene of Transmissible Diseases. Their Causation, Modes of Dissemination, and Methods of Prevention. By A. C. Abbott, M. D., Professor of Hygiene and Bacteriology, and Director of the Laboratory of Hygiene, University of Pennsylvania. Second Edition, Revised and Enlarged. With 46 Illustrations and 20 Charts. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 15 to 350.

Essentials of Refraction and of Diseases of the Eye. With a Consideration of Ocular Injuries and the Ocular Symptoms of General Diseases. By Edward Jackson, A. M., M. D., Emeritus Professor of Diseases of the Eye in the Philadelphia Polyclinic, etc. Third Edition, Revised and Enlarged. With 82 Illustrations. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 5 to 261.

Beiträge zur Frage über die Behandlung der entzündlichen Erkrankungen der Gebärmutter-Adnexe mit dem galvanischen und dem faradischen Strom. Von Dr. med. Johann Kalabin, Privat-Docent für Gynäkologie an der Kaiserlichen Universität, etc. Mit 3 Abbildungen im Texte. Jena: Gustav Fischer, 1901. Pp. x-230.

La cura del Tubercolotico Polmonare nel Sanatorio considerata anche come questione sociale. Con 185 Figure intercalate el Tavola fuori testo. Professor Vincenzo Cozzolino, della R. Università di Napoli. Torino: Rosenberg & Sellier, 1901. Pp. xx-630.

Proceedings of the Ninth Annual Meeting of the Association of Military Surgeons of the United States, held in New York City, May 31, June 1, and 2, 1900.

Miscellany.

Sterilized or Boiled Milk versus New Milk.—Referring to the change that is taking place regarding the value formerly attached to "milk hot from the cow," the *Medical Press and Circular* for June 16th says: "In whatever way the dispute may end the controversy serves to remind us of the great change that has taken place in regard to milk supply, and the tendency undoubtedly is nowadays to feed infants on sterilized or boiled milk instead of new milk. The ultimate effects of such a practice are almost impossible to estimate, but, as Dr. Poore pointed out, the interests of the consumer and the producer are not identical in this matter. If the dairyman be allowed to sterilize all his milk and still to call it 'new milk' he will be relieved of the danger of losses from his produce going bad, but he will sell old milk for the price of new milk. There is room here for liberty, and if sterilized milk be labeled in every case and sold as such, its market value would soon be established."

Pinta, a Tropical Disease.—Dr. Osborne Browne (*Journal of Tropical Medicine*, June 15th) says that Dr. Edgar (*Journal of Tropical Medicine*, February 15, 1901) and Dr. Buchanan (*Journal of Tropical Medicine*, April 15, 1901) both allude to pinta as a disease of Tropical America. Dr. Browne found it very common on the Gold Coast, where the natives erroneously attribute it to yaws, although the latter disease may have occurred years before the pinta. *At first it begins as a very itchy dark bluish or black spot, as a rule on the back of the hand or dorsum of the foot; although it not so unrarely extends to the palms or soles.* When the disease has gone on for a considerable time it loses its initial dark color at all events in places, and is succeeded by a grayish-pink or white color, denoting a loss of the natural pigment of the skin. It is said by natives to extend into Hausaland about Kano, where it is called tungere. The fungus is in all cases identical. Natives may also lose the pigment from their skin by a burn, wound, or old parasitic diseases (including pinta) long since died out.

Partial Amputation of the Penis, with Preservation of Function to the Remainder.—M. Gangolphe (*Province médicale*, April 27th) reported a case in which he had amputated, for epithelioma, a third of the penis as well as the glans. The patient acceded to the operation only after a long resistance, as M. Gangolphe could not hold out hope of functional capacity remaining. Recently the patient had informed M. Gangolphe that he had been able to perform complete coitus, and that the penile stump acquired in erection from eight to ten centimetres (about $3\frac{1}{10}$ th to $3\frac{9}{10}$ ths inches) in length. (Mon opéré m'a fait savoir . . . que son moignon acquérait de huit à dix centimètres de longueur au moment de l'érection). The patient added that, in his opinion, the doctor might have removed half the organ, which in its normal state was eighteen centimetres (about seven inches) in length. M. Gangolphe has recorded this case because hitherto the information so earnestly desired by the patient, as to the effect of partial amputation upon the sexual function, has been wanting.

An Ambulance Struck by a Car.—One of the electric ambulances attached to the New York Hospital was struck by an Eighth Avenue trolley car at Fifteenth Street on July 10th, and the ambulance surgeon, Dr. Chittenden, and the driver were slightly hurt.

Original Communications.

THE WESLEY M. CARPENTER LECTURE
ON
CONJUGATION IN THE ASEQUAL CYCLE
OF THE
TERTIAN MALARIAL PARASITE.*

By JAMES EWING, A. M., M. D.,

NEW YORK.

PROFESSOR OF PATHOLOGY, CORNELL UNIVERSITY MEDICAL
COLLEGE.

In 1897 the writer's attention was attracted by a specimen of blood from a rich tertian infection in which there were very numerous twinned parasites of about twelve hours' development, while all the older parasites were single. A remarkable specimen of this type was secured at Montauk, in 1898, from a soldier just arrived from Cuba, in whose blood there were two very compact and very numerous broods, nearly all the young parasites being twinned while all the older forms were single. Extreme length and variety of amœboid processes characterized the younger parasites in both cases. The latter case promptly raised a suspicion that under some conditions young tertian twins might conjugate, producing a single large full-grown parasite.

In the following spring, two pronounced cases of the same type were observed in New York. In one of these the writer was able to follow the parasites through one complete cycle, and found that the young twins were succeeded by single full-grown parasite. At the same time, by the application of the Nocht-Romanowsky method of staining the parasites, all stages of the gradual union of nuclei were clearly demonstrable, and the writer's suspicion regarding a possible conjugation of young parasites reached a positive conviction.

Since that time other cases have been observed which have supported the conclusions reached in 1899, and presented in a preliminary report at Baltimore in March, 1900.

The evidence favoring the belief in conjugation of parasites consists principally in the morphological appearance of twinned organisms in their developmental stages. The blood in typical cases usually shows two broods, the younger consisting of twinned compact and ring-shaped parasites, and the older of single large or full-grown parasites. In many instances the young organisms are entirely separate, each exhibiting a single large granule of chromatin. Many red cells, however, contain two young parasites which are clearly fused together

along one segment of their bodies, and two large chromatin granules are then invariably found at distant points in the parasites.

The fused bodies usually differ in appearance. One is then a large, delicate ring with thin bow and chromatin granule of moderate size, while the other is a coarser body, often compact, or, if ring-shaped, exhibiting a thicker bow, inclosing little or no hæmoglobin, and presenting a larger chromatin granule. These differences between the conjugating parasites are not always clearly visible.

Among the rings which occur singly in such specimens of blood, the two forms of young parasites are often distinguishable, but the writer has been unable to find recorded any observation of single rings containing two large and equal chromatin granules. Every red cell containing two large and equal chromatin granules always contains two distinct young parasites.

It appears, therefore, that the bodies of these young twinned parasites become fused together while their nuclei remain separate. Occasionally the two chromatin granules are found close together, but no signs of fusion of nuclei are found at this early stage.

In a somewhat later stage of development most of the parasites are found to have lost the simple ring-form and to have developed a number of long, beaded, thread-like pseudopodia, variously curled in the red cells, indicating a very active amœboid stage. The chromatin masses are now subdivided into ten or twelve granules, but these masses still remain far apart and show no tendency to unite.

In still later stages the amœboid figures become less marked and the masses of chromatin lie side by side united by a little achromatic "milky" substance. Finally, the groups of chromatin granules come to lie side by side surrounded by achromatic substance, and this phase is marked by a distinct reduction in the length of amœboid figures. Beyond this stage the parasites show complete fusion of both bodies and nuclei, the resulting individual being of large size and showing an abundance of chromatin.

The morphological evidence indicating conjugation is therefore apparently complete.

There is also the strong circumstantial proof to be mentioned that very numerous young twinned parasites are succeeded by older single forms, and equally significant is it that a full-grown brood, all single, is found associated with a numerous young brood mostly twinned. It is not at all likely that twinning can occur extensively in a part of a brood and not at all in its older members, or in one brood extensively and not at all in its predecessor. The occurrence in the Montauk patient of two broods, one less than half grown and almost invariably

*Delivered at the New York Academy of Medicine, November 15, 1900.

twinned and the other approaching segmentation and all single, convinced the writer at once that conjugation was the only possible explanation applicable to the case.

Some possible objections to the theory of conjugation must be considered.

The suggestion naturally arises that the presence of two masses of chromatin does not necessarily mean the presence of two parasites in one red cell. From a long series of observations on the character of the chromatin in young tertian parasites, the writer must admit that this claim is partially valid. The young tertian parasite, in some cases, may contain two granules of chromatin. In the young compact body previously described, these granules, when present, may be large and of nearly equal size, but in the delicate tertian ring the writer has never seen two equally large chromatin granules. In somewhat rare instances the thin ring shows an accessory granule of small size in the neighborhood of the main granule, but never, in the writer's observation, have two large granules occurred in a single, thin, ring-shaped tertian parasite.

The significance of these double granules is not clear. The appearance of two very small, compact, spore-like bodies, partly fused together, as may occasionally be seen, indicates that such forms may sometimes result from the early union of the bodies of two very young parasites. The accessory granules in the thin rings have always appeared too small to have been derived in the same way, and probably result from the precocious subdivision of the main granule. The accessory granules may arise, therefore, (1) from the incomplete fusion of the original granules which go to make up the spore in the parent rosette, or (2) from a precocious subdivision of the chromatin, as suggested by Ziemann, or (3), as seems most likely to be the case with the compact bodies, by the incomplete separation of the bodies of two spores in the rosette.

In any case, the existence of more than one granule in a single parasite presents no difficulty for the theory of conjugation. The identification of twin parasites in the writer's specimens has always been based, not merely on the presence of multiple nuclei, but also on the undoubted presence of the bodies of two distinct parasites. In some of the conjugating forms, moreover, three masses of chromatin granules were rather frequently seen in various stages of union, when only two bodies of parasites were to be found in the red cells. This appearance, which was at first very puzzling, can be positively referred to the conjugation of one compact parasite with double chromatin granules and one thin ring-form with single granule. In one case single compact parasites with double granules twinned with thin ring-forms, and large conjugating forms with three

masses of chromatin, were present in considerable and nearly equal numbers. It appears, therefore, that the presence of two large and equal masses of chromatin in one infected red cell indicates, with few exceptions, the presence of two parasites. The exceptions are disposed of by the fact that three nuclei are sometimes seen in conjugating forms, two of which are usually derived from two very young compact forms uniting very early, probably in the rosette, and the third from subsequent conjugation with a ring-shaped parasite.

The further development of single young parasites with accessory granules may be followed in rare instances. The accessory granule divides, as does the main mass of chromatin, and, later, unites to form one clump of granules in the full-grown stage. Throughout these stages the total bulk of the two chromatin masses appears not to exceed the average of single parasites, whereas in the conjugating forms the excessive quantity of chromatin in all stages is a very striking feature.

In all the examples of such single parasites that the writer has seen, the unequal size of the chromatin masses was distinct when there was no indication of the presence of the bodies of two parasites in the same cell. These forms, therefore, differ entirely from the conjugating forms above described, in which multiple chromatin masses are always associated with multiple parasites. The writer has never seen more than two masses of subdivided granules in a single parasite, whereas three large and equal masses may be observed in two conjugating forms.

Ziemann describes the appearance of multiple chromatin masses in young tertian parasites. He was at first uncertain whether these granules were referable to the presence of two fused parasites or to early division of one nucleus, but finally accepted the latter explanation. He describes the separation of one, or rarely two, accessory granules from the original mass in cells infected by single young parasites. Sometimes the accessory granule was much smaller than, sometimes nearly as large as, the parent granule. All these appearances the writer has seen in single parasites, less often in single members of the conjugating pair; and he agrees with Ziemann that they may represent merely a precocious subdivision of chromatin, but the conjugating forms of the writer's observations are quite different and do not appear in Ziemann's descriptions.

Secondly, it may be objected that it is impossible to determine when the bodies of two parasites are really united, as one may overlap the other and produce a false impression of union. This difficulty is undoubtedly present with some of the young forms; but, with others, the appearance of the parasites toward the completion of the process, when amœboid motion is subsiding, is, on the contrary, absolutely

convincing that the bodies are actually fused. The significance of two or three large masses of chromatin surrounded by one achromatic zone is also unmistakable.

Thirdly, it may well be pointed out that examples of twin parasites of advanced development, presegmenting bodies and rosettes, are sometimes seen in severe tertian infections, furnishing examples of twinning without subsequent conjugation. This fact is a matter of rather common observation, and, in the writer's experience, there have been some cases in which it was especially noted. In one infected cell were found, for instance, a large rosette and a compressed hyaline body. In another were seen one perfect rosette, one imperfect presegmenting body, and one compressed hyaline body.

It may be said of these twins which proceed to segmentation without conjugating, that they are vastly less numerous than the conjugating forms of young twins seen in the same or other specimens. The writer has seen hundreds of conjugating forms within a few months, but remembers only three or four twinned rosettes seen in as many years.

In the cases showing twinned adult parasites, a few younger couples were seen which showed no attempt to conjugate. The great majority of these young parasites were the typical tertian ring-shaped parasites, while the small compact forms were hard to find. There is in this fact an indication that conjugation requires the presence of two somewhat differentiated parasites, as already described, one a compact body and the other a ring-shaped parasite. Observation of recent cases has borne out this conclusion.

Finally, the comparative absence of older twinned parasites may be referred to the death and extrusion of one of the twins while the other proceeds to full development alone.

In some gregarines in which multiple infection of cells and conjugation of parasites is common (Klossia), one of the parasites usually succeeds in dwarfing its companions and reaches full development alone. The dwarfed or dead parasites are then found in the cell alongside of the growing form (Wolters; Clarcke). In some instances of multiple infection by full-grown malarial parasites there are evidences of compression and death of the younger of two or three organisms. More often both parasites appear to be equally favored. In any case, the remains of the dwarfed parasite ought to be found if one member of the pair commonly inhibits the growth of the other. In the writer's cases showing conjugation no traces of dwarfed parasites could be found, and, while young twins were extremely common, all the older parasites were single. It therefore appears to be impossible to explain the entire absence of older twinned forms, and especially of

traces of any abortive individuals, on any other basis than that of conjugation.

The writer finds, therefore, that the usual result of twinning of tertian parasites is conjugation; that twins sometimes grow to maturity without conjugating, for reasons which are not clear, but apparently when both parasites show the usual ring-form; that the union sometimes involves three parasites, but probably always requires the presence of one or more compact, densely staining forms, which do not commonly assume the ring shape, and one of the typical tertian rings.

A further inquiry relates to the frequency with which conjugation occurs and its position as an essential or accidental phenomenon in the progress of malarial infection.

It would seem that a process so fundamental as the conjugation of individuals, if it occurs at all, ought to be an invariable feature of every active infection, but it must be admitted that the majority of specimens taken from routine cases fail to show distinct traces of the process. Nevertheless, it is probably a very common occurrence, since the writer has found little difficulty in securing specimens containing a few conjugating forms.

The four cases originally referred to as exhibiting very abundant conjugating forms presented several characteristics in common. They were all very rich infections, the Montauk case showing more parasites than the writer has ever seen in any other benign tertian infection. The three New York cases were examined early in the course of the disease after severe febrile paroxysms. They all responded promptly to quinine, although one relapsed when quinine was omitted. Conjugating forms are usually few or wanting when the total number of parasites is small, or after quinine has been given, or in third or fourth paroxysms. *Conjugation seems to be a feature, therefore, of the early stages of rich infections.*

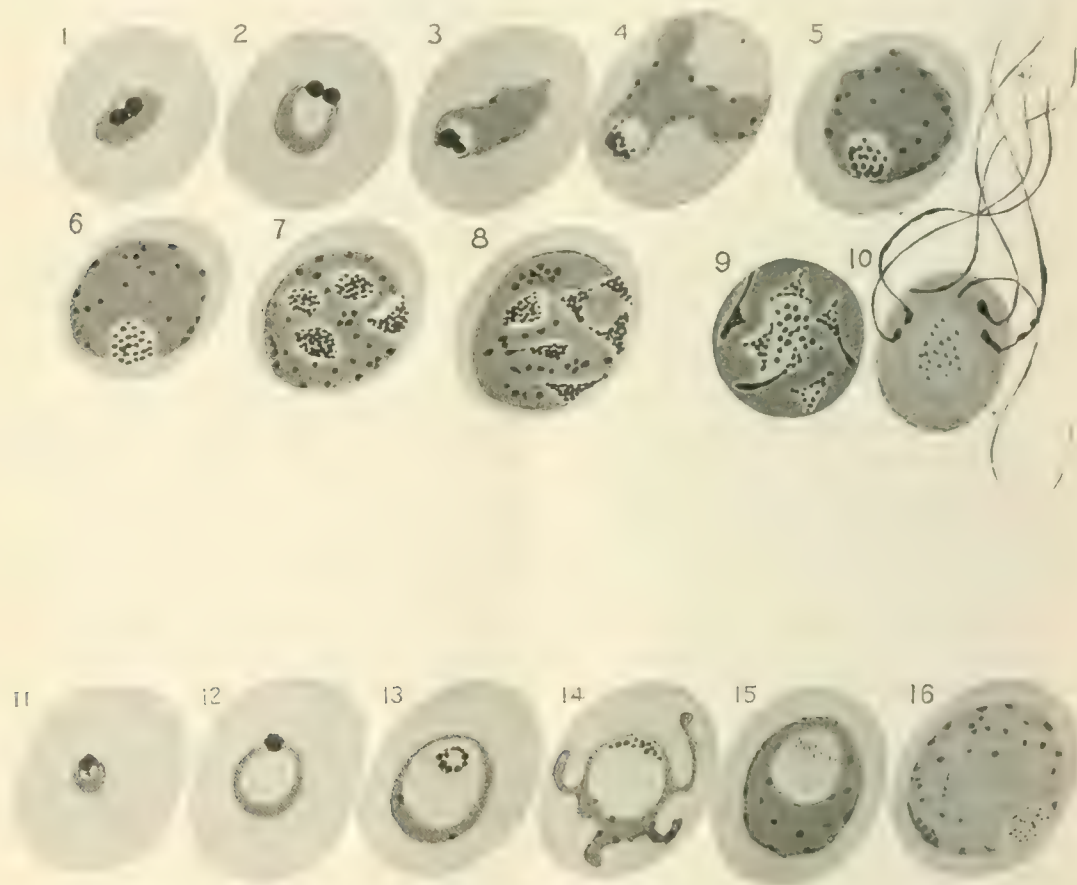
This conclusion from clinical data accords with the well-known significance of conjugation among many protozoa, which are able to reproduce two or three generations through conjugation, after which another type of sexual reproduction becomes obligatory.

The further examination of specimens exhibiting conjugating forms develops other peculiarities of great interest.

Single parasites of both types, *i. e.*, compact, densely staining bodies with one or two large chromatin granules, and the thin ring-shaped parasites, can be traced through later stages of development. The compact bodies remain densely staining and compact throughout their growth. They are not often found in distinct ring-form inclosing hemoglobin, but usually remain compact, while develop-

ing short amœboid processes. They are usually of smaller size in all stages than are other equivalent tertian parasites, but the infected cells are slightly swollen. In some respects they resemble quartan parasites. In the full-grown stage these bodies are still densely staining, with very distinct chromatin granules. The writer is not certain that they ever segment, but he has been able to trace them up to a form in which there are six subdivided groups of chromatin granules. (See cuts.) Now, the true presegmenting tertian form does not develop its sixteen to twenty separate nuclei by the subdivision

obtained directly from the circulating blood, the chromatin has appeared in elongated rod-form as it appears in forming flagella in shed blood. The writer has not traced the extrusion of flagella from these compact bodies with six nuclei, but in specimens made from fresh blood which has been allowed to stand in a moist chamber for from ten to twenty minutes and stained by Nocht's method, flagellating forms show marked resemblance to the compact bodies with six nuclei seen in specimens made from fresh blood in the ordinary way, but those flagellating forms do not stain so densely with methylene-blue.



DESCRIPTION OF THE CUTS.

FIGS. 1-8 inclusive represent the forms which belong to the development cycle of the compact tertian parasite.

FIGS. 9-10 represent phases of formation of flagella in shed blood.

FIGS. 11-16 represent the forms which belong to the cycle of the thin ring-shaped tertian parasite.

of the parent group of granules first into two, then into four, eight, and sixteen masses, but the whole parent mass flows out into the body and is *at once disseminated* into the final number of nuclei destined to form spores. These densely staining bodies with from four to six chromatin masses are distinctly different in appearance from the true presegmenting bodies. The writer finds them, on the other hand, much more like the bodies which in shed blood exhibit undoubted evidence of the beginning formation of flagella. Indeed, in some of the densely staining compact bodies with six chromatin masses

Likewise the development of single ring-shaped tertian parasites may be traced in the same specimens with the others. As these forms increase in size they are characterized by their hyaline appearance and tendency to stain lightly with methylene-blue, and by the comparatively small quantity of finely divided chromatin. No presegmenting bodies could be found in these cases which appeared to show the characters of this pale full-grown parasite, and the writer is not certain that it ever segments. On the other hand, the pale-staining, often extra-cellular, non-flagellating bodies seen in blood from

fifteen to twenty minutes after shedding show considerable resemblance to the pale forms derived from single ring-shaped parasites which have not conjugated.

These observations accord in some, but not in all, respects with the descriptions given by Bastianelli and Bignami of the tertian microgametocytes and macrogametocytes in the mosquito's stomach.

According to these observers, the microgametocyte, or male flagellating form, exhibits from five to six times as much chromatin as the other. This chromatin may lie in one central mass or in a network of threads, but is always compact and densely staining. It nearly always produces six flagella. The macrogametocyte, or female form, shows an eccentric nucleus with very scarce chromatin granules, and is a very pale-staining body. They trace these two forms indistinctly in the circulating blood, as follows:

"From nine to six hours before the chill, besides tertian rosettes, there are to be seen bodies of equal or larger size, with a single vesicular nucleus and subdivided chromatin grains or rods which lie far apart. In bodies one third smaller than the above-described forms similar rods and threads may be seen, and it is reasonable to suppose that the forms destined for development in the mosquito have from their earliest stages a characteristic form. In the circulating blood, however, these early forms are not seen, because, as in the development of crescents, they are confined to the marrow."

The writer has not had opportunity to examine malarial blood from the mosquito's stomach, but in shed blood kept moist for fifteen minutes he has seen the early stages of the formation of flagella, and finds such bodies to resemble in size, number of chromatin masses, and general staining qualities the fully developed compact form seen in conjugating specimens.

That microgametocytes and macrogametocytes develop especially in the bone marrow, as suggested by Bastianelli and Bignami, may explain their usual absence from the peripheral blood, where the writer has seen the separate development of the two distinct forms of parasites in only a very few cases. At present, analogy with the æstivo-autumnal parasite is the only evidence favoring the suggestion that the bisexual forms of the tertian parasite develop principally in the bone-marrow, as the opportunity to examine the marrow of cases of tertian malaria is, fortunately, very rare.

In the æstivo-autumnal parasites, the bisexual forms, the crescents, have for some time been separated into two classes. McCallum describes distinct differences between the flagellating crescent, or male microgametocyte, and the non-flagellating female macrogametocyte in the parasites of birds.

Bignami and Bastianelli, as also Celli, note several distinguishing points in the male and female crescents of the human parasite. According to these observers the microgametocyte is smaller, assumes the spheroidal form, stains lightly with methylene-blue, and its nucleus is apt to be eccentric and not to show a vesicular type. The macrogametocyte retains the fusiform shape, stains densely, and exhibits a central vesicular nucleus surrounded by pigment. After fertilization, the macrogametocyte stains still more densely, the nucleus may migrate to one pole, and the pigment becomes disseminated. All these features the writer has found to characterize individual crescents in circulating blood, and cannot regard them as indications of fertilization unless it is admitted that under some conditions crescents may become fertilized in the circulating blood.

Mannaberg believes that crescents are syzygia developed by conjugation of two amœboid individuals. Recent study of related protozoa, however, has left little support to such an hypothesis. Crescentic bodies in protozoa invariably develop by segmentation of an encysted body, and the writer can find no instance of the development of a single sex-ripe form by conjugation of two individuals. At any rate, if crescents develop through conjugation, the process is of entirely different significance from the present type of conjugation of tertian parasites.

A natural inquiry relates to the occurrence of conjugation among æstivo-autumnal parasites, with which twinning of young forms is decidedly more common than with the vernal parasite.

An increased difficulty in determining this question is found in the disappearance of æstivo-autumnal parasites from the peripheral blood just at the time when conjugation of forms might be expected to occur. The writer has already described two forms of æstivo-autumnal rings, but has been unable to trace their development, either in smears of the viscera of fatal cases or in the peripheral blood of five cases in which numerous parasites of all stages remained in the peripheral blood. During this search for conjugating forms, several examples of twinned, half or full grown, or segmenting, parasites in the same red cell were encountered, but they were vastly less numerous than young twins. If conjugation occurs it probably lasts over a very brief period only, and can be demonstrated only in smears of visceral blood where the parasites have massed in large numbers. In a few quartan specimens the writer has seen no traces of either twinning or conjugation.

The Biological Significance of Conjugation.—Comparative biology offers an abundant opportunity for the occurrence of conjugation of malarial parasites. Of protozoa, conjugation is most frequently

observed among gregarines, which exhibit at least two types of the process. In one of these types, one or more embryonal gregarines attach themselves to the body of a second or third individual, forming a short chain, much as do certain bacteria (*Klossia*). In this relation they proceed for a variable time in their development. Pfeiffer refers to this process, apparently, as a "spurious conjugation," employing the term "embryonal cohesion" (*embryonale Verklebung*). In the second and more important type, two partly or fully developed individuals become encysted together, developing sporocytes and initiating a completely new phase of existence in the life of the parasite.

Pfeiffer describes the gradual fusion, first of the bodies, later of the nuclei, of conjugating sporozoa. Witlaczil also describes the fusion, first of the bodies, later of the nuclei, of a rare form of gregarine, and refers to similar processes in other protozoa. Wolters gives minute descriptions of conjugation in gregarines, in which complex nuclear changes are concerned. In all these cases, however, conjugation precedes encystment, showing that this particular cycle of the parasite undergoing conjugation is not homologous with the pyrogenous cycle of the malarial parasite, which becomes encysted in the mosquito's stomach after fertilization by the flagellum, and not after conjugation.

On the other hand, it is a well-recognized biological principle, stated, among recent authors, by Leuckart, Pfeiffer, Sedgwick, Haeckel, and others, that conjugation among protozoa may be the only sexual feature of reproduction during a limited number of generations, after which the reproductive capacity ceases and must be restored by the development of bisexual forms, and usually by the appearance of an entirely new phase of existence. With the malarial parasite, conjugation appears to fulfill just such a purpose, favoring the development of the amœboid pyrogenous forms of the organism over a few generations, after which there is a tendency to develop separate bisexual forms, which, in the mosquito's stomach, initiate a new phase of existence in a new host. In this respect malarial conjugation must be admitted to have the full significance which attaches to it in related protozoa, and cannot be classed as a form of embryonal cohesion or of spurious conjugation.

The spontaneous disappearance of malarial infections in the human subject may thus be explained by the gradual failure to reproduce by conjugation, and the development of parasites singly into sexual individuals, sterile for the human host, but adapted to development in the mosquito. Such quiescent stages of related infections are very commonly observed in the blood of snakes and birds, etc., which, for months, harbor with impunity countless num-

bers of the crescentic bodies awaiting transfer to a new host.

In current literature on related protozoa there appears to be no reference to conjugation of individuals belonging to a cycle which is homologous with the pyrogenous cycle of the malarial parasite. This is probably owing to the fact that observed forms of the coccidia and gregarines belong to the encysted cycle, which in the malarial parasite occurs in the mosquito, while the other forms, if they exist, have not yet been described or fully studied.

The occurrence of conjugation among malarial parasites establishes more fully the parallelism believed to exist between the life histories of this and related protozoa.

The malarial parasite may be said to begin its existence, in the human host, by a series of generations of amœboid bodies produced after conjugation of partially differentiated individuals. After the capacities of this method of reproduction have been exhausted, the sexes become separated, the male forms being represented by the flagellating bodies, microgametocytes, and the female by the large, pale, hyaline, non-flagellating bodies (macrogametocytes). These forms are sterile for the human host, but in the mosquito fertilization of the macrogametocyte by the flagellum or microgamete takes place, and the resulting motile form, the vermicle, penetrates the tissues of the mosquito and becomes encysted. From this cyst develop the germinal rods which are inoculated into the human host through the salivary glands of the mosquito, to begin anew the pyrogenous or amœboid cycle. At several points in the series there remain wide gaps in our knowledge. We do not yet know how the germinal rods are transformed into amœboid bodies. The development of the sexual forms of the tertian parasite, as described by the writer, can at present only be offered as a probability, not as a demonstrated fact, while the origin of æstivo-autumnal crescents is as yet entirely obscure. At the other end of the series there is possibly an entire new phase of development of the parasite or the production of some "resistant body" in the external world apart from either man or mosquito. The present paper need not, however, be burdened with the obscurity of these related problems, as its object is merely to present the evidence, which is believed to be demonstrative, of the occurrence and significance of malarial conjugation.

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SOME OF THE CONDITIONS FOLLOWING THE BOTTINI OPERATION FOR PROSTATIC OBSTRUCTION.*

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On February 18, 1901, I made a report to the profession of my experience with the Bottini operation for the relief of prostatic obstruction. This report was made as brief as possible, and in order to do this some interesting details were necessarily omitted. As all the phenomena and conditions pertaining to the operation are, I venture to say, worthy of careful study, I desire to present for your consideration some of the conditions following the operation which appear to me to have physiological and pathological significance.

It is not necessary to detail to you the technique of the operation—by this time all surgeons are familiar with it; but there is a condition which follows immediately after the incisions have been made to which I have seen no reference made and which offers a serious impediment to after-treatment. In some individuals, immediately after the removal of the Bottini incisor, it will be found impossible to introduce either a soft rubber (Nélaton) or gum or webbing catheter of any degree of stiffness. The obstacle is in the membranous and prostatic urethra, and it consists of a firm and rigid contraction of both these portions of the deep urethra. The catheter may be introduced for a short distance beyond the bulbo membranous junction, and then it will be suddenly and firmly clutched, even while the patient is still under ether narcosis. In order to test it, I have had the patient kept profoundly under the anæsthetic, and yet the reflex irritation is so great as to resist absolutely the introduction of the catheter. That it is not due to rapid swelling I am convinced from the facts that the muscular clutching can be felt and that it will let up in a degree when the

catheter is slightly withdrawn, but when an attempt is made to still further introduce the instrument a forcible contraction takes place instantly, which holds the catheter so firmly that some force is required to extract it.

In order to overcome this difficulty, I have been obliged to have made for me a series of metal catheters, patterned after the Trendelenburg searcher, and with solid tips, in order that the instrument may be easily rendered sterile.

This muscular impediment usually subsides after three or four days, when ordinary catheters may be readily introduced. If in any of these individuals it becomes necessary to use the in-lying catheter, recourse is had from necessity to a metal stylet with which either a Nélaton or webbing catheter can be passed. It seems incredible to those who have not witnessed it that instantly after the removal of a metallic instrument, measuring No. 24 or 26 French in circumference, it should be impossible to pass a catheter of the same or smaller calibre, but such is the fact. It is another illustration, but in marked degree, of that power of forcible contraction possessed by the muscles of the deep urethra in prostatitis, and which we often witness under some form of aggravated local irritation, such, for example, as the presence of a vesical calculus, or of an ulcer in the bulbous urethra. In the cases to which I am now referring the operation itself evidently excites the powerful reflex influence which is maintained even under profound narcosis.

The process of repair begins immediately after the operation. In a few of my cases I have been able to introduce the cystoscope, for the purpose of observing the results of the operation; but, as the fluid in the bladder soon becomes tinged with blood, such observation has generally been negative. In a few instances, however, I have been able to view with certainty the location of the incision and its length and depth in so far as the salient portion of the prostate could be brought into the field of the cystoscope. But in one of my cases, in which there was absolutely no blood, the cystoscope was introduced immediately after the operation and a beautiful demonstration of the work of the incisor was revealed. In either lateral lobe was a long linear cut, and as the cystoscope was drawn forward the whole length of the incision could be brought into view, showing that the cut divided the lobes almost into two smaller ones. The surface of each cut was seen to be covered with a white, glistening film and punctate red spots, where minute drops of blood oozed from the denuded surface began to show through the feathery and translucent eschar. On watching these incisions for a while, the walls were seen receding from one another, making the apparent distance of the cut less and the sharp incision more of a

*Read at the fifteenth annual meeting of the American Association of Genito-urinary Surgeons, April 30 to May 2, 1901.

groove. In a little while further this groove began to fill up with blood clot.

The above-described phenomena were observed on either side, while the inferior incision was like a

ferior incision was, therefore, only $1\frac{3}{4}$ centimetre in length, while the right lateral was 2 centimetres and the left was $2\frac{1}{2}$ centimetres. This patient had become almost entirely dependent upon the catheter,



dimple cut into a flat lobe. In this individual, preliminary cystoscopy had shown enlargement of the lateral lobes, most markedly of the left, while the posterior lobe was but slightly enlarged. The in-

and his bladder had become atonic, allowing from twelve to sixteen ounces of residuum. Spontaneous urination began on his recovering from the anæsthetic. He had absolutely no pain or discomfort

after the operation, which is contrary to the usual experience. For some weeks his residual urine would vary from four to twelve ounces, his bladder being markedly atonic; but under persistent treatment, extending over nearly five months, he was able to dispense with his catheter, having now only an inconsiderable amount of sterile residual urine (from none to half an ounce, according to his nerve conditions).

It is evident that in these cases the process of repair begins and proceeds as under ordinary aseptic conditions. The progress of the process of repair, as well as the grooves which the instrument effects, is shown in this specimen, which I now show you, taken from the body of one of my patients, who died from pneumonia two months after the operation. This gentleman was aged seventy-one. He had been under my observation for several years, and had been obliged to use his catheter to relieve himself of variable amounts of residual urine and for the purpose of treating frequent attacks of cystitis. His prostatic urethra invariably became so sensitive that in a short time the catheter would be thrown aside and he would get on as well as he could with the frequent and painful urination, which was sometimes as often as every half hour. His residual urine would vary from three to seven ounces, and even more. He finally consented to the Bottini operation, which was done on January 19th of this year.

An inferior incision of $3\frac{1}{2}$ centimetres and a right and left incision of 3 centimetres were made under ether narcosis. For several days he had a hard time of it; the prostatic sensibility remained so great that it was almost impossible to introduce a catheter, even with local anæsthesia, but on the eleventh day after the operation he urinated with ease and the catheter was inserted without the least pain, as he expressed it, "for the first time in my life." After that his progress toward convalescence and comfort was without incident. His nocturnal urination, instead of being every half-hour or hour, was once in five or six hours. He made his urine in good stream, without pain, and with only four drachms of residual urine, and he was able to void entirely a measured quantity of fluid injected into the bladder.

On the 12th of March he died of pneumonia, due to an attack of la grippe, for which he was under the care of Dr. A. Alexander Smith, of New York. During his illness he was able to urinate freely and easily, and he declared to me that the comfort which he experienced was, to use his own term, "wonderful."

His family readily consented to an autopsy, and I am thus able to show you a very interesting specimen. It shows the three grooves, the two lateral

ones permitting the lateral lobes to widen out, while the inferior one lowers the urethra to the bottom of the bladder. The surfaces were undergoing repair and the granulations could be distinctly seen when the specimen was fresh. There is a little bridge of new tissue which has evidently formed from one side of the inferior incision to the other, and illustrates to me the necessity of either placing an indwelling catheter in the urethra or of passing a sound during the healing process. The latter I now usually do with my syringe-sound, and make applications of nitrate of silver to the granulating surfaces repeatedly after the operation.

In my opinion, the spontaneous urination which follows the operation is due, not only to the formation of the grooves, but to contraction of the cicatrices and to atrophy of the gland tissue, for the following reasons: 1. Improvement in freedom of urination progresses, so that some of the patients among the number in which improvement only was reported are now able to empty the bladder. This fact gives me hope of the permanency of results. 2. In two persons I have been obliged to open the bladder above the pubes; one, two years, and the other, one year after the Bottini operation, for the removal of stone from diverticula. In each of these cases there had been a shortening of the urethra and a vast improvement in the facility with which instruments could be passed into the bladder, and in one of them (Schickler) there had been such steady improvement in urination that even during the symptoms of stone it was found that the catheter was needed only for purposes of treatment. At the time of the lithotomy the grooves could be distinctly felt, and the reduction in the size of the intravesical portion of the prostate, which had been ascertained by the searcher, could be verified by sight and touch. 3. A specimen which was removed from a patient who died suddenly from a cerebral clot three months after the operation, who had been entirely dependent upon his catheter, no spontaneous urination having taken place for a year, and who immediately after the operation resumed normal urination and never used his catheter again, shows the atrophy which has taken place in the intravesical portion where the incisions were made by the Bottini operation, whereas the *extravesical* portion shows no change. 4. Two of my patients have reported to me a few weeks after the operation that, although coitus was possible, there was no ejaculation, which certifies to me that the contraction has been sufficient to occlude the ducts, for in neither of these cases was the incision carried so far forward as to affect the *veru montanum*.

My anatomical deductions in these cases may not be correct, but, added to the other facts, seem to me worthy of consideration, although not conclusive.

That the tone of the bladder may be restored, even in cases of great laxity and weakness of the muscular wall, is evident, but for this purpose, besides the tonic effect of applications of nitrate of silver to the mucous membrane, it is advisable to instruct the patient as to judicious emptying of his bladder, and also to obtain the aid of skilful applications of the faradaic current. In the patient whose cystoscopic picture I have narrated to you the effect of treatment was conspicuous.

The operation was done on October 9, 1900, and, although he was enabled by it to urinate spontaneously, he had still six or seven ounces of residual urine; but under electrical treatment by an expert the power of his bladder was restored, and on April 3, 1901—my last note—he was able to void all of a measured quantity of fluid injected into his bladder. There is a necessity for continuous treatment of these cases until all infectious material in the urethra, the sinuses of the prostate, the seminal vesicles, and the bladder shall have been extended. It should be remembered that these cases usually come to us with chronic catarrh of all these regions, and that prior to the operation the very necessity of using the catheter maintains a supply of infectious material. This was illustrated to me by two cases of spontaneous epididymitis which occurred in individuals who had thrown away their catheters, and in whom the inflammation of the epididymis began without relation to the use of the catheter even for treatment. In one of these individuals the attack followed sexual hyperæmia, and in the other apparently after exposure to cold. One of them was four months and the other five months after the operation. Their urine, although voided spontaneously, still contained flocculi of epithelium and pus, and material of the same character could be expressed from their prostate and urethra.

Up to the present time I have had in my practice forty-two operations (my associates, Dr. Pedersen and Dr. Squier, having done five of these). Over 60 per cent. of the subjects have thrown away the catheter, about 20 per cent. have an increased amount of spontaneous urination, and 20 per cent. received little or no benefit. There have been three deaths directly attributable to the operation. Two of these were from sepsis, and the other was from shock.

A Dusting Powder for Sudamina and "Prickly Heat."—Dr. Edward M. Thompson, of New York, informs us that he has found the following combination very efficient, especially in children:

℞ Bismuth subnitrate. }equal parts.
Sodium bicarbonate, {
M.

MENTAL DISTURBANCES IN THE COURSE OF CARDIAC DISEASE.*

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The great diversity of psychical disturbances, both in degree and form, which often complicate cardiac affections is one of the reasons that the real character of these disturbances is not infrequently overlooked by the general practitioner, who more than any one else is concerned with the handling of this class of diseases. Yet, inasmuch as the liver, the kidneys, the intestines, and the other organs of the body become so widely altered in their function under the influence of a more or less pronounced pathological condition of the heart, we must be prepared to meet even more often with similar aberrations in an organ so delicate in its structure, and so largely dependent on the circulation, as the brain. The attention of the general practitioner having been called to the subject, some of us will surely recall in our experience cardiac cases where intercurrent complications of the brain have escaped a more detailed observation, either on account of a lack of familiarity with these indirect manifestations of an unbalanced heart or because the exhaustive effects of the primary disease and suspected complications of another nature, such as uræmic poisoning, etc., had led to the overlooking of the fundamental cause of the observed nervous and mental symptoms.

Of the several cases, in my own experience, of psychoses in the course of cardiac disease, I consider the following as very illustrative:

A married lady, about forty-five years of age, in comfortable circumstances, well built, intelligent, still menstruating regularly, and perfectly normal mentally, had been suffering from severe recurrent articular rheumatism for nearly ten years. Endocarditis, with all its consequences, followed, and led to a condition of health that through all these years had been to the patient a period of almost continual invalidism. I must mention in this connection that the popular prejudice against great altitudes in valvular disease did not find a confirmation in this special instance. Several attempts to remove the patient to different places on the Atlantic and Pacific coasts, also a trip to Europe, were followed by such an alarming aggravation of her condition, that further experiments in that direction had to be entirely given up, the woman feeling more comfortable in Denver than in any of the localities where she had sought relief.

I saw her first at the height of an attack of disturbed compensation of the heart. It was a case of double valvular damage, of insufficiency of both the aortic and mitral valves. The patient

*Read at the annual meeting of the Colorado State Medical Society, Denver, Colo., June 18, 1901.

was extremely cyanotic; dyspnœa, general dropsy, congestion of the lungs, stomach, etc., scanty urine and slight albuminuria, and a rapid and very irregular pulse were the most prominent clinical features of the distressing condition. A few weeks' energetic treatment with theobromine salicylate and digitalis, frequent administration of large doses of calomel, an ice bag over the region of the heart, and an appropriate diet restored the patient's health to such an extent that she could freely walk around, visit her friends, and even attend to light housework. All of a sudden a change set in, brought on by a severe cold that the patient contracted during the wet season. The cold subsided in a few days, but symptoms of disturbed circulation gradually began to come to the front. For several days her condition did not present any alarming symptoms at all. We could, however, even at that time notice a certain change in the disposition and conduct of the patient. Reasonable and easily manageable up to the period of the present illness, she now became cross, peevish, irritable, and extremely obstinate. A trained nurse was emphatically rejected by her. She refused to take medicine, quarreled with those around her, wanted to be left alone, and treated every one in a most unfriendly manner. She would keep her eyes fixed in one direction as if absorbed in meditation, and would answer questions in monosyllables with a marked effort. At other times she showed signs of extreme, uncontrollable restlessness and excitement. Perfect insomnia which did not yield to large doses of bromides completed the picture of this complicated condition that I had to cope with. The urine of the patient was closely watched, but nothing extraordinary could be detected.

One day I was told that the patient had been unusually excitable and irritable during the whole forenoon. She was found in her nightgown, sitting in a chair in the middle of the room, oblivious to her surroundings. When addressed, she threatened to jump out of the window if not left alone. Gradually she became more quiet, but more reticent and suspicious, than before. She was still in the same state when I called in the evening. The attempt to urge her to take medicine was a fruitless task. The exhausted woman needed sleep most urgently, not having had any rest for nearly three days and three nights. Having previously tried without success all kinds of sedatives, I finally took refuge in morphine, which is so highly praised for this condition by Allbutt, Balfour, and other eminent clinicians. Only one eighth of a grain was administered subcutaneously, with the intention to repeat the dose after a while if necessary. The effect was really remarkable. In ten or fifteen minutes the patient was fast asleep. Her respiration became quiet, the pulse stronger and more regular than it had been for days. Six hours later, I was hurriedly summoned to the house, to find my patient dead. The catastrophe came unexpectedly. She suddenly awoke, gasped for breath, fell back on her pillow, and was gone.

An undoubted case of acute transitory mania in a child, eight years old, with chronic valvular

endocarditis, during an attack of failing compensation, fortunately did not take such a sad termination. Here, bromides alone did their duty in a very gratifying manner, the little patient completely recovering from the spell in a few days.

I know of a case of mitral insufficiency that had been under my care for some time in which the patient, a man forty years of age, committed suicide in a fit of melancholia. The fact was confidentially disclosed to me a year later by the patient's wife. During a fit of mental depression, and while left alone in the room, he swallowed the contents of a bottle of carbolic acid, which was afterward found empty under the blanket.

There is no consensus of opinion among clinicians as to the causal relation between the abnormal function of a diseased heart and the mental disorders that may incidentally occur. Post-mortem examinations have not thrown much light on the subject; nor has clinical experience so far been able to establish the connection between the special variety of mental deviation on the one hand, and a pathological heart on the other. It nevertheless appears to be a reasonable conclusion that a disordered circulation, bearing heavily on the nutrition of the brain, must eventually be productive of abnormal mental symptoms. Even admitting, on the authority of Foster¹ and Landois², and other physiologists, that the absolute quantity of the blood in the brain is very little, that the interchange between the blood and the nervous elements and the metabolism of the brain-substance are also small, it is the extreme sensitiveness of the organ and the complexity of influences which regulate its work, that make here the metabolism important, "not so much on account of its quantity as of its special qualities." The metabolic process in the brain must, however, be sufficiently intense, since, according to Mosso³, the temperature of the blood coming from the brain is slightly higher than that of the arterial blood and of the rectum.

Just as the heart is easily and promptly affected by the slightest of our emotions, so is a similar result in the brain caused by every marked change in the circulation. "The blush due to passion, the lividity produced by intense fear, and a condition of general irritability common to subjects with heart disease, are all examples of mutual connection between the mind and the circulation."⁴ A rise in the arterial pressure produces a more rapid flow of blood through the cerebrum, and

¹Text-Book, 7th ed., part 3, p. 1286.

²Text-Book, 4th English ed., p. 928. In the rabbit the percentage of blood in the brain is only 1 per cent. of the total volume of blood in the body, and not more than 5 per cent. of the total weight of the brain itself.

³Die Temperatur des Gehirns, Leipsic, 1894.

⁴Dr. Huch: *Tokyo Dictionary of Psychological Medicine*, London, 1898.

with it a rise of the venous and intracranial pressure in general.⁶ An opposite effect takes place when the pressure in the arteries has become lowered. Any interference with the blood supply of the gray matter of the brain, either by increase or diminution, leaving aside the quality of the blood, must naturally result in some alteration of the normal activity of the brain. Fortunately, both an overflow and an underflow of the blood in the brain are automatically kept under control by the cardio-inhibitory centre of the medulla oblongata, and by other regulating mechanisms. This arrangement, although proving perfectly adequate under normal conditions, must decidedly suffer when the heart loses its equilibrium, and for weeks, months, or years, fulfills its function in a wrong way. According to Dr. Hack Tuke,⁶ it is an established fact that certain districts are more productive of heart disease than others, and in the asylums connected with these districts mental affections are more prevalent than in other institutions of that kind. With the frequency of cases of cardiac diseases, it is rather astonishing that the records of concomitant mental manifestations are so limited in proportion. We must think, then, of an innate individual power of resistance of the brain substance that protects the vast majority of cardiac patients from this complication, while some of them respond easily with their mental apparatus to the vicious effects of a heart that fails to supply it properly with the needed food.

The character of mental disturbances in cardiac disease will largely depend on the altered circulatory relations inaugurated between the heart and the brain by the specific pathological condition of the former. Lesions of the different valves, bearing in different ways on the distribution of the blood and on the velocity of the blood-flow in the cerebral organs, will affect differently their nutrition and function, and consequently produce a diversity of mental aberrations. Thus, in mitral incompetency, where the recurrent flow of the blood is constantly meeting with an obstruction, venous engorgement or passive hyperæmia will take place. Any mental disorder observed under these circumstances ought to be different from those accompanying cerebral anæmia, as, for instance, in the case of a narrowed aortic orifice. Clinical experience seems to confirm these *a priori* deductions. In valvular insufficiency of the mitralis, mental depression, gradually developing into simple and agitated melancholia, is the predominant form of psychosis met with. The patient appears reticent, downhearted, apathetic, and

dissatisfied with both himself and his surroundings. Instances of suicide are not infrequent in this condition, decidedly more so than in affections of the aortic valves. Altogether, psychoses are more frequently observed in connection with aortic defects than in failure of the mitralis. The symptoms of mental disturbance here partake more of the nature of mania, and resemble the delirium of alcoholic pneumonia. Extreme irritability, excitement, fretfulness, restlessness, inconsistency, querulousness, make it sometimes very difficult to control the patient. The contrast between his usual ways of acting and thinking, and the observed change in temper not infrequently amounting to violence, is so striking, that suspicions of insanity even enter the mind of those who take care of him. These suspicions are often too well founded, and become confirmed in the outbreak of a real mania with all the distressing features and consequences of this special form of psychosis. Troublesome and exhaustive sleeplessness is especially noticeable in aortic insufficiency.

A strict correspondence between the variety of heart disease and the form of insanity, is naturally not to be expected, although Mickle⁷ has made the attempt to divide the different cardiac affections in nine groups, according to the more or less typical mental disorders that they are apt to produce. It is not always that these disorders run the same course in the cardiac affections with which they are connected. Almost every case of mania, as has been rightly said, commences with a stage of depression. Hypochondriacal ideas may gradually and ultimately develop into delusions, general irritability turn into maniacal excitement. A classification of mental and cardiac disturbances in their respective dependence on one another would, therefore, prove a difficult and ungrateful task.

Looking over the literature of the subject, in which the bulk of contributions belongs to the alienists, we find that the mental disturbances in cardiac patients have not escaped the attention of both the specialists and the clinicians in general. Aside from the standard text-books on medicine which devote from a few lines to half a page to this complication, mention of it is, of course, largely made in most of the works on mental diseases. Altogether, one gets the impression that not much importance is attached to the direct influence of valvular and heart disorders on the appearance and development of abnormal mental conditions. Osler⁸ says: "In gen-

⁶ American Text-Book of Physiology, 1896, p. 735.

⁷ *l. c.*, p. 178.

⁷W. Julius Mickle, *Insanity in Relation to Cardiac and Aortic Disease*. Gulstonian Lectures. *Lancet*, 1888, p. 911; also Tuke's *Dictionary of Psychological Medicine*.

⁸*Principles and Practice of Medicine*, 3d Ed., p. 713.

eral medical practice we seldom find marked mental symptoms (in connection with heart affections), except toward the close of the disease, when there may be delirium, hallucinations, and morbid impulses. We do meet insanity, breaking out in patients with aortic and mitral disease, in the stage of compensation, which appears to be related definitely to the cardiac disease." In the most excellent French cyclopædia of Charcot, Bouchard, and Brissaud⁹, in the chapter on mania, melancholia, and other forms of psychoses, cardiac disease is not enumerated among the ætiologic factors occasionally responsible for these mental conditions. In the chapters on anæmia and hyperæmia of the brain, Brissaud¹⁰ considers it probable that circulatory derangements originating from heart disease may *sometimes* have something to do with insanity, but he adds that there is not always foundation in the belief that the mental excitability in these cases is actually associated with congestion. Yet, the expression *folie cardiaque* is of French origin (Lasègue, Huchard), and designates the acute delirium observed in connection with cerebral congestion when the heart is asystolic. Savage¹¹ is more explicit on the subject. He says: "With aortic, or both aortic and mitral disease, the symptoms may be either melancholic or maniacal; but I am inclined to think that with simple aortic disease, with hypertrophy of the left ventricle, it is at least not uncommon to meet with acute mania and exaltation of ideas. In doubtful cases of men with exaltation of ideas, I expect to find post mortem hypertrophy of the left ventricle and atheroma of the aorta with more or less brain change."

Most of the writers express themselves very cautiously with regard to the close relation between mental and cardiac disturbances. That incompetency of the aortic valves is more liable to affect the brain than pathological conditions of the other valves of the heart, is recognized by all the authors. Allbutt¹² states that even in the latent and stealthiest phases of aortic insufficiency we may note certain mental perturbances which are not unknown in other heart diseases. The delirium that is here observed is usually one of *place*, the patient acting under the delusion that he is in a strange house, or far away from home. Recently, Telgmann¹³ reported five cases in which the delirium was very active and in each case marked by the delusion that the patient was among strange surroundings and prevented from returning to his home.

The correlation between insanity and cardiac disease has been studied by many, thus by Fauconneau,¹⁴ Ball,¹⁵ Vallin,¹⁶ and Blandford.¹⁷ Eichhorst¹⁸ describes a condition, termed by him "toxæmic delirium," which he has observed in cases of uncompensated valvular disease, when the use of digitalis was followed by sudden polyuria and a complex of violent mental symptoms. They gradually subsided when the diuresis returned to the normal. He believes that the mental disturbances in such cases are due to the absorption of a toxic substance present in the drop-sical blood. Riegel¹⁹ also reports cases of that kind with extensive dropsy where delirium of a character similar to that in Eichhorst's cases occurred simultaneously with the removal of the dropsy. He corroborates the hypothesis of intoxication by substances contained in the drop-sical fluid. Telgmann²⁰ denies these toxic influences, and is inclined to attribute the mental outbreaks to a sudden overstrain of the heart.

Mania and melancholia seem to be altogether the most common forms of mental alienation in connection with cardiac diseases. It is strange that these two manifestations are also the most prevalent in cases of so-called *puerperal insanity*. Another analogy between these two predisposing causes of mental disturbances is to be found in the sudden onset of the symptoms in both of these diseases; also in the favorable prognosis, and in some other particulars which need not be further dwelt on here.

The causes which lead to puerperal insanity are as yet an obscure field of theories, guesswork, and controversy. That a normal process, which the great majority of women have from time immemorial gone through without any damaging consequences to their mental health, should in certain easy and otherwise uneventful cases be followed by severe mental disturbances, is at first sight incomprehensible and, therefore, a matter of great interest to the medical student. It is not, as we should expect, in *primiparæ* that we find the largest percentage of these occurrences. Here, the novelty of the event, the apprehension of the possibly grave results of the pregnancy, the psychic effects of the awakened instinct of motherhood, and last, but not least, the trials during parturition itself, could to a certain degree serve

¹⁴*De la folie cardiaque et des troubles psychiques dans les maladies du cœur*, Paris, 1890.

¹⁵*De la folie cardiaque, Médecine moderne*, July 10, 1890.

¹⁶*De la nature du rapport qui existe entre les affections du cœur et celles de l'encéphale, Gazette hebdomadaire de médecine*, 1865.

¹⁷*Insanity, in Twentieth Century Practice*, Vol. XII.

¹⁸*Deutsche medicinische Wochenschrift*, 1898, No. 25.

¹⁹*Deutsche medicinische Wochenschrift*, 1898, No. 51, Vereins-Beilage.

²⁰*L. c.*

⁹*Traité de médecine*, Paris, 1894, Vol. vi.

¹⁰*L. c.*, p. 134 and 140.

¹¹*Allbutt's System of Medicine*, Vol. viii., p. 404.

¹²*System of Medicine*, Vol. v.

¹³*Deutsche medicinische Wochenschrift*, May 11, 1899.

as ætiological factors of this complication. In the experience of Bevan Lewis²¹ only 32.3 per cent. of cases of puerperal insanity were in primiparæ. Hoppe²² found the proportion as high as 45 per cent. The usual percentage given by authors is between 30 and 35. Nor do those cases of pregnancy consequent on *illicit relations*, where the shame, the dread of publicity and of social ostracism, hold the woman under a great mental stress, figure as a predisposing cause of puerperal insanity. Out of the 112 cases collected at the Norristown Asylum of Pennsylvania, *not one* of the women confined was unmarried.²³ Morel²⁴ states that puerperal insanity seizes the virtuous mothers of families even more frequently than the women who, especially in Paris, find so easily the means of concealing their shame and the fruit of their illegal love. While Clouston²⁵ found about 25 per cent. of his cases to occur in illegitimate pregnancies, in Edinburgh the average rate of illegitimacy was only about 10 per cent. To make *septicæmia* responsible for the insanity, seems also to be groundless. In true septicæmia, ushered in with the usual signs of puerperal fever, insanity is a rare occurrence.²⁶ Puerperal insanity, furthermore, is equally met with in nervous women as in perfectly rational patients that are free from any hereditary stigmata.

Is it not, therefore, obvious that, besides the enumerated predisposing causes, some *special cause* must be looked for to explain the occurrence of puerperal insanity, particularly in those cases where the former can be safely excluded, and where the outbreak of the disease is least expected?

In consequence of the greater activity of the circulation, the arterial tension is generally increased during pregnancy.²⁷ The veins, too, are fuller,²⁸ which is manifested by the frequency of varicose enlargements. The propulsion of the blood being, therefore, effected by the aid of an increased strain of the heart, we find *cardiac hypertrophy as a constant phenomenon of pregnancy*.²⁹ Both ventricles undergo slight eccentric hypertrophy, the left more than the right. The increase in weight of the heart (8.8 per cent. of the

normal weight) continues with the duration of pregnancy up to the day of labor, and is followed by a reduction, which is rapid at first and more slow afterwards.³⁰ The cause of the hypertrophy is to be sought in the increased work thrown on the heart in supplying the placental circulation, the uterus, and the mammæ with blood. Moreover, pregnancy increases the quantity of the blood, as has been demonstrated in pregnant dogs and sheep. (Spiegelberg, Gescheidler, Heissler.)

As in the uterus, the involution of this cardiac hypertrophy may, in exceptional cases, be imperfect and become permanent under the strain of rapidly following pregnancies. Hypertrophy of the left heart tending to increase the diameter of both the mitral and aortic valves, the condition of valvular insufficiency is thus easily explained. *In a small number of cases valvular disease is, indeed, traceable to pregnancy and to the puerperal state.*³¹

Latent cardiac disease of rheumatic origin antedating pregnancy frequently reveals itself first during gravidity. "A crippled heart may cause no serious disturbance in the non-pregnant condition, but when pregnancy occurs, it is unequal to the increased work thrown upon it, and cardiopathic accidents may set in."³² The time when gravidocardiac accidents begin or become intense is from the third to the sixth month, generally in the fifth. In labor the danger from cardiac disease is greatest.

The physical signs of simple non-malignant endocarditis are notoriously not always characteristic.³³ The great majority of the cases are latent, and there is no indication whatever of cardiac mischief. Experience has taught that endocarditis, and even insufficiency of the aortic valve, are frequently found in persons in whom they had not been suspected during life.

The preceding considerations lead to the two following conclusions: (a) That the heart in a number of women during pregnancy and the puerperium is subject to hypertrophy, which may become permanent and pathologically affect the valves; and (b) that latent cardiac disease of rheumatic and other origin may first come to the front during pregnancy or in and after labor.

If we only admit that cardiac disease in general is, under certain conditions, capable of producing mental disorders of a typical nature, then could not puerperal insanity, in some obscure cases at least, be brought in connection with either a la-

²¹Insanity at the Puerperal Period Wood's *Medical and Surgical Monographs*, Vol. vi, p. 300.

²²Archiv. für Psychiatrie, 1893.

²³J. H. Lloyd, *Insanity and Dis. of the Nerv. System in the Child-bearing Woman*, *American System of Obstetrics*, 1889, Vol. ii, p. 558.

²⁴Traité théorique et pratique des maladies mentales, Paris, 1856, p. 106.

²⁵Chronic Diseases of Mental Diseases, 1884.

²⁶Bevan Lewis, *loc. cit.*, p. 500.

²⁷E. H. Danty, *American Gynecological and Obstetrical Journal*, February, 1897.

²⁸Th. Parvin, *The Science and Art of Obstetrics*, 1895.

²⁹James T. Whittaker, *Diseases of the Heart*, in *Twentieth Century Practice*, Vol. IV., p. 90.

³⁰Dressel, *Münchener medicinische Abhandlung* n. 1861.

³¹Pepper, *Text-Book of Medicine*, 1894, Vol. ii, p. 279.

³²Th. Parvin, *loc. cit.*, p. 420.

³³Osler, *loc. cit.*, pp. 702 and 712.

tent or previously diagnosed affection of the heart?

In cases of puerperal insanity where a diseased condition of the heart was certainly known to exist, the cardiac affection, so far as I can judge from the literature, has never been given any importance in connection with the coincident puerperal psychosis. To cite an example: In his recently published *Clinical Lectures*, Kraepelin³⁴ describes three typical cases of puerperal insanity, in one of which there was a history of apoplexy three years previous to pregnancy, and in another there were signs of an enlarged heart with an apical presystolic murmur. Yet he passes these data by without any further comment.

Cardiac disturbances of any kind might be oftener discovered in cases of puerperal insanity if more attention were paid to the condition of the heart in obstetric practice, and thus, perhaps, indirectly contribute to the study of mental manifestations in relation to cardiac disease.

THE OPHTHALMOSCOPIC EXAMINATION FOR KIDNEY DISEASE.*

By EDWARD JACKSON, A. M., M. D.,

OPHTHALMOLOGIST TO THE ARAPAHOE COUNTY HOSPITAL,
DENVER, COLORADO.

In cases of renal disease the ophthalmoscopic examination follows closely in importance the clinical and microscopical examinations of the urine. Noticeable changes are found in fifty per cent. of such cases; and distinct albuminuric retinitis occurs in not less than ten per cent. In these latter cases the ophthalmoscopic appearances are easily recognized, are as pathognomonic of the general disease as any set of symptoms known in medicine, and have the most definite prognostic significance. Of the men showing this symptom in Haab's Clinic, all died within two years. Belt, in 419 collected cases, found that seventy-two per cent. were dead at the end of the first year, and ninety per cent. at the end of the second year. A symptom of such frequency and such significance is worth looking for, and it should be looked for repeatedly, for some of its most characteristic appearances are transient.

To look for it thoroughly requires the use of a mydriatic. The patient usually presents a small senile pupil. The most characteristic changes are apt to be in or near the macula, a region hard to examine thoroughly without the use of a mydriatic, even in young eyes. If the patient is in bed, the difficulty is still further increased, and also the need for the mydriatic. But these pa-

tients are suffering a progressive loss of vision. If you put atropine in the eye, it takes two weeks to get over it. The atropine impairs the sight, and by two weeks the progress of the disease will prevent the recovery of as good vision as was previously enjoyed. The patient, then, will naturally blame the atropine for a permanent loss of vision. A brief mydriatic must be employed. A solution of cocaine, 4 per cent., or euphthalmine, 5 per cent., or homatropine, one fifth of one per cent., should be instilled forty or fifty minutes before the examination is to be commenced.

What to Look for.—The most constant ophthalmoscopic symptom is alteration of the retinal veins. These are dilated and tortuous, especially some of the parts of the small veins which arise about the macula. Other parts of a vein may be hidden in swollen hazy retina, so that the dilated part may look unlike a vessel, but like a hæmorrhage. Next, hæmorrhage may be found anywhere in the retina, it may even extend into the vitreous. The dark red spots that indicate it may be large or small, many or few, or, at times even quite absent.

Swelling and opacity of the retina are usually confined to isolated patches, or to the region surrounding the optic nerve. The color of the patch may vary from a dirty-red to a snow-white, or a gray-blue. The swelling is to be measured by the refraction of its summit. Sometimes it looks like a small detachment of the retina. But actual detachment may also occur. White spots arise from fatty degeneration. These are regarded as most characteristic when arranged in rows, radiating from the centre of the macula. Large spots are confined to this part of the fundus or to the neighborhood of the optic disk, but small ones may be scattered in all parts of the eye-ground. White streaks are occasionally seen along the arteries or may wholly replace them. The optic nerve is often reddened and opaque. It may even be swollen until it exactly resembles the choked disk of brain disease.

Rabelais and Galen.—As an addendum to the very interesting article of Dr. Austin Flint in our issue for June 29th, it is worthy of note that the *editio princeps* of Galen, published by Aldus, in 1527, in five folio volumes, has recently been unearthed in the library of Sheffield University College in England. Three of these volumes bear the autograph of Rabelais; volume two, for instance, being inscribed "Francisci Rabelesi καὶ τῶν αὐτοῦ φίλων." It is supposed that this was probably the copy used by him in his lectures on Hippocrates and Galen at Montpellier, in 1530 and 1531, and also in the compilation of his work on these authors, published in 1532 at Lyons.

³⁴Einführung in die psychiatrische Klinik. Leipsic, 1901, p. 135.

*Read before the Colorado State Medical Society, June 19, 1901.

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the subsequent questions are as follows:]

III.—How do you treat Colles's fracture of the radius? (Answers due not later than August 12, 1901.)

IV.—Which form of vaccine do you prefer, dried lymph or "glycerinated" lymph? Give your reasons without mentioning producers' names. (Answers due not later than September 9, 1901.)

V.—How do you treat habitual constipation? Proprietary preparations must not be mentioned. (Answers due not later than October 10, 1901.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested that the answers be short, no one answer to contain more than six hundred words. We shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers as original communications.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted this month has been awarded to Dr. Adrian Landry, of Painscourtville, La., whose paper appears below.

PRIZE ESSAY, SERIES NO. II.

WHAT IS THE BEST WAY OF PRESCRIBING CALOMEL AS A PURGATIVE?

By ADRIAN LANDRY, M.D.,

PAINCOURTVILLE, LA.

In discussing this question, we must not overlook the constitution of our patients. We must certainly make a distinction between our Southern negro, whose liver is always torpid, as much from climate as from bad whiskey, and our white population. A mode of administration which sometimes fails to produce any effect in the former class would no doubt produce unhappy and undesirable results in the latter.

In white patients of ordinary constitution, for the emptying out of the liver and intestinal tract, I prescribe calomel in small repeated doses, half-grain triturate tablets every half hour until four grains are taken, beginning in the afternoon at about 4 o'clock. The triturates contain no sodium bicarbonate. This is followed by a Seidlitz powder the next morning. I administer it preferably in the evening, for the reason that, calomel taking about ten hours to act, the purging occurs in the morning hours, a desirable time among all patients. In regard to meals, a very

light supper and breakfast are allowed—milk, coffee, tea, toast, crackers, etc.

The physiological action of calomel is still a matter of dispute among physiologists. According to most observers, calomel has no effect on the biliary secretion, not increasing it, as is generally supposed. That it empties the liver of bile, I am inclined to believe. Furthermore, the chemical changes to which calomel is subject in the stomach and intestines, and its way of acting, are also matters of opinion. I will say that my theory of its action sides with that of Wood and others who state that calomel, prior to its action upon the liver, escapes into the intestines, where the alkaline juice decomposes it and precipitates the gray oxide of mercury, which acts as such. This is the more probable result, as calomel acts more like blue mass than corrosive sublimate.

In view of this theory, small repeated doses are more efficient than a single large dose, as the alkaline juice in the intestines is so weak as not to be able to decompose more than a very small portion of a large dose into gray oxide, whereas small repeated doses are more apt to be all decomposed. In combining calomel with sodium bicarbonate the alkaline carbonate helps the intestinal juice in the decomposition. I do not generally use sodium bicarbonate in the triturate tablets, for the reason that these cannot always be obtained fresh. On keeping them a long time, they undergo a change and become of a gray color, losing the hepatic effect which a recently prepared powder always possesses.

In using small repeated doses the danger of saturation is minimized and rendered almost nil. In fact, I have never as yet heard of a case; whereas a large dose is apt to produce the undesired effect in some susceptible patients. To be on the safe side, I always administer a saline about ten hours after the calomel, even when given in small repeated doses, to clean out the intestinal canal of whatever undecomposed calomel may remain. This is particularly imperative where a single large dose is administered. A single large dose of calomel often disturbs the stomach, producing nausea and vomiting, especially when the stomach is already irritable. Here again we see the superiority of the small repeated dose, in the form of triturates especially. These not only do not produce any nausea and vomiting, but tend to quiet an irritable and disturbed stomach, and will be retained when everything else ingested is vomited.

In children I administer calomel in small repeated doses, not in triturate tablets, but in freshly prepared powders, always with sodium bicarbonate and sugar of milk or white sugar to increase the bulk. To children from one to five years old I administer from one to three grains each of calomel and sodium bicarbonate, divided into four powders, one every

hour, beginning at 5 or 6 o'clock in the evening. This is followed by one or two drachms of castor oil in the morning. This is particularly efficient in children passing clay-colored, pasty stools, and in intestinal infection with much straining and bloody, mucous stools.

In patients particularly difficult to purge, as in the majority of our Southern negro element, and in plethoric and sthenic individuals, requiring a thorough cleansing out of the liver, I prescribe calomel in two medium doses, combining it with sodium bicarbonate, powdered jalap, and resin of podophyllum thus:

I℥ Calomel,	}	each. 6 grains;
Sodium bicarbonate,		
Powdered jalap.		5 "
Resin of podophyllum.		¼ grain.

M. Divide into two powders.

S. One to be taken at 8 and the other at 10 o'clock in the evening.

The reason for using the sodium bicarbonate has been stated, *i. e.*, to assist the intestinal juice in the decomposition of the calomel into gray oxide. As to the jalap, I use it as a purgative and to increase the biliary secretion, and the podophyllum to act especially on the liver, increasing the secretion of bile. This mode of administration I always follow with a half-ounce of magnesium sulphate in the morning.

To most of us not conversant with this type of patients this may seem a drastic dose, but I have often seen it produce only two natural stools, acting only as a mild laxative. In such cases I repeat the dose, increasing the calomel and the podophyllum.

ONE SIXTH OF A GRAIN EVERY HOUR.

Dr. John B. Corsiglia, of New York, writes:

The best way of prescribing calomel as a purgative is in small doses, a sixth of a grain for an adult, repeated every hour till twelve such doses have been taken, and always associated with a little bicarbonate of sodium and sugar of milk. A Seidlitz powder should follow. The reasons are as follows: The sodium bicarbonate prevents the griping action of the calomel. Sugar of milk helps its eliminating power. Calomel acts only on the upper part of the small intestine. When the upper part of the small intestine is sluggish, from obstruction to the intestinal glands, and when the bile flowing into the small intestine cannot therefore be eliminated, giving rise to pancreatic and hepatic turbidity (biliousness), calomel in sixth-of-a-grain doses repeated every hour, and associated with the substances mentioned, acts better than if given in a large single dose. The reason is that we desire a slow but steady action of

the calomel upon the intestinal glands, so as to allow of the gradual escape of the bile. With a single large dose we overstimulate those glands, give them more work to perform than Nature has designed for them, and the result is that they are left sluggish and weak, with a repetition of the trouble in a short while. Then, again, if a large dose is given, this fails to act after a short while. I have known of a case in which an individual who always was in the habit of taking ten grains of calomel, but after a time it failed to produce any movement of the bowels, although a sixth of a grain, repeated every hour, was always followed by numerous movements and by a sensation of well-being for a long time afterward.

On the other hand, when, as after childbirth, we have reason to suspect slight intestinal sepsis, with accumulation of gases, constipation, headaches, and a rise of temperature to 101° or 102°, a single five-grain dose of calomel with an equal quantity of bicarbonate of sodium acts better. We here desire a quick action for two reasons: 1. Because the puerperal state is one of lowest resistance. 2. Because the quicker we eliminate the poison from the intestine, the less fear we have of auto-intoxication. But in all other cases a sixth of a grain is preferred.

A SMALL DOSE EVERY FIFTEEN MINUTES.

Dr. Moses Keschner, of New York, says:

The small and repeated dose of calomel is preferred: 1. Because it has been found by physiologists that calomel entering the stomach escapes unchanged into the alimentary canal, and is there decomposed by the alkaline juices and dissolved by the fatty matters always present, practically forming soaps. A small quantity of calomel coming into the duodenum is at once converted into the black oxide, and freely exhausts all the solvent power of the alkaline juices, which may be unable to take up any more rapidly a large than a small amount of the drug, and the major portion escapes unchanged; and, inasmuch as only the calomel which is changed into the black oxide is active, and as we can obtain this result with a small quantity of the drug, it seems most rational to employ such small quantities, thus avoiding the danger of pyalism attendant upon the administration of a single large dose. 2. The system is impressed much more rapidly by frequent small doses than by a single large dose. 3. Clinical experience has shown that in small doses of one, two, or three grains calomel purges some patients briskly, and in these individuals large doses, although they do not proportionately increase the evacuation, occasion spasmodic pain in the stomach and bowels.

Size of Various Doses.—From a tenth to half a

grain may be given every fifteen minutes or every half-hour until one or two grains have been taken. Twelve grains may be given. Children bear proportionately larger doses.

Time of Administration.—If a single large dose is given, give it before the patient goes to bed, because it takes from six to ten hours to act, but if small and repeated doses are given, give it during the day, so as not to disturb the patient's rest. With regard to the meals, it may be said that an empty stomach or a small proteid meal enhances the action of the drug, while a full stomach or a large proteid meal retards it. (*Handbuch der allgemeinen u. speziellen Arzneiverordnungslehre.* C. A. Ewald, 12th ed., p. 419.)

The advantage of combining with calomel sodium bicarbonate is to increase the alkalinity of the contents of the duodenum and thus aid the intestinal juice in the reduction of the salt to the black oxide.

The reasons why a saline aperient is given after calomel are: 1. In case the calomel does not act, the saline will act in the capacity of another cathartic. 2. Most salines being hydragogue cathartics, they produce large watery movements, and thus clean out the intestinal tract, at the same time carrying off any calomel that may remain in the intestinal tract (not having been acted upon by the intestinal juice), thus avoiding possible mercurialization in those who have a marked susceptibility to the drug.

CALOMEL SHOULD BE COMBINED WITH OTHER DRUGS.

Dr. Edward M. Merrins, of Newark, N. J., writes:

Confine Its Use to Appropriate Cases.—Calomel is (1) stimulant to muscular fibres, thus causing catharsis by increased peristaltic action of the intestines and inducing a more rapid flow of bile by its action on the muscular tissue of the bile-expelling mechanism; (2) stimulant to glandular action; (3) antiseptic. Hence it is indicated in biliousness, jaundice, malarial and other fevers, and whenever the biliary discharge is deficient and portal congestion exists, also in intestinal diseases dependent on deficient glandular action or putrid decomposition of food. (Where the intestinal walls are the site of infection, as in typhoid fever and dysentery, its antiseptic action is not so great.) As its later action is (4) sedative in such conditions as acute gastric catarrh, "the best purgative is calomel in the form of powder—tasteless, never rejected by the stomach, disinfectant, cholagogue." It is also invaluable in the irritability of the bowels and loss of appetite often met with in protracted cases of disease such as pulmonary phthisis.

Give it in Combination.—Calomel is more effective if combined with other drugs. As glandular

stimulants we add podophyllin, ipecac, etc.; to secure greater rapidity of action, jalap, colocynth, gamboge, etc.; to assist its action generally, sodium bicarbonate. This last substance, like calomel, has little or no action on the functional activity of the liver cells; it is valuable given with calomel because it neutralizes the acid products of decomposition, dissolves and removes mucus from the gastro-intestinal walls, thus promoting healthy action, and, being sedative, prevents the griping that occasionally follows calomel when given alone. This griping is really due to acridity of the bile poured out, not to the calomel.

Follow with a Saline.—Salivation may occur whenever mercury is given. Even small doses may cause it if there is an idiosyncrasy. Therefore, unless given with more powerful cathartics, calomel should generally be followed six hours later by a saline aperient. In this way its specific action is not interfered with and the unabsorbed drug is swept out of the system. If purgation does not occur within twenty-four hours after the administration of a large dose, a saline must certainly be given.

Calomel may be given in a single dose of from three to ten grains or in small doses of from a tenth to a sixth of a grain every fifteen minutes until from one to three grains have been taken. Where the system responds readily to drugs, as in delicate women and children, or where there is intestinal irritation, as in diarrhoea, and we further desire to secure its prolonged antiseptic action, the small, frequently repeated dose is to be preferred. Thus, in cholera infantum from one fortieth to one thirtieth of a grain every fifteen minutes until two or three grains have been administered gives as good results as any other method of treatment. Where prompt action is necessary, as in severe malarial fevers (quinine often failing to act beneficially until the system has been purged by a mercurial), and in strong adults where simple catharsis is the main object, the large dose should be given, followed by a saline.

The advantage of the large dose is the greater certainty and promptness of specific action; the disadvantage is the risk of excessive action or salivation. The advantages of divided doses are gentleness of action and no danger of pyalism; the disadvantages are the tediousness of the administration, occasional nausea, and the uncertainty, when an evacuation does occur, whether it is due to the calomel or to the saline that followed it.

Time of Administration.—This will depend upon the condition to be relieved. In urgent cases it should be given at once, regardless of the time when catharsis will occur. Otherwise give it at bedtime and let a saline be taken the following morning be-

fore breakfast. In the conditions for which calomel is usually prescribed, the patient will be all the better, and the drug more effective, if it is taken fasting or near the end of digestion, and if only light food is taken while it is in the system.

LARGE DOSES FOR BILIOUSNESS, SMALL ONES FOR DIARRHŒA.

Dr. B. Ray Browning, of Littleton, N. C., writes:

The answer to the query would, it appears to me, depend upon just what conditions are being treated and what is desired to be brought about. The special merit of mercurial purgatives is their cholagogue properties—*i. e.*, to increase the discharge of bile. Calomel possesses this property to a marked degree. This, and its being free from taste and easily retained when other purgatives are rejected by the stomach, make it a purgative of exceptional value. Calomel acts upon the upper part of the alimentary canal, hence it is my custom to follow it with some other general purgative, such as Epsom salts, to hurry forward from the upper canal that which the calomel has carried down from the upper bowel. Now, as to the best way of prescribing it as a purgative, that is determined in my practice by the existing conditions. In that condition generally called biliousness, where we recognize the clinical, though not the pathological, condition, calomel exerts its peculiar beneficial influence at once, curing the condition. I give ten grains, sometimes twelve or fifteen, at night, followed by a tablespoonful of Epsom salts early the next morning. In this condition experience has demonstrated that the single large dose is indicated, whereas in that condition of diarrhœa with acrid, burning stools and some tenesmus, it is better to give one grain as a purgative and corrective at night for several nights. In the diarrhœas of infancy (not cholera infantum) we get the best purgative action of calomel by the administration of very small doses, while in older children the dose is correspondingly increased. In typhoid fever it is my habit to give a single large dose of calomel, ten grains the first day, eight the second, and four the third. This entirely relieves the usually loaded bowel, and to a moderate degree antisepticizes the bowel contents, having at the same time a slight antiseptic effect. Give calomel as a purgative at the beginning of fevers for its peculiar derivative effect, and especially in that variety known as hæmorrhagic malarial fever. Of all purgatives, calomel seems to be more indicated than any other, and this is proved by the results obtained. From ten to twelve grains are given every two hours until four such doses are taken. Under such administration the conditions are markedly changed, the bowels are unloaded, the portal circulation is relieved, and its diuretic action is secured. In all these conditions calomel is a use-

ful purgative, hastening waste and causing elimination of the products by the intestines. As a vermifuge for lumbricoid worms, five grains of calomel at night is an excellent purgative, causing their expulsion. There are any number of conditions in which calomel is a useful purgative, but my belief is that the manner of its administration is best determined by just what is being treated, some diseased conditions requiring small, often repeated doses, others a single large dose.

AVOID LARGE DOSES.

Dr. A. E. von Tobel, of Meriden, Conn., writes:

According to Hippocrates, it should be the aim of a physician to give drugs which heal *cito, tuto et jucunde*. Judged by this standard, calomel can hardly be called an ideal drug, for, although it acts *tuto*, it never acts *cito*, and, as most of us can testify from bitter experience, in many cases it does not act *jucunde*. This latter objection can, to a large extent, be overcome by careful and intelligent adjustment of the dose. There is probably no drug in such general use that is so carelessly given as calomel.

In giving calomel, first of all consider the *size of the dose*. Avoid large doses, as a simple purge, or to stimulate the emunctories at the beginning of fevers and infectious diseases, three grains will be a sufficient dose. If constipation is obstinate, give five grains and repeat in five hours if necessary, but do not repeat more than once. If by that time the bowels are not moved by calomel, it is better to try some other drug. In only two classes of patients is it permissible to give large doses: the obese, with sluggish livers, and those having liver affections with jaundice. Here the dose is from five to ten grains. Bear in mind that children will take relatively larger doses than adults.

Shall we give divided doses? My rule is as follows: With children and in cases where the stomach requires medication, give a small dose every hour till the bowels move, in other cases give single doses.

As to the time of administration, in spite of the time-honored custom, I do not give calomel at night where I can avoid it. A large dose given at, say 10 p. m., will usually act about 3 a. m., and no patient enjoys making two or three hurried visits to the closet at that hour. After such an experience they are very apt to change doctors. So, where I can, I give calomel in the morning or during the day, so that its action may not disturb the patient at night.

Shall we combine it with sodium bicarbonate? Personally, I do not, and I fail to see what good the drug can do given in the doses usually prescribed. If given at all, it should be given in larger doses, sufficient to neutralize all the acid of the stomach;

If no movement is obtained in three hours, a high enema is then given which contains warm soapsuds, olive oil, oil of turpentine, and castor oil. In diarrhœa, a quarter of a grain of calomel, with from a half to two grains of extract of krameria and a quarter of a grain of Dover's powder, every one to three hours.

For children from six to fourteen years old: In constipation, calomel, a quarter to half or one grain every one or two hours, or combined with a tenth of a grain of extract of belladonna.

In obstinate constipation, cascarn, half to one and a half grain, may be added, or a tenth of a grain of resin of podophyllum; also an enema should be given if it is necessary. If the constipation is of long standing, a better effect of the drug is obtained if the enema is given first.

In diarrhœa, an eighth of a grain of calomel with small doses of bismuth subnitrate, three grains of extract of krameria, and a grain of Dover's powder, every two or three hours.

For youths and adults: In constipation, a quarter to a grain of calomel with aloin, strychnine sulphate, and extract of belladonna, every three hours. If hæmorrhoids are present, omit the aloin and substitute cascarn.

In obstinate constipation, increase the dose of calomel to two to three grains and also add resin of podophyllum. An enema and massage of the abdomen may also be required.

For diarrhœa, calomel, an eighth of a grain, combined with bismuth subnitrate and extract of krameria, every two to three hours.

Whenever a rapid and a large movement is required, a large single dose of calomel gives the best results.

Therapeutical Notes.

An Ointment for Sunburn.—Dr. Thompson recommends this ointment for sunburn:

℞ Bismuth subnitrate. 1 drachm;
Petrolatum. 1 ounce.

M.

To be spread well over the burned area.

The Treatment of Teething.—Dr. Beal, of Lille (*Nord médical*, May 1st), gives the indications as follows: 1. Incision. 2. Attend to accidents. In nervous accidents of meningitic character, the author advises hot baths at 98.6° F., for five minutes at a time. The child should then be placed in a woollen coverlet until the sudorific action is complete (usually about half an hour). In intestinal accidents nothing is of greater value than a purgative, followed by a water diet. In

the first case the author gives a small dose of antipyrine; in the latter, especially if there is depression, a coffeespoonful of cognac in a tumbler of water. If surgical intervention is impracticable from any reason, from the very beginning frictions with cocaine lotion or mentholated oil are recommended, or with the following:

℞ Syrup of belladonna. 40 parts;
Cocaine hydrochloride. 1 part;
Chloroform. 4 parts.

M.

For Cutaneous Cancer.—Dr. Heidingsfeld (*Journal of the American Medical Association*, July 13th), in a paper read before the Section in Cutaneous Medicine and Surgery, recommends the following:

℞ Arsenious acid, } of each. . . . 5 parts;
Powdered gum arabic, }
Crystallized cocaine hydrochloride. 2 "
Glycerin. 2 "
Water. q. s.

M.

Make a paste, to be applied locally.

For Impetigo Contagiosa.—Dr. Jay F. Schamberg (*International Medical Magazine; Medical Review of Reviews*, May 25th), after removing the crusts by softening with oil or petroleum and washing with soap and water, recommends the frequent application, during the day, of the following lotion:

℞ Corrosive sublimate. 1 grain;
Glycerin. 1 drachm;
Alcohol. 1 ounce;
Water. enough to make 4 ounces.

M.

This should be supplemented at night by the application of some such ointment as the following:

℞ Ammoniated mercury. . . 10 to 16 grains;
Powdered starch, } of each. 2 drachms;
Powdered zinc oxide, }
Petrolatum. ½ an ounce.

M.

Sometimes lesions on the face will yield more quickly to an ointment of

℞ Resorcin. 15 grains;
Lanolin, } of each. ½ an ounce.
Petrolatum, }

M.

Or to the following lotion:

℞ Resorcin. 40 grains;
Boric acid. 40 "
Glycerin. 1 drachm;
Alcohol. ½ an ounce;
Water. sufficient to make 4 ounces.

M.

When the patches are upon covered surfaces they may be painted twice daily with a ten- or twenty-grain solution of silver nitrate. "Fingering" the sores must be prevented.

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THE VERMONT SCHOOL FOR HEALTH
OFFICERS.

Boards of health have shown themselves capable of educating the people in sanitary matters in a higher degree perhaps than any other agency. We have often taken occasion to speak of the good work done in this direction by the Michigan board. That accomplished by the Vermont board's School for Health Officers reaches the people only indirectly, but it is none the less sure to spread among the inhabitants of the State a knowledge of the science of sanitation. It is comparable to the Army Medical School in that it seeks to instruct inexperienced appointees. We are indebted to the board's secretary, Dr. Henry D. Holton, of Brattleboro, for an account of the third annual session, held in Burlington on July 8th, 9th, 10th, and 11th. About 150 health officers were present, representing nearly all sections of the State, and the session was held in a sanitary atmosphere, so to speak, namely, in a hall situated directly over the State Laboratory of Hygiene. The president of the board, Dr. C. S. Caverly, of Rutland, presented a review of sanitary legislation in the State, most of which has been enacted since the year 1886, when the board was created. He expressed the opinion that these schools sufficiently supplemented the other sources of information open to young health officers to make their opportunities as good as were to be found anywhere. However, the author of one of the papers, Dr. W. N. Platt, of Shoreham, asked why the University of Vermont should not establish a course leading to a degree in medical sanitation.

An important paper, entitled *The Relation of Animal Disease to Public Health*, was presented by Dr. Don D. Grout, of Waterbury. The diseases of

the lower animals known to be communicable to human beings he enumerated as glanders, farcy, rabies, malignant anthrax, tuberculous disease, malignant cholera, milk-sickness, small-pox, diphtheria, scarlet fever, the plague, and "possibly typhoid fever in sucking animals." Much of the paper was taken up with the subject of tuberculous disease as derived by man from the bovine family. It is evident that the author did not mean to imply that all the diseases mentioned in his list had their origin in the lower animals.

To be able to identify small-pox at sight is almost a *sine qua non* in a sanitary official; yet there is no other disease of anything like equal prevalence of which the diagnosis is such a stumbling-block to most practitioners of medicine as that of this loathsome scourge. The subject was expounded on this occasion by Dr. E. S. Darling, of Hardwick, and by Dr. J. H. McCollum, of the South Department City Hospital, Boston, whose paper was illustrated by means of stereopticon views of the eruption in the various stages of the disease. It is by no means an easy matter, under ordinary conditions, to teach a man how to recognize small-pox at an early period in its course, for the reason that, happily, the opportunity of studying it clinically is seldom to be had. In the absence of actual cases, we cannot rate too high the value of stereopticon views and of such ingenious colored wax casts as were included in the University of Minnesota's contribution to the pathological exhibit at the last meeting of the American Medical Association.

Several other important subjects were discussed, notably that of water-supplies and that of the disposal of sewage, but we have not space for their consideration here. We cannot close this brief notice, however, without expressing our high appreciation of the Vermont board's work through the medium of these schools, which, we understand, are the first of their kind to have been established.

THE SUPPOSED MICRO-ORGANISM OF SYPHILIS.

Dr. Justin D. Lisle, an American physician who, as he informs us, has been for nearly three years on the laboratory staff of the Institut Pasteur, has sent us a copy of a communication presented before the French Academy of Medicine on July 2d by himself and Dr. Louis Jullien, who is the surgeon of the St.-

Lazare prison for prostitutes. The substance of the communication is as follows:

Although the blood of syphilitic persons has often been found sterile from the bacteriological point of view, the authors, in their quest for the germ of syphilis, decided to make that liquid the subject of their studies, because it seemed to them impossible that it should not contain, free from all impurity, the agent that infected all parts of the organism, and they selected cases of recent infection that had not been subjected to specific treatment. Drawing blood directly from a vein, they examined it at once and also its serum. They observed the presence of a round, granular, highly refractive body capable of traversing the Chamberland filter and endowed with a mobility that was perhaps Brownian. Such bodies had been seen before by other observers, but neither in cultures nor in inoculations upon animals had they ever given any result. Remembering that the coagulated blood of syphilitic subjects did not convey the disease, they were not surprised at this fact. They accounted for it by assuming the presence in the serum of a highly bactericidal body, an alexin. To avoid the formation of this substance, they performed their experiments with the plasma and with the contents of blisters.

The organism which they found they describe as polymorphous, its appearance varying from that of a short bacillus to that of a very long filament, with the extremities vaguely rounded but not swollen into a hammer shape, moving freely under the microscope. It takes all the usual stains well, but it must not be dried in a flame or at a temperature above 140° F. It is well to treat it with alcohol and ether, with a solution of osmic acid, or with a saturated aqueous solution of corrosive sublimate to which acetic acid has been added. It does not take the Gram stain.

Bouillon inoculated with it becomes turbid in twenty-four hours, and in four or five days there is formed a light pellicle which does not extend or become thickened. It slowly liquefies gelatin, and the liquid becomes cloudy and flocculent and assumes a greenish hue. The gelatin is not colored, and its surface remains even. On ordinary gelose and on glycerinated and peptonized gelose it gives rise to a creamy coat which is always moist and of a very slight greenish tinge. It grows very well on glycerinated potato, in the form of a whitish layer,

neither dry nor scaly, which collects in the bottom of the tube. It grows invisibly and without liquefaction on solid serum and abundantly on liquor amnii, and it grows very well on media inoculated with pyocyanous or colon-bacillus cultures. It does not coagulate milk, but precipitates the casein, leaving a fatty layer at the surface; the reaction is alkaline. Its anaerobic development is slow. It never produces pyocyanine or indol. Most of the cultures have a stale, disagreeable odor, but are not foetid.

Passing over the modifications described by the authors as occurring in the germ on its cultivation, we come to their inoculation experiments. Cultures injected into the peritonæum of the guinea-pig gave rise to paralysis, emaciation, abortion, and death in from ten to fifteen days. Young guinea-pigs were killed by the procedure in twelve hours. Injected subcutaneously, the cultures cause loss of hair and the formation of an indurated and ulcerated patch, with engorgement of the neighboring lymphatic glands. Post mortem, the urine is found albuminous, the spleen is contracted, sometimes the kidneys and the liver show fatty degeneration, and the blood is always sterile. In frogs the effects are most striking, and death occurs in thirty-six hours. The fact that the dead bodies of all the animals were sterile led the authors to make an investigation as to whether or not the same state of things was the case with the human subject, and they were not surprised to find that, out of the thousands of post-mortem examinations made in the special hospitals, not one was on record as having been the occasion of syphilitic infection.

A three-day-old culture of the authors' microbe, brought into contact with the serum of a person with active syphilitic manifestations, gave rise to decided agglutination, a phenomenon which was never produced with the serum of a healthy person. Inoculated upon syphilitic subjects, the cultures produced no effect. Finally, and to this capital phenomenon the authors call special attention, the alexin contained in the serum of an animal subjected to repeated injections of syphilitic plasma becomes fixed on the microbe. As is well known, this reaction is due to the intervention of a special sensitizing substance engendered by the inoculation.

The authors' conclusions are as follows: 1. They have found this microbe in syphilis in the florid stage in all instances, and in none but syphilitics.

2. The microbe agglutinates the serum of syphilitic subjects, and does not agglutinate that of healthy persons. 3. In laboratory experiments on animals it gives rise to specific effects comparable to syphilitic manifestations in man. 4. It fixes the special alexin of animals inoculated with syphilitic products. 5. Cultures of it have no effect on syphilitic subjects. 6. As in syphilis of the human subject, the microbe dies when the animal infected with it succumbs. For all these reasons they declare that the bacillus which they have isolated from the blood plasma of syphilitic persons is the pathogenic microbe of syphilis.

The contention of Lisle and Jullien seems plausible, and it is to be expected that their investigations will be followed by other researches that will shortly settle its title to acceptance. Even in the presence of such telling facts as they report, however, it is always well to contemplate the central conclusion with some reserve.

THE LEGAL STATUS OF THE UNBORN CHILD.

In Rhode Island a tenant recently brought suit to recover damages from his landlord for the consequences of the fall of a ceiling which had long been known to both to be unsafe. Portions of the falling plaster struck the plaintiff's wife and brought on premature labor. Not being viable, the child died three days later. The tenant lost his case in the courts, and the judge before whom it ultimately came is reported to have concluded his decree as follows: "In our opinion, one cannot maintain an action for injuries received by him before his birth, and consequently his next of kin under the statutes, after his death, cannot maintain an action therefor." In support of his decision the judge cited a Massachusetts case of a similar nature, though the result was permanent crippling and deformity instead of death, in which the ruling was that, "as the unborn child was a part of the mother at the time of the injury, any damage to it which was not too remote to be recovered for at all was recoverable by her."

All this may be acceptable to the legal mind, but we imagine that the generality of the medical profession will dissent from it *in toto*. Upon what, we should like to know, is the criminality of induced abortion founded if not upon the fact that the child

is murdered in the act? And if the public prosecutor can proceed against the abortionist virtually as for the murder of the child in such a case, upon what principle cannot the next of kin maintain a civil action in such a case as occurred in Rhode Island? "Part of the mother," forsooth! True, the unborn babe derives its sustenance from the mother. So does the nursing infant, but is it, too, a "part of the mother"? If the statutes take no cognizance of negligence resulting in damage to an unborn child, if nobody can sue on the child's behalf in case the damage results in its death, and if an unborn child is held legally to be "part of the mother," the sooner legislation is enacted to do away with these absurdities and enormities the better.

INTESTINAL WORMS AND DISEASE OF THE VERMIFORM APPENDIX.

It may be that a substantial addition to our means of preventing appendicular inflammation is to be found in the use of anthelmintics. E. Metchnikoff (*Bulletins de l'Académie de médecine*, LXV, 3; *Centralblatt für Chirurgie*, June 8th), cites a number of instances in which attacks of such inflammation, even of the relapsing form, subsided on the use of vermifuges. The ova of the worms had previously been found in the stools, and the search for them is urged in all doubtful cases. The action of the worms seems to be mechanical; on the one hand they may block the mouth of the appendix, and on the other they may bore into its mucous membrane, carrying with them pathogenic micro-organisms.

HYSTERICAL UTERINE HÆMORRHAGE.

Among the multitudinous manifestations of hysteria, according to B. Vedeler (*Norsk Magazine for Laegevidenskaben*, 1900, p. 822; *Centralblatt für Gynäkologie*, June 29th), we must include certain cases of uterine hæmorrhage in which physical causes within the pelvis are not to be found. There is often hyperæmia of the vulva, vagina, and uterus, together with enlargement of the last-mentioned organ, the os uteri is patulous, and from it there issues a clear secretion. At first, says the author, the treatment should be by rest in bed, cold applications, and the use of ergotine. If these measures do not answer the purpose, faradaization by the vagina is to be employed; all other ordinary treatment either aggravates the trouble or acts by suggestion.

THE TREATMENT OF LUPUS VULGARIS BY ETHYL CHLORIDE.

Dr. C. A. Dethlefsen (*Hospitalstidende*, January 16; *Treatment*, April), records a somewhat remarkable case of lupus vulgaris of twelve years' duration, in which there was an ulcer on the left cheek extending from half an inch below the infrapalpebral fold to one-third of an inch below the angle of the mouth, and from the ala nasi outward and downward for two and three inches, respectively. The soft parts of the tip of the nose, the nasal septum, and the anterior portion of the nasal mucous membrane, formed a mass of spongy granulations hanging down over the upper lip. The affected parts were frozen with ethyl chloride (without previous scraping) daily for a week, and later every second or third day, and toward the end once or twice a week. The freezing was followed by a rush of blood, with serous transudations which ultimately dried forming crusts. The crust was removed before the next freezing. The photographs taken respectively a week after beginning treatment and after complete cure certainly show a wonderful result, and appear to give promise of a brilliant future to this method of dealing with a most disheartening malady.

THE GASTRIC JUICE OF THE DOG AS A REMEDY.

Dr. Frémont, of Vichy, has given the name *gastérine* to a preparation made from the gastric juice of the dog, obtained through a gastric fistula established for the purpose. At a recent meeting of the Medical Society of the Hospitals of Paris (*Gazette hebdomadaire de médecine et de chirurgie*, July 4th) M. Mathieu reported having observed great benefit and occasionally "veritable resurrections" from its use in cases of dyspepsia. Some of the patients had been so cachectic as to lead to the suspicion that they were cancerous. The gastric "chemism" continued faulty, but the patients were benefited in some unexplained way. Another speaker said that quite the same effects were produced by the use of hydrochloric acid.

Pyæmia Following the Extraction of a Tooth.—According to the *Ohio Dental Journal* for June 1st, Dr. Zanadski, of Warsaw, reports a case of fatal septic pyæmia from the extraction of a tooth. One of the under molars was extracted, in consequence of which the patient's face became greatly swollen, and on the third day rigors with fever came on. After lingering nineteen days, the patient died. At the autopsy, necrosis of the inferior maxillary was found at the point where the tooth had been extracted; the temporal bone was infiltrated with pus, and the dura mater of that side was covered with offensive pus. The soft parts adjacent were infiltrated and the veins were filled with pus.

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera and plague were reported to the Surgeon-General, during the week ending July 19, 1901:

Smallpox—United States.

California.....	San Francisco	June 30-July 7...	1 case.	
Dist. of Col.....	Washington	July 6-13.....	1 case.	
Illinois.....	Chicago	July 6-13.....	3 cases.	
Kansas.....	Wichita	July 6-13.....	1 case.	
Louisiana.....	New Orleans	July 6-13.....	1 case.	
Massachusetts.....	Boston	July 6-13.....		1 death.
"	Holyoke	July 6-13.....	2 cases.	
"	New Bedford	July 6-13.....		1 death.
Michigan.....	Detroit	July 6-13.....	1 case.	
Minnesota.....	Minneapolis	June 30-July 7...	2 cases.	
Nebraska.....	Nebraska City	July 6-13.....	66 cases.	33 deaths.
N.-Hampshire.....	Manchester	July 6-13.....	1 case.	
New Jersey.....	Newark	July 6-13.....		1 death.
Ohio.....	Cincinnati	July 3-12.....	3 cases.	
"	Cleveland	July 6-13.....	8 cases.	1 death.
"	Toledo	July 6-13.....	1 case.	
Pennsylvania.....	Lebanon	July 6-13.....	6 cases.	
"	Philadelphia	July 6-13.....	3 cases.	1 death.
"	Pittsburg	July 6-13.....	2 cases.	
Tennessee.....	Memphis	July 6-13.....	1 case.	
Utah.....	Salt Lake City	June 30-July 6...	2 cases.	
Washington.....	Tacoma	June 30-July 7...	1 case.	

Smallpox—Foreign.

Austria.....	Prague	June 22-29.....	1 case.	
Belgium.....	Antwerp	June 15-29.....		2 deaths.
Canada.....	British Columbia, Victoria	June 15-30.....	2 cases.	
China.....	Hongkong	May 25-June 1...	1 case.	1 death.
Colombia.....	Panama	July 1-8.....	5 cases.	1 death.
Ecuador.....	Guayaquil	May 11-June 6...		7 deaths.
Egypt.....	Cairo	June 16-24.....		1 death.
France.....	Paris	June 22-29.....		10 deaths.
Gt. Britain.....	Dundee	June 22-29.....	1 case.	
"	Glasgow	June 28-July 5...	9 cases.	1 death.
"	Liverpool	June 15-29.....	4 cases.	2 deaths.
"	London	June 22-29.....	5 cases.	2 deaths.
India.....	Bombay	June 11-18.....		6 deaths.
"	Calcutta	June 7-15.....		6 deaths.
"	Karachi	June 2-9.....	1 case.	1 death.
"	Madras	June 1-13.....		9 deaths.
Italy.....	Messina	June 22-29.....	12 cases.	
"	Naples	June 23-30.....	170 cases.	32 deaths.
Russia.....	Moscow	June 15-22.....		7 deaths.
"	Odessa	June 15-29.....	3 cases.	
"	St. Petersburg	June 15-22.....		1 death.
"	Warsaw	June 8-15.....		3 deaths.
Spain.....	Corunna	June 22-29.....		3 deaths.
"	Valencia	June 8-23.....		1 death.
Switzerland.....	Geneva	June 18-22.....	1 case.	

Yellow Fever.

Costa Rica.....	Port Limon	July 4.....	1 case.	
Cuba.....	Cienfuegos	July 15.....	1 case.	
Mexico.....	Vera Cruz	June 30-July 6...	6 cases.	4 deaths.

Cholera.

India.....	Bombay	June 11-18.....		3 deaths.
"	Calcutta	June 8-15.....		53 deaths.
"	Madras	June 1-14.....		1 death.

Plague.

Africa.....	Cape Town	To June 22.....	735 cases.	334 deaths.
"	"	June 15-22.....	21 cases.	
China.....	Hongkong	May 25-June 1...	215 cases.	207 deaths.
India.....	Bombay	June 11-18.....		54 deaths.
"	Calcutta	June 8-15.....		48 deaths.
"	Karachi	June 29.....	28 cases.	25 deaths.
Japan.....	Formosa	June 23.....	Epidemic.	
"	Nagasaki	June 1-10.....	1 death on U. S. S. Kintuck.	
Mauritius.....	"	June 13-20.....	2 cases.	1 death.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending July 20, 1901:

DISEASES.	Week end'g July 1		Week end'g July 20	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid Fever.....	24	9	30	10
Scarlet Fever.....	14 ⁸	25	15 ⁸	21
Cerebro-spinal meningitis.....	0	4	0	2
Measles.....	210	10	164	8
Diphtheria and croup.....	155	25	130	18
Small-pox.....	66	33	35	12
Tuberculosis.....	267	14 ⁸	258	123

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending July 20, 1901:

BAGG, C. P., Passed Assistant Surgeon. Detached from the *Culgoa* and ordered to the *Yorktown*.

BOGAN, F. M., Assistant Surgeon. Detached from the *Scorpion* and ordered to the *Machias*.

BUCHER, W. H., Assistant Surgeon. Detached from the Naval Hospital, Norfolk, Virginia, and ordered to the *Dixie*.

DECKER, C. J., Surgeon. Detached from the *Newark* and ordered home to await orders.

MCDONNOLD, P. E., Assistant Surgeon. Ordered to duty at the Naval Museum of Hygiene, Washington.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army from June 13 to June 20, 1901:

ASHBURN, PERCY M., First Lieutenant and Assistant Surgeon. Par. 21, S. O. 156, July 6, 1901, H. Q. A., relating to him, is revoked.

BLOOMBERGH, HORACE D., First Lieutenant and Assistant Surgeon, will proceed to Plattsburgh Barracks, N. Y., for temporary duty.

BONAR, REUBEN M., Captain and Assistant Surgeon, is relieved from duty at Camp McKinley, Honolulu, and will proceed to Manila.

BORDEN, WILLIAM C., Major and Surgeon, is granted leave of absence for one month.

BROOKE, ROGER, JR., First Lieutenant and Assistant Surgeon, will proceed to Fort Myer, Virginia, and report for duty.

BURNS, ROBERT, Major and Surgeon, is granted leave of absence for one month.

CALDWELL, ROBERT A., Captain and Assistant Surgeon, is relieved from duty on the transport *Rosecrans*, and will report to the commanding general, Department of California, for transportation to Manila.

DELANEY, MATTHEW A., First Lieutenant and Assistant Surgeon, will report to the commanding officer, Fort Monroe, Virginia, for duty.

FIELD, PETER C., First Lieutenant and Assistant Surgeon, will proceed from New Brunswick, N. J., to Fort Slocum, N. Y., for temporary duty.

GEER, CHARLES C., First Lieutenant and Assistant Surgeon, will proceed to Fort McPherson, Georgia, for temporary duty.

GOSMAN, GEORGE H. R., First Lieutenant and Assistant Surgeon, will proceed to West Point, N. Y., for temporary duty.

HAINES, ABRAM L., Major and Surgeon, will proceed to San Francisco for transportation to Manila.

HALLORAN, PAUL S., First Lieutenant and Assistant Surgeon, will proceed to Fort Wadsworth, N. Y., for temporary duty.

HOYT, HENRY F., Major and Surgeon. The leave of absence granted him is extended one month.

KOERPER, CONRAD E., First Lieutenant and Assistant Surgeon, will report in person to the commanding officer, Washington Barracks, D. C., for temporary duty.

PORTER, RALPH S., Major and Surgeon, will proceed to San Francisco and report to the commanding general, Department of California, for transportation to Manila.

RUFFNER, ERNEST L., First Lieutenant and Assistant Surgeon, will proceed to Columbus Barracks, Ohio, for temporary duty.

THORNBURGH, ROBERT M., First Lieutenant and Assistant Surgeon, is granted leave of absence for one month, and upon the expiration thereof he will proceed to Fort Slocum, N. Y., for temporary duty.

The Central International Bureau for the Prevention of Consumption.—We learn that Dr. W. Freudenthal, of New York, has been made a corresponding member.

Medical Schools for Turkey.—According to a cable from Constantinople, the sultan has issued a decree ordering the establishment of medical schools at Bagdad, Damascus, Smyrna, and Adrianople.

The Knights Templars' Conclave, to be held in Louisville, Ky., from August 27th to 30th, has been provided with a medical committee with a membership of fifty under the chairmanship of Dr. T. Hunt Stucky. The secretary of the committee is Dr. Walker B. Gossett.

The University of Glasgow Honors a San Francisco Physician.—At the recent celebration of the four hundred and fiftieth anniversary of the founding of the University of Glasgow (Scotland), Dr. A. Barkan, delegate from Cooper Medical College, of San Francisco, was made a Doctor of Laws by the university.

A Physician Nominated for Mayor.—Dr. Edward S. Brush has been nominated for mayor of Mt. Vernon by the Republican City Convention. Dr. Brush was the first mayor the city ever had. He was elected in 1892, and made an excellent official. There was a general demand for his re-nomination ever since, but he has always declined. Dr. Brush was formerly president of the Medical Jurisprudence Society.

Manhattan State Hospital Employees Indicted.—The grand jury of New York city has returned indictments for manslaughter in the first degree against Thomas J. Foley, a nurse, and Michael Carroll, an attendant in the Manhattan State Hospital, on the charge of causing the death of Herbert C. Wadman at that institution on March 3d. At the inquest on the death of Wadman the two men were charged with assaulting Wadman and fracturing his chest. They are under bonds.

The Kansas State Board of Medical Examiners Asked to Pass Upon a Chinese Diploma.—Dr. Ah Sam, of Leavenworth, Kans., has presented a piece of parchment to the State Board of Medical Examination and Registration and asks for a certificate permitting him to continue practising medicine. The parchment is covered with Chinese letters and the members of the board do not know whether it is a diploma from a Canton medical school, as Ah Sam contends, or a Chinese patent medicine advertisement.

Permission Asked to Bury a Man Alive.—The request of Dr. J. T. Beterio for permission to bury a man alive to demonstrate that bodily functions can be suspended by hypnotic influence has been refused by the Chicago Health Department. The position taken by the officials is that they have jurisdiction over the interment, exhumation, and disposal of dead bodies, and that in case they gave a burial permit for a live body, and death resulted, they would be indictable.

Virchow's Eightieth Birthday.—It is proposed to formally celebrate Professor Virchow's eightieth birthday on Saturday, October 12th, at Berlin, when he will personally receive delegates with congratu-

latory addresses from various scientific bodies, foreign as well as German. The affair is under the personal direction of Professor Waldeyer, of Berlin, as president of the executive committee, who will furnish any information required by societies who propose to either send delegates or present addresses on this occasion.

Ludington, Mich., Engages a Community Doctor.—The citizens of Ludington, Mich., have formed a pool for the employment of a physician. The local physicians recently organized to fix visit fees, and the new schedule seemed to be too high to the bill payers. Therefore, about 200 families organized to employ a physician at a fixed salary of \$1,800 a year. The salary is made up by monthly assessments and by terms of the contract the doctor is required to respond to all calls from members of the organization. If any member sends in a needless call, a fine is charged up to him. Dr. Bart, who recently graduated from the State University, is the community doctor.

A Professor to Study Pathology Abroad.—Professor W. M. Ford, of the Johns Hopkins University, Baltimore, who was recently appointed to the Rockefeller research fellowship in pathology at McGill University, has left for Paris, France, where he will remain until the new pathological laboratories are completed at the McGill Faculty of Medicine. During his sojourn in Paris he will conduct a series of experiments in the department of pathology at the Pasteur Institute in that city on the lines suggested by the medical staff of the Rockefeller Institute in Chicago. He expects to return to Montreal in September next, when he will commence active research work at McGill.

A New Dean for the Northwestern Medical School.—Owing to the continued illness of Dr. Frank S. Johnson, he has resigned his position as dean of the Medical School of the Northwestern University, at Chicago, and Dr. N. S. Davis, Jr., formerly secretary of the faculty, has been elected dean. Dr. Arthur R. Edwards has been elected to the secretaryship made vacant by the promotion of Dr. Davis. Dr. Davis is a graduate of the institution of which he is now dean, and was elected secretary of the Section in Practical Medicine of the American Medical Association at the St. Paul meeting. He has been professor of principles and practice of medicine in the Northwestern Medical School since 1887.

Assistant Bacteriologists Wanted.—An examination for the position of assistant bacteriologist, Class I, salary \$800, will be held by the Municipal Civil Service Commission of the City of New York on July 29, 1901, at 10 a. m. An examination for the position of assistant bacteriologist, Class II, salary \$1,200, will be held on July 31st, at 10 a. m. Candidates for Class II must be able to carry on original investigations. The subjects of the examinations are: Technical knowledge, experience, mathematics, writing a report on an assumed state of facts. For applications address Lee Phillips, secretary, Municipal Civil Service Commission, 346 Broadway, New York city. For particulars as to

the examination, application should be made to F. G. Ireland, chief examiner.

A State Antitoxine Laboratory.—Dr. Daniel Lewis, commissioner of health for the State of New York, has secured a building in Albany for the establishment of a State antitoxine laboratory. Dr. H. D. Pease, of the Sheffield Scientific School, Yale University, has been appointed director of the new laboratory. The animal house will be provided with the most perfect hygienic conditions attainable for such purposes, and will be supplied with about fifteen horses for the manufacture of serum. Dr. Lewis, in a statement concerning the laboratory, says: "The importance of this laboratory to the people of the State can hardly be overestimated. The commissioner of health proposes to supply State institutions with diphtheria and other antitoxines free of cost, and also furnish these remedies to municipalities which are not already provided with a similar laboratory for patients who are unable to buy them. Antitetanus and antityphoid serums will also be manufactured in the laboratory. These new departments are intended to supply to all the health officers throughout the State the same facilities for investigation, diagnosis, and treatment of infectious diseases as are now supplied by the city of New York."

Bubonic Plague on a Ship in New York Harbor.—On the arrival of the steamship *Hohenfels* from Calcutta on Monday morning, July 22d, one of the Indian crew, a stoker, twenty years of age, was found to have an enlarged and inflamed gland, which could not be satisfactorily accounted for. He was removed to Swinburne Island and specimens taken from the gland and examined at the quarantine laboratory, and an organism believed to be the plague bacillus was found. Upon this discovery, the bacteriologist of the health office of the port went to Washington with the specimens referred to, and after an examination by Dr. Geddings and Dr. Rosenau, of the Marine-Hospital Service, Surgeon-General Wyman reported that the result of the examination confirmed the diagnosis made in the laboratory. The case is a very mild one, the patient having been found at work on the vessel. The crew will be removed to Swinburne Island for observation. The cargo will be disinfected before leaving the ship and each night the holds of the vessel will be subjected to sulphur to kill the rats. After the cargo is removed the vessel will be thoroughly cleansed and disinfected in every part. The *Hohenfels* is a steamer built for the East Indian trade and was recently put on the Calcutta-New York service.

The County Medical Association to Investigate Compulsory Vaccination.—What is probably a step toward the enactment of a law at the next legislature making vaccination compulsory in this county has been taken by the New York County Medical Association, which has appointed a special committee to inquire into the expediency of such a provision. This committee will submit its report at the meeting of the County Medical Association to be held in October, and it will probably later be laid before the State Medical Association for consideration. Dr. F. W. Loughran, of 744 Prospect Ave-

nue, is chairman of the committee. While the committee has not yet decided on a plan of inquiry, it has begun an investigation of the character and workings of compulsory vaccination laws of various countries and States. Such laws are in force in Germany and France. The committee intends to ask the physicians of this city for their opinion on the subject. When the question reaches the State Medical Association, the physicians in every county in this State will probably be asked to send word to the organization as to whether or not they are in favor of a compulsory vaccination law. The physicians will be specially asked to give their views on what should be the limitations of such a law.

A Systematic Effort to Exterminate Mosquitoes being made on Staten Island.—Convinced that malaria is spread by mosquitoes, Dr. Alvah H. Doty, health officer of the port, has begun a war of extermination on the mosquitoes of Staten Island. He has laid out a section of the island about three miles long by a mile and a half wide, bounded by the upper and lower bays, Vanderbilt Avenue, Richmond Road and New Dorp Lane. In this territory is a large extent of salt-water marsh and many fresh-water "pockets." Men are making a map of the marshes, pools of stagnant water, cisterns, and cesspools. It is proposed to employ crude petroleum, and Dr. Doty is having machines made with perforated pipes, with which the oil can be released under the water and kill all germs in it. It is his opinion that the use of petroleum has not been entirely successful heretofore for the reason that it has been simply sprayed on the surface of the pools and blown off by the first breeze.

The Late Dr. Skinner's Precautions Against Being Buried Alive.—A remarkable will was placed on record with the surrogate of Erie county, at Buffalo, N. Y., on July 22d. It was the will of the late Dr. Winslow W. Skinner, who died on March 7th in Florence, Italy. Dr. Skinner formerly was a resident of New York. He had a horror of being buried alive, and in his will described three tests to which he wanted his body subjected before it was cremated. The first test was to watch for the occurrence and disappearance of rigor mortis. The second test was to make a transverse incision in the thickest part of the biceps brachialis. The will says: "If no blood flows from this incision, or if only a few drops of thick blackish blood ooze into the cut, it is probable that death has occurred. But if red blood appears in the wound there is doubt as to death having taken place." The third test was to observe for decomposition or putrefaction of the body tissue. This was the surest, the will said, and was indicated by the appearance of greenish marks, spots, and streaks on the abdomen, and by the odor. Dr. Skinner directed that his body be cremated after the tests had demonstrated that he was dead.

Diphtheria.—Diphtheria has made its appearance at La Crosse, Wis., and at San Francisco, Cal.

Typhoid Fever.—There have been many cases of typhoid fever at Pittsburgh, Pa., and at Jackson, Mich.

Scarlet Fever.—An epidemic of scarlet fever has alarmed Beverly and Salem, Mass. In the former city there were seventeen cases and four deaths within a week. The physicians consider the disease in part due to impure milk.

No Small-Pox in Newport.—Dr. C. F. Barker, president of the Board of Health, Newport, R. I., writes that there is no case of small-pox at present in the city of Newport, R. I., and that there has only been one case in that city, which occurred in a servant who was attacked soon after her arrival from New York, but who had entirely recovered.

The Bubonic Plague.—The number of deaths from bubonic plague throughout the whole of India has been steadily declining for some weeks past, though for the week ending June 20th the number of deaths reported was slightly larger than that for the preceding week. Up to July 4th, 184 cases and 63 deaths had occurred from plague among Europeans in the Cape peninsula, and 538 cases and 284 deaths had been reported among Asiatics and African natives. During the last week of June some eight cases of plague were reported throughout the whole of Egypt.

Small-pox.—The Board of Health for New York has asked and received \$65,000 from the Board of Estimate with which to fight small-pox in the city, where the number of cases and fatalities seem as great as ever. The unusual number of small-pox cases in the Harlem and Bronx districts has caused some comment among physicians. The fact of eleven cases in fourteen days, in a section of the city where houses are somewhat isolated and there is but a thin population, has attracted the more attention, because the schools are closed and ordinary means of contagion seem lacking. It is pointed out, however, that the section is opposite North Brother Island, where the city sends its small-pox cases, and physicians are quoted as inclined to the belief that the contagion is carried by mosquitoes.—Dr. Frederick A. Jewett, of the Brooklyn Department of Health, has recommended the closing of a vacation school on account of the prevalence of small-pox in the neighborhood.—Other points where the epidemic has made its appearance recently are Lebanon and Ashland, Pa.; Cleveland, Ohio; Claiborne county, Tenn., and Brent county, Ont.—There seems but little change in the number of cases in New York city, and several new cases are reported from Newark, N. J., and from Freeport, L. I.—Another place recently visited by the epidemic is Rutland, Vt.

The London Tuberculosis Congress was opened July 22d. Some 2,500 delegates were present, over 400 being foreign. Among the American representatives may be mentioned Professor William Osler, of Johns Hopkins University; Dr. Herman Biggs, of New York; Professor George Dock, of the University of Michigan; Professor Liautard, of Kansas, delegate of the American Veterinary Medical Association; Mr. Austin Peters, of the Massachusetts Board of Cattle Commissioners, and seven representatives of the American Climatological Association; Dr. Ravenal, of the Pennsylvania Society for the

Prevention of Tuberculosis, and five representatives of the American Tuberculosis Congress. The American Medical Association is officially represented by Dr. Allen T. Haight, of Chicago, and Dr. Judson Daland, of Philadelphia.

His Royal Highness the Duke of Cambridge, on behalf of the King, was chairman, and was immediately supported on the right and left by the American and French Ambassadors, the Ministers of Portugal, Denmark, the Netherlands, and Greece; the Marquis of Lansdowne, Earl Cadogan, Lord Strathcona, the Lord Mayor, Lord Lister, Lord Derby, Sir James Blyth, Professor Clifford Allbutt and Sir James Crichton-Browne, the Duke of Northumberland, the Marquis of Bath, Earl Spencer, Colonel Fitzgeorge, and Professor Koch.

Mr. Malcolm Morris, F. R. C. S., honorary secretary, read the report of the committee. The following message was received by the Duke of Cambridge from King Edward: "I have just received your telegram, and thank you for having kindly consented to open the Congress in my name. I am glad to hear that the ceremony passed off so well. I pray you heartily to thank for me the eminent men belonging to almost every nation who have assembled to-day under your presidency, and to express to them my earnest hope that the valuable information which they will give to the world as the result of the deliberations of the British Congress on Tuberculosis, will further assist in mitigating that dire disease which has baffled the most distinguished physicians so long."

Addresses of welcome were made by Lord Lansdowne, the Lord Mayor of London, Lord Strathcona, and Lord Lister, who specially thanked Professor Koch and other illustrious foreign scientists for their attendance.

The chairman announced that a gift of £120,000 would be forthcoming for the purpose of establishing the first public tuberculosis sanitarium, so soon as the recommendations of the congress concerning its establishment had been formulated. On the 23d, Professor Koch startled the congress by asserting that his experiments had satisfied him that human tuberculosis and bovine tuberculosis were radically different diseases. He had amply demonstrated that cattle could not be infected with human tuberculosis. The counter proposition, that human beings were not liable to infection from bovine tuberculosis, was harder to prove, but personally he was satisfied that it was the case, and he detailed at length the post-mortem evidence supporting this belief. It remained to determine the chief source of contagion. Human immunity to bovine infection disposed of the belief in infection through meat or dairy products, and he considered this source of danger so slight as to be unworthy of precautionary measures. Heredity was also an unimportant factor in the transmission of tuberculosis, though the contrary had long been believed. The chief source of danger lay in the sputum of consumptive patients, and a remedy was to be found in a law preventing the consumptive from throwing contagion about him. Several methods to this end were available. He strongly urged the establishment of special consumptive hospitals, the obligatory notification to the authorities of the existence of the disease, the disinfection of their quarters whenever consumptives changed their

residence, and the dissemination of information to the people concerning the true nature of consumption as an aid in avoiding and combating it. Dr. Koch complimented Dr. Herman M. Biggs, of the New York City Health Department, upon the repressive measures in regard to tuberculosis taken in New York, where, he said, the mortality from tuberculosis had been reduced 35 per cent. since 1886. He commended the system organized by Dr. Biggs in New York to the study and imitation of all municipalities. Dr. Koch finally expressed his belief that the ultimate stamping out of tuberculosis was possible.

It was scarcely likely that Professor Koch's iconoclastic views in regard to the dangers of food products from tuberculous cows would go unchallenged. While, undoubtedly, his reputation carries great weight, there was a very general incredulity, and on the following day this was voiced by Professor Brouardel, of Paris, who was unable to accept Professor Koch's view that tuberculosis could not be propagated by the meat and milk of tuberculous cattle, but he thought it easy to protect the population from this contamination by legislation. Professor Brouardel maintained that the disease was curable, and said that any measures tending to limit the ravages of alcoholism would diminish the mortality from consumption. He added that the measures needed for the prevention of tuberculosis were identical in every country, and the first step in this direction was to render unhealthy dwellings and districts salubrious. A healthy house was anti-tuberculous. He joined Professor Koch in complimenting the United States on its quick realization of the dangers of expectoration and on its legislation in the matter.

Among other eminent scientists who expressed themselves as unable to accept Professor Koch's views were Lord Lister and Sir William Broadbent. Sir James Crichton-Browne stated that the British authorities had appointed a commission to inquire into the relation between human and bovine tuberculosis.

The Kansas Academy of Medicine, composed of doctors and practising physicians of the counties of central and western Kansas, was organized at Lindsborg, Kans., on July 10th.

The New York State Medical Society has changed its meeting place for this year's convention from Utica to Buffalo. A three days' session of the society will be held early in September.

The Baltimore County Medical Association.—The monthly meeting of the Baltimore County Medical Association was held on July 18th at the Eudowood Sanitarium, near Towson, Md. Dr. Charles I. Hill, of Arlington, gave an interesting address on Sunstroke and Heat Exhaustion and Dr. F. D. Sanger, of Baltimore, spoke of Early Diagnosis of Tuberculosis of the Larynx.

The Ohio State Eclectic Medical Association at its recent meeting elected the following officers: President, Dr. S. Schiller, of Youngstown; first vice-president, Dr. Charles G. Smith, of Cincinnati; second vice-president, Dr. R. V. Dickey, of Lima;

recording secretary, Dr. W. S. Turner, of Waynesfield; corresponding secretary, Dr. W. N. Mundy, of Forest; treasurer, Dr. R. C. Wintermuth, of Cincinnati.

The Tri-State Medical Association of Western Maryland, Western Pennsylvania, and West Virginia met at the Queen City Hotel, Cumberland, Md., on Thursday, July 25th. Among the papers read were the following: Some Facts Learned in the Management of Typhoid Fever in Central West Virginia, by Dr. W. W. Golden, of Elkins; Bright's Disease, by Dr. James Tyson, of Philadelphia; The Future Physician an Optimist, by Dr. William F. Barclay, of Pittsburgh; Diagnosis of Typhoid Fever, by Dr. E. T. Duke, of Cumberland.

The Canadian Medical Association.—The next annual meeting of the Canadian Medical Association will be held at Winnipeg on August 28th. Quite a number of Montreal medical men will attend the meeting. The address in medicine will be given by Dr. J. R. Jones, of Winnipeg; that in surgery by Mr. O. M. Jones, of Victoria; and that in gynecology by Dr. T. S. Cullen, of Toronto, now of Johns Hopkins, Baltimore. In addition to these addresses a large number of papers have been promised on various topics of interest to medical men.

The Brashear Medical Society held its quarterly meeting at Taylorsville, Ky., on July 16th, celebrating the second anniversary of the organization of the society. The meeting was called to order by Secretary Wiley Rogers, of Taylorsville. Among the papers read were: Teething in Infants, by Dr. R. B. Gilbert, of Louisville; Diagnosis and Treatment of Typhoid Fever, by Dr. S. L. Reid, of Elk Creek; The Use of Ergot in Obstetrics, by Dr. Hugh Rodman, of Bardstown; Vomiting in Pregnancy, by Dr. J. B. R. Cooper, of Samuels. The visitors were entertained at the Spencer House by the resident members. The next quarterly meeting will be held at Bloomfield on October 15th.

Mississippi Valley Medical Association.—The twenty-seventh annual meeting of the Mississippi Valley Medical Association will be held at the Hotel Victory, Put-in-Bay, Lake Erie, Ohio, September 12, 13 and 14, 1901. The following announcements are made regarding railroad rates: The tickets to the meeting will be on sale from September 8th to 12th, and will be good returning on all trains leaving Cleveland until midnight of September 15th without deposit or visé. The rate *via* Cleveland is approximately one cent a mile, or about one fare for the round trip. Local railroad agents can give exact information of cost of trip. Extension of tickets may be had to and including October 8th, provided they are deposited with the joint agent at Cleveland on or before 12 o'clock noon of Sunday, September 15th, and payment of a fee of fifty cents at the time of deposit. This will give those in attendance the opportunity of visiting the Pan-American Exposition at Buffalo, the regular round trip by rail or water between Cleveland and Buffalo being \$5. This rate of one cent a mile is an open one, and tickets can be purchased for physicians and their families as well, but it applies only by way of Cleveland.

Those who do not wish to take the trip to Cleveland, which route is longer for those living west and southwest of Ohio, can obtain a fare and a third rate for the round trip on the certificate plan by way of Detroit, Toledo, or Sandusky. Tickets by these points can be bought through to Put-in-Bay, baggage being checked through also. If tickets are bought by way of Toledo, Detroit, or Sandusky, a certificate must be obtained in order to secure the one-third fare returning. If tickets are bought by way of Cleveland, they will be of the ironclad signature form, the signature of the purchaser having to be witnessed both at the starting point and at Cleveland. Titles of papers to be presented must be sent the secretary not later than August 1st, accompanied by an abstract for publication on the programme. No title will appear without the abstract. The annual oration in medicine will be delivered by Dr. Frank Billings, of Chicago; the orator in surgery will be announced later. Further details may be obtained from Dr. Henry E. Tuley, secretary, 111 West Kentucky Street, Louisville, Ky.

Hospital Buildings and Endowments.—The order of the Sisters of St. Joseph has purchased property at Elgin, Ill., which they will remodel for hospital purposes and open on September 1st. At the same time the physicians of that city have agitated the proposition of erecting a hospital themselves and have pledged \$7,000 among their profession for the purpose of organizing a stock company. The new proposition has not caused them to abandon their purpose.—A hospital is being erected in the North End, Boston, by the Methodist Society. It will be a four-story structure of stone and brick.

Births, Marriages, and Deaths.

Married.

SHOYER—DENTON.—In Leavenworth, Kansas, on Monday, July 15th, Dr. Mayer Shoyer and Miss Edna Denton.

Died.

BLANCHARD.—In Scranton, Pennsylvania, on Friday, July 19th, Dr. George A. Blanchard, in the thirty-fifth year of his age.

BOYD.—In Savannah, on Sunday, July 14th, Dr. Arthur F. Boyd.

CAREY.—In Cincinnati, on Monday, July 15th, Dr. Milton T. Carey, in the seventieth year of his age.

COOLEY.—In Hannibal, Missouri, on Thursday, July 18th, Dr. R. N. Cooley, in the seventieth year of his age.

DUNBAR.—In New York, on Saturday, July 20th, Dr. Adolph Dunbar, in the twenty-ninth year of his age.

GOBRECHT.—In Washington, on Friday, July 19th, Dr. William H. Gobrecht, in the seventy-second year of his age.

GUNTER.—In Charlestown, Massachusetts, on Monday, July 15th, Dr. Adolphus B. Gunter, in the fiftieth year of his age.

HONNER.—In Detroit, on Wednesday, July 3d, Dr. R. H. Honner, in the forty-fifth year of his age.

KNODE.—In Marklesburg, Pennsylvania, on Thursday, July 18th, Dr. George E. Knoder, in the thirty-fifth year of his age.

RAUB.—In Quarryville, Pennsylvania, on Saturday, July 20th, Dr. H. E. Raub, in the seventy-first year of his age.

WAITE.—In New Bedford, Massachusetts, on Saturday, July 20th, Dr. E. E. Waite, in the forty-third year of his age.

Pith of Current Literature.

Medical Record, July 20, 1901.

The Suture of Wounds of Large Blood Vessels, with Report of a Case of Recovery after Suture of a Wound of the Axillary Artery. By Dr. A. E. Halstead.—According to the author, the indications for arterial suture are: First, in all cases of injury to a vessel or vessels, where a ligature might bring about serious nutritional changes to the part supplied by the injured vessels. This is especially liable to occur when the corresponding vein is injured at the same time. In such cases an effort should be made to repair both vessels. Secondly, in all wounds of large vessels produced by puncture, gunshot, or laceration. Thirdly, operation wounds of large vessels, accidental or intentional, as when, for any reason, a part of the vessel must be sacrificed.

Clinical Observations on Syphilis. By Dr. J. A. Fordyce.—While the diagnosis of the primary sore does not involve the consideration of many other conditions, the situation is quite otherwise when we consider the possibilities in the second stage of the disease. The acute exanthemata, eruption from the administration of drugs, and a multitude of non-venereal eruptions may confuse the physician if all the concomitant symptoms are not given their proper consideration. The author gives some interesting and suggestive illustrative cases.

Headaches. By Dr. H. H. Seabrook.

The Tampon in Gynecological Therapy. By Dr. Maxwell Benjamin.—The author prefers wool to any other material for this purpose. It is more expensive than cotton, but its use, he asserts, will give both physician and patient such satisfactory results as fully to compensate for its additional cost. It is naturally soft, allows for drainage and retains its resiliency for a longer period than cotton. Ordinary wool has the property of working its way into the mucous membrane of the vagina, and if introduced dry and left for twenty-four or forty-eight hours, it cannot be removed without injury to the mucous membrane and severe pain to the patient. The tampon should therefore be covered with vaseline or other emollient. After being covered with vaseline it may be rolled in any antiseptic or astringent powder and then introduced. It is better to use a few small tampons than one large one. In the application of a tampon Sims's posture is the one best suited for most purposes.

Latent Pulmonary Tuberculosis. By Dr. Charles R. Upson.—It is largely through ignorance of the true significance of the early subjective symptoms and the apathy of the lay population that the disease is permitted to gain such a firm hold on its victim. In the author's opinion, the remedy lies in the publication and general distribution, by boards of health, of literature describing the early subjective symptoms of pulmonary tuberculosis, and the necessity, whenever these symptoms are noticed, of an examination of the lungs. The circular should, furthermore, explain that while the disease is largely curable in the first stage it will, if neglected, rapidly advance to the incurable stage, rendering the victim

a source of danger not only to himself but to others.

Mediate Palpation. By Dr. E. W. Whitney.

Medical News, July 20, 1901.

A Study of Sixteen Hundred and Fifty Blood Examinations for the Widal Reaction, with Special Reference to the So-called Partial Reactions. By Dr. Robert J. Wilson.—In general, the author concludes that those cases in which the Widal reaction was present are only further evidences of the already known practical value of the reaction; the so-called partial reactions are valueless so far as the clinician is concerned.

A New Method of Determining Approximately the Amount of Hydrochloric Acid in the Gastric Contents. By Dr. Max Einhorn.—The procedure is as follows: A minute quantity of stomach-contents is placed by means of a glass rod upon a strip of dimethylamidoazobenzol paper. If the paper turns red, one drop of the contents is diluted with two drops of water in a porcelain dish. If the paper still turns red, one or two more drops of water are added. This is done until only a slightly red, or almost no red color is produced by the mixture upon the test paper. It is clear that the more HCl there is in the stomach-contents the more they can be diluted, still giving a trace reaction with the dimethylamidoazobenzol paper. This test is of value in examinations with the stomach bucket, and in cases where it is important to obtain at once an idea of the amount of acidity.

Local Treatment of Female Diseases; Its Abuses. By Dr. A. L. Beahan.—The author deplores the (oftentimes unnecessary and useless) intra-uterine examinations, operations and applications, and he believes that the close study of many diseases of women will certainly limit the range of usefulness of "treatments," but will enlarge the sphere of surgical relief and improve the care of remote and general disturbances.

Disinfection within and without the Body in Diphtheria. By Dr. M. A. Veeder.—The article outlines a few leading features, so that whatever measures of disinfection are adopted, they may be used with full knowledge of the dangers and difficulty and complexity of the subject of control of diphtheria.

Cerebral Apoplexy; Its Relation to Testamen-tary Capacity. By Dr. Charles Schram.

Surgical Diagnosis. By Dr. James McKone.

Static Electricity in the Treatment of Sprain. By Dr. Leonard C. Stanford.—For sprains with little or no effusion there is immediate relief, which lasts from two to four hours. At the end of this time some reaction follows, depending directly upon the amount of work put upon the injured limb. Aside from this immediate relief, there is a marked permanent improvement in the majority of cases. In those cases in which effusion was present to any extent, as, for example, in synovitis of the knee, the spark, while for a short time relieving the pain when it existed, seemed to have but little effect otherwise. In these cases, however, after the effusion had been relieved by other methods, static electricity was a

valuable aid in stimulating and strengthening weakened structures.

American Medicine, July 20, 1901.

A Review of the Progress of Therapeutics for the Preceding Twelve Months. By Dr. Reynold Webb Wilcox.—In the history of the past twelve months the author notes but few startling achievements in therapeutics. He believes, however, that the progress has been of a kind that is likely to be permanent. He refers to the careful study of older remedies and methods, and the reinvestigation of theories and practices based upon them, and the readjustment of our conclusions in the light of these researches. Of the Finsen light-treatment he speaks favorably, and mentions the suggestion that leprosy might also prove amenable to this method. Suprarenal extract has been used in Addison's disease and in various disturbances of the circulation. Hopkins has found a tendency to secondary hæmorrhage after its use in intranasal operations, and this has also been observed in the practice of others. Sodium cacodylate has attracted more attention than any one remedy. It apparently can be safely introduced into the body in much larger doses than its arsenic contents would lead us to suppose, and has received favorable commendation in the treatment of tuberculosis, various cutaneous diseases, anæmia, chlorosis, and chorea. Tetanus antitoxine must still be considered *sub judice*.

Pneumotomy for Abscess of the Lung, with Exhibition of Patient. By Dr. W. Joseph Hearn and Dr. W. J. Roe.—The authors consider that pneumotomy has a wide field of usefulness, but is especially indicated in the following conditions: (a) In abscesses such as a single abscess; (b) sacular bronchiectatic abscess; (c) a single tuberculous abscess, with retention of secretion, high fever and localized tuberculous involvement of the lung tissue; (d) in localized abscesses from the entrance of foreign bodies into the bronchi, gunshot and penetrating wounds of the lung.

On the Evils Arising from the Failure to Recognize the True Nature of Neurasthenia, and Some Causes of this Failure. By Dr. W. W. Johnston.—The author considers the prolonged illness of Darwin, and he details the symptoms as being those of neurasthenia and as illustrating the serious evils which follow the neglect to insist upon an entire abandonment of all work in the earlier stages of neurasthenia. He favors the institutional treatment of neurasthenia in institutions constructed and managed for neurasthenic patients only.

Anæsthetization as a Specialty; Its Present and Future. By Dr. S. Ormond Goldan.—With things properly arranged, the anæsthetist will not be considered a mere satellite of the surgeon, but will be recognized as one of a distinct class. There will then be an incentive to men to give their best energies to the perfection of anæsthesia; the old cry for a safer anæsthetic will become a thing of the past; anæsthetics will not so often be blamed for results not properly due to their use but to their abuse—then there will be a supply of skilled anæsthetists throughout this country sufficient to fill every demand.

The Relation of Pharmacists to Physicians, and the Relation of Pharmacy to Materia Medica and Drug Therapeutics. By Dr. F. E. Stewart.

Foreign Bodies in the Rectum, with Report of a Case. By Dr. Lewis H. Adler, Jr.

Removal of Ovarian Cyst, Broad Ligament Cyst and Appendix at the Second Month of Pregnancy; Delivery at Term. By Dr. Maurice Kahn.

Journal of the American Medical Association, July 20, 1901.

On the Advancement of Surgical Pædiatrics. The Chairman's Address, delivered before the Section on Diseases of Children at the fifty-second annual meeting of the American Medical Association. By Dr. Samuel W. Kelley.—See abstract of proceedings of that section in *New York Medical Journal*, June 8th, p. 1012.

The Study of Laryngology in the University and in the Higher Medical Education. The Chairman's Address, delivered before the Section in Laryngology and Otology at the fifty-second annual meeting of the American Medical Association. By Dr. John N. Mackenzie.—See abstract of proceedings of that section in *New York Medical Journal*, June 8th, p. 1008.

Simple Gingivitis; Its Ætiology and Treatment. By Dr. George T. Carpenter.—Disease of the human gums is common and almost universal. A defect in nutrition or a cachectic condition may cause an isolated gingivitis at a given point. Improper nourishment is also a cause. Higher civilization, mingled with hotel and restaurant cooking, contribute. As for treatment: Correct all malocclusions and restore perfect contour to crowns. Remove all local irritants and deposits and make a light application of iodine to the affected parts. Change the diet to plain, coarse, wholesome food. Corn-meal is advised as a dentifrice.

Military Dental Practice—Its Modifications and Limitations. By Henry D. Hatch, D. D. S.—It would seem, according to the author, that with the training the dental surgeon has received in aseptic methods and in minor surgery, he might be an excellent assistant to the general surgeon in emergencies, after battles, etc., thereby tending to promote mutual regard and a better understanding between the two professions, now separate, but destined to become one.

Opening Discussion on "Military Dental Practice—Its Modifications and Limitations." By Dr. John S. Marshall.

The Tongue as a Breeding Place for Bacteria. By Dr. H. M. Fletcher.—The author writes of the importance of keeping the mouth and all it contains perfectly clean. As a prophylactic measure, no physician can afford to neglect it, either for himself or for his patients.

A Contribution to the Surgery of the Kidney. Two Cases of Disease of the Kidney Simulating Gall-stones. By Dr. Bayard Holmes.

The Gynæcological and Obstetrical Significance of Girlhood. By Dr. Henry P. Newman.—The author quotes the statistics of Engelmann to

prove that the girl as the product of modern civilization is, in everything but bodily vigor, removed by all that is desirable from her aboriginal mother. It is due to her that we should endeavor to restore, so far as is compatible without artificial standards, the natural privileges of which she has been deprived.

Adenoma Sebaceum of the Non-symmetrical Type. By Dr. William S. Gottheil.

The Treatment of Laryngitis. By Dr. Otto T. Freer.—Abstracted in our report of proceedings of the Section in Laryngology.—See *New York Medical Journal*, June 8th, p. 1008.

Œdematous Laryngitis, with Report of Cases. By Dr. Joseph S. Gibb.—See abstract in *New York Medical Journal*, June 8th, p. 1008.

Total Extirpation of the Thyreoid Gland. By Dr. George F. Cott.—See abstract in *New York Medical Journal*, June 8th, p. 1009.

Types of Membranous Pharyngitis. By Dr. W. E. Casselberry.

The Relation of the Middle Turbinate Body to Chronic Nasal Disease. By Dr. L. H. Baker.—See abstract in *New York Medical Journal* for June 29th, p. 1153.

Acute Œdema of the Nasal Sæptum. By Dr. J. L. Goodale.

Atresia Hymenalis, Its Ætiology and Treatment, with Report of a Case of Atresia Hymenalis, Hæmatocolpos, Hæmotometra, and Hæmatosalpynx Duplex, Each of the Size of a Man's Fist, in a Girl of Fourteen Years. By Dr. O. Thienhaus.

How Shall We Deal with Uterine Myomata? By Dr. E. E. Montgomery.—See abstract in *New York Medical Journal*, July 13th, p. 93.

Boston Medical and Surgical Journal, July 18, 1901.

The Shattuck Lecture. The Alleged Increase of Cancer in Massachusetts. By Dr. William F. Whitney.—If death from cancer should go on at the apparent geometrical rate of increase of the past fifty years, in two and a quarter centuries every person over thirty years would die from that disease. The author believes, however, that the rate is probably only arithmetical at its worst, and he attributes the increase to better diagnosis and registration. He believes that until the ratio of deaths over thirty years has reached eight or nine per cent., which is shown by autopsies to be the true rate for cancer, it is not justifiable to speak of the increase as being inherent in the disease itself. Comparison with other States and countries shows the rate for Massachusetts to be about the same as theirs, with greater variation between the males and females than is the case in Austria, which is remarkable for the correspondence between the two sexes.

The Clinical Value of Some of the Newer Hypnotics. By Dr. Albert E. Brownrigg

Cases Illustrating Minor Surgery of the Kidney. By Dr. John Bapst Blake.—Case I. Nephrorrhaphy; necessity of continual after-treatment. Case II. Traumatic rupture of kidney; nephrotomy; recovery. Case III. Acute abdominal symptoms;

laparotomy; abscess of kidney; nephrotomy; recovery. Case IV. Hydronephrosis; nephrotomy; resection of kidney; nephrorrhaphy; recovery.

Advantages of Sanatorium Treatment of Pulmonary Tuberculosis. By Dr. Henri T. Fontaine.—The author considers the benefits that accrue to the individual, the public, and the State, from this method of treatment. He points out, however, that a sanatorium is not a place to go for a few months with an almost certain hope of recovery; rather, we should consider a sojourn at a sanatorium as a means of educating a patient into those rules and habits of living by means of which alone he can expect in time to eradicate the disease entirely. Considerations are also presented from the purely economic point of view.

Ovarian Cyst with Twisted Pedicle: Acute Symptoms; Operation and Recovery. By Dr. Charles L. Scudder.

Philadelphia Medical Journal, July 20, 1901.

Spastic Ileus. By Dr. Edward Quintard.—This paper is devoted to a description of a few of the more interesting cases of "spastic ileus" that have been reported in foreign journals, together with two of the author's cases. (*To be continued.*)

A New Method of Making Tannin Available as an Intestinal Astringent. By Dr. Albert C. Barnes and H. Hille, Ph. D.

Some Observations Respecting the Value of Present Methods of Medical Education. By Dr. Augustus P. Clarke.—The author believes that the standing of every student should be known to the professor, not only by record, but also by being reinforced by much personal observation as to his habits and manner of pursuing his work. He believes that the custom of passing judgment upon answers to written questions without knowing anything personally as to who the candidate may be, is an unwise measure.

A Few Interesting Obstetrical Experiences. By Dr. J. Thompson Schell.

Photo-mechanical Reproduction (concluded). By Dr. B. H. Buxton.

Lancet, July 13, 1901.

Tumors of the Bladder and Enlarged Prostate. By D. Wallace, F. R. C. S.—The classification and the remarks on symptoms and treatment given by the author, refer to primary tumors of the bladder wall. He prefers Albarran's classification: 1. Epithelial tumors; *simple* papilloma and *malign* epithelioma. 2. Connective tissue tumors; *simple* fibroma, *malign* sarcoma, myxoma, and fibro-myxoma. 3. Tumors of special tissues; angiomas and myomata. 4. Cysts; dermoids and hydatids. Simple growths may clinically prove fatal, just as malignant ones do, unless suitable treatment is carried out. They give rise to hæmorrhage, cystitis, and secondary renal affections, and it is from these that patients die when the tumor is malignant—not, as a rule, from secondary growths. The usual first symptom is a causeless, symptomless bleeding. Sometimes pain or frequency of micturition may be first noticed. At a later period, cystitis being pres-

ent, pus may be in the urine and then pain and frequency of micturition are complained of. Examination of the urine for tumor cells is usually negative, but, if large nucleated cells in groups are seen, the diagnosis of tumor is assisted. The sound is not trustworthy, and negative evidence by it is valueless. The cystoscope is invaluable, and it enables the cystoscopist in many cases to give a prognosis as well as a diagnosis. Prognosis depends upon (1) the character of the tumor; (2) its extent, site, and attachment; and (3), the presence or absence of sepsis. The tumor may be pedunculated, sessile, or infiltrated, yet a pedunculated tumor may have deep attachments. Palliative treatment with drugs is only justified when the diagnosis has been made and radical treatment is impossible. With regard to operative treatment to remove the tumor, the suprapubic route is that of choice wherever the tumor is situated. It permits of operation by sight as well as by touch. The vertical incision is best, as it weakens the abdominal wall less. Trendelenburg's position is advantageous, and the bladder should first be distended with fluid, not air. The tumor should be removed with scissors; the bleeding is usually small, and readily ceases on the injection of hot water. Primary union should not be aimed at. A tube should be put in, and Cathcart's modification of the Sprengel pump applied. At the end of ten days the tube should be removed, and the pump used only at night. The author has never seen a permanent fistula result.

With regard to enlarged prostate, the danger of what is termed "catheter life" is generally recognized, the chief risk being associated with the occurrence of sepsis, organisms being introduced at the time of catheterization. An endeavor should always be made thoroughly to purify the hands and instruments and the meatus and anterior urethra of the patient, and a red rubber or silver catheter is preferable to a gum elastic one, as either of these may be boiled. Three operations hold the field: (1) Castration, vasectomy and angeioneurectomy; (2) drainage, suprapubic or perineal; and (3), suprapubic prostatectomy. Castration or vasectomy may give relief, but not necessarily; further treatment may be required. Hitherto, success has attended castration more frequently than vasectomy. The author prefers suprapubic prostatectomy to either. Its advantages are: (1) The operation immediately relieves the symptoms; (2) by resting the bladder the bleeding ceases; (3) the bladder may be efficiently washed out; and (4), the bladder regains its contractile and expulsive power. The objections to the method are: (1) Danger to life; (2) imperfect drainage; and (3), inability wholly to remove the prostate.

Diagnosis and Treatment of Typhoid Fever. By Dr. R. W. Marsden.—A recent acute illness, commencing with lassitude, headache, chills, then epistaxis, enlargement of the spleen, a continuous pyrexia, rose spots appearing in successive crops for several days, and each lasting three or four days, with an absence of leucocytosis, and terminating by a remittent temperature gradually subsiding after seventeen days, and accompanied by sudden profuse intestinal hæmorrhage or intestinal perforation, or further followed by a definite relapse, such a symptom-group may with certainty be diagnosticated as

due to typhoid fever. The position of the Widal reaction may be summarized as follows: A negative result at the end of the first week indicates a probability against a diagnosis of enteric fever, while each succeeding negative result increases this probability, so that by the end of the attack a negative result almost amounts to a certainty against the diagnosis.

Difficulties in diagnosis may arise, not from indefiniteness of the symptoms, but from their special localization, as in meningitis, nephritis, etc. Clinically, the only sign upon which absolute reliance can be placed, is the appearance of rose spots on several consecutive days during a continuous fever of at least seventeen days' duration. As regards diet, the author lays down the following laws: (1) In every case the patient is to be put on fluids alone at first; (2) known easily digestible food only should be allowed until at least three weeks after the termination of the attack; and (3), until the end of three weeks of convalescence, care should be taken that the food is thoroughly masticated. As regards baths, the following is certain: (1) They are potent factors in reducing temperature; (2) the intellect keeps clearer and stupor is lessened; (3) they exert a general tonic action on the system; (4) they retard emaciation; and (5), they diminish the percentage of patients dying from cardiac failure and asthenia. The author recommends a tepid bath of from 75° to 85° F., given regularly when the temperature reaches a certain altitude.

The Treatment of Bronchiectasis and of Chronic Bronchial Affections by Posture and by Respiratory Exercises. By Dr. W. Ewart.—By the postural method of treatment the author means elevation of the hips and legs, by raising the foot of the bed. He cites two cases of bronchiectasis in which its use was followed by a sense of relief, a diminution in the frequency and severity of the cough, a lessening of the sputum, a complete cessation of the gush of expectoration, and the liberation of the affected pulmonary areas from entangling slime. The continuous method is preferable to the intermittent, which latter has been advocated by Quincke. The benefits secured are due to: (1) The mechanical advantage of gravitation; (2) the stimulus to cough set up by the advancing secretion; (3) airless portions of the lung are enabled to expand; and (4), the weight of the abdominal organs against the diaphragm facilitates expectoration. Cases of bronchiectasis are markedly benefited by this method, but a cure is not to be hoped for where fibrous replacement of lung tissue has taken place on a large scale.

An Undescribed Innocent (?) Growth of the Gall-bladder. By E. S. Bishop, F. R. C. S.—The author reports the case of a woman, aged forty-two years, suffering from a tumor of the gall-bladder. Upon opening the abdomen, the gall-bladder was found to have undergone multilocular cystic degeneration. There were no adhesions, no calculi, and no hydatids. The cysts were opened and emptied, and the edges sewn to the abdominal wall. The patient recovered perfectly, having, of course, a biliary fistula, for which a cholecystenterostomy will have to be performed.

A Case of Meningitis, Probably Influenzal in

Origin. By A. F. Perigal, M. B.—The interest of the case here reported lies in the early symptoms and their sudden onset in a strong, healthy subject, and also in the fact that there were other cases of influenza in hospital at the same time.

Three Unusual Cases of Cerebrospinal Fever.

By W. J. Buchanan, M. B.—The author reports three cases of cerebrospinal fever which present points of special interest. In the first case a general arthritis preceded the cerebral symptoms; in the second case symptoms of hemiplegia were present; and in the third, the intensity of the process was such that the cerebellum was infiltrated with blood.

A Case of Renal Colic with Unusual Symptoms.

By C. Corben, M. R. C. S., and J. Cropper, M. B.—In the case here reported, the symptoms of renal colic were accompanied by an attack of cough and hæmoptysis; auscultation showed moist sounds at the base of the right lung. The sputum examination was negative as regards tubercle bacilli, and the passage of fragments of a urate stone relieved the pulmonary symptoms at once.

Puerperal Eclampsia; Four Cases Successfully Treated by Rectal Injections of Chloral Hydrate.

By W. B. Hallowes, L. R. C. P.—The author reports four cases of puerperal eclampsia in which the injection, *per rectum*, of sixty grains of chloral hydrate in one ounce of water, gave prompt relief. The injections were repeated every three hours, and in no case were more than four given, recovery being uneventful in each case. All the cases were at or about full term.

A Case of Intestinal Adhesions Simulating Tumor Formation and Causing a Risk that the Surgeon Might Tap the Bowel Unwittingly.

By J. D. Malcolm, M. B.—The author reports the case of a woman suffering from abdominal ascites. After tapping, a firm, hard mass was felt in the pelvis. Upon opening the abdomen a smooth, rounded, reddish mass presented; apparently a tumor. But as no intestines appeared above the mass, and as it was resonant upon percussion, a diagnosis of adherent intestine was made, and the mistake of tapping the tumor as a cyst was avoided.

Observations upon Forty Consecutive Cases of Intubation of the Larynx in Diphtheria.

By Dr. C. Basan.—The results of the forty consecutive cases of laryngeal diphtheria intubated by the author are shown in the following table:

	Number Recov- of cases, cured. Died.		
Intubation alone	32	28	4
Intubation with subsequent tracheotomy...	8	5	3
Total	40	33	7

With regard to treatment, as early as possible diphtheria antitoxine should be injected, 6,000 or 12,000 units at once, and repeated in twenty-four hours if necessary. The author attributes his good results to its use. The tube should be expressed at the end of three days. Expression is readily accomplished thus: The patient sitting upright, extend the neck, and, with the left hand grasping the occiput, place the ball of the right thumb just below the cricoid cartilage and bend the fingers of the same hand round the nape of the neck. Press the thumb

backward and slightly upward, and at the same time pull the head well forward on to the chest. This rarely fails to dislodge the tube, and there is no danger of it being swallowed. With antitoxine, intubation should hold a place in the treatment of laryngeal diphtheritic stenosis, but unfortunately its scope of usefulness is practically limited to hospital practice.

British Medical Journal, July 13, 1901.

Leucoma or Leucoplakia of the Vulva and Cancer.

By H. T. Butlin, F. R. C. S.—The author reports three cases of leucoma or leucoplakia of the vulva, the first complicated with an ulcer which was almost certainly cancerous; the second with an ulcer which was quite certainly cancerous; the third also with cancerous disease. The plaques of leucoma form only on the mucous surface, not on the skin. They are precisely similar in appearance, feel, and variety of form, to the white plaques which form upon the mucous surface of the mouth. In more than one instance the vulva and the mouth have been attacked in the same patient. There is therefore reason to believe that it is the same disease in both situations. If so, the influence of tobacco and of the direct contact of alcohol in the production of the disease loses some of its importance. Syphilis plays no part. Such altered surfaces are predisposed to the growth of cancer, and the question is pressing of the desirability of free removal of all such plaques from the vulva, whether the signs of development of cancer are present or not.

On Fibroids of the Cervix Uteri.

By Dr. A. H. N. L. Lewers.—The author confines his remarks to interstitial and subperitoneal fibroids of the cervix. Their importance is largely a matter of size; when small, they cause no symptoms, but when they reach the size of a coconut and upward, they should be removed. If left alone, pressure symptoms will arise in course of time. Menstruation may be scanty or profuse. An important point in diagnosis is to recognize the difference between a submucous fibroid of the cervix or body which is felt through the dilated os uteri, and a fibroid of the cervix which is truly interstitial. In the former case the tumor may be safely removed by *morcellement* through the vagina. Such fibroids, if left alone, become infected and break down, producing general sepsis. In removing such tumors, the deep cervical attachments must be separated before they can be drawn up to and out of the abdominal wound. Four cases of cervical fibroids are reported, the patients all recovering perfectly after operation.

Extra-uterine Fœtation. By J. D. Malcolm, F. R. C. S.

The Diagnosis of Cancer of the Womb. By Dr. F. J. McCann.—Hæmorrhage is an important early sign of cancer of the neck of the womb. Bleeding after the menopause always calls for a thorough examination of the pelvic organs. In early cases of cancer the discharge is not foul smelling; such septicity indicates sloughing of the cancerous surface, following infection with septic organisms, and is no part of the cancerous process. Pain is a late symptom, as is wasting and cachexia. Among the conditions commonly mistaken for can-

cer are cervical erosions, mucous polypi, chronic endotrachelitis, fibromyomatous polypi with sloughing surfaces, and fungous endometritis. Cancer of the body of the uterus must be distinguished from pregnancy in the earlier months, intra-uterine tumors, fungous endometritis, senile endometritis, and myoma. The author describes the symptoms of each of these conditions, and the points on which a diagnosis is based.

Acute Lead Poisoning in Women Resulting from the Use of Diachylon as an Abortifacient.

By Dr. W. Wrangham.—The author reports five cases of acute lead poisoning following the use of oleate of lead (diachylon) as an abortifacient. In all the cases the effect of the poison was manifested chiefly in the nervous system, although gastro-intestinal trouble and abdominal pain were also present. The ocular symptoms were particularly noticeable, no fewer than four of the patients presenting optic neuritis and ocular paralysis. The former condition is indicative of grave danger, one of the cases presenting it proving fatal. Large quantities of the material were ingested for some weeks before serious symptoms appeared. The use of diachylon as an abortifacient is a common thing in England, and the author recommends that all cases of lead poisoning be reported to the medical health officers, and that each case be investigated.

A Case of Ruptured Uterus in a Multipara.

By Dr. J. P. Simpson.—The author reports the case of a woman, aged thirty-three years, who, desiring to avoid giving birth to her fourth child, cut off its arm, by which it had presented. The uterus ruptured, and the patient was dying when first seen by the attending physician. On opening the body, the child and placenta were found in the peritoneal cavity. The author thinks the rupture due to reflex action on the part of the child when its arm was cut off.

Infection by the Urine in Convalescence from Typhoid Fever. By Dr. T. C. Allbutt.—The author urges medical practitioners to satisfy themselves of the purification of the urine of convalescents from typhoid fever before allowing them to go at large. Bacilli may live in the urine for many weeks and have been known to live there for five years. The author has taught for many years the necessity of disinfecting the stools of typhoid convalescents; he now acknowledges his error and admits that infection during and after convalescence is carried almost exclusively by the urine.

On the Evolution of Myelopathic Albumosuria.

By Dr. T. R. Bradshaw.—The author reports a case of myelopathic albumosuria occurring in a patient aged fifty-three years. The case illustrates two important points: 1. The presence of the albumose in the urine is the earliest symptom of the disease, and may be observed for many months before there are any other indications of failing health, or any local signs of alterations in the skeleton. 2. The albumose is at first excreted in small amounts, but is usually unrecognized for a long time. In the case here recorded, it appeared immediately after an attack of mild pneumonia.

On Some Cases of Hæmorrhage into the Skin and Suprarenal Capsules. By P. S. Blaker,

M. R. C. S., and B. E. G. Bailey, M. R. C. S.—The authors report four cases in children, of hæmorrhages into the skin, in which at autopsy hæmorrhages into the suprarenal capsules were also found. The interesting feature about these cases was the sudden onset, rapid course, and fatal termination. Not one of the patients was over a year old. The histories throw no light on the causation of the disease, but it is probably a toxæmia. It is just possible that the disease may be hæmorrhagic small-pox of the fulminating variety.

Experimental Malaria; Recurrence after Nine Months.

By P. T. Manson, M. B.—In September, 1900, the author was bitten in England by mosquitoes that had been allowed to feed upon the blood of a malarial patient in Rome. He developed a double tertian infection, which yielded rapidly to quinine. Five grains of quinine were taken once a week for three months afterward. Nine months later, without his having been re-infected, he developed a single tertian malaria which also yielded readily to quinine. The case illustrates the possibility of malarial organisms lying dormant in the system for months.

Indépendance médicale, June 19, 1901.

Surgical Treatment of Facial Neuralgia.—M.

A. Chipault says that those cases of facial neuralgia which come to the surgeon are more serious than those which physicians treat. Surgical intervention may consist of resection of one or all of the branches of the trigeminal nerve, or of resection of the Gasserian ganglion, the latter being the only method which offers a certainty against recurrence. Resection of the superior ganglion of the sympathetic may be practised. The operation involving the Gasserian ganglion is the gravest of the procedures. All these measures, especially peripheral resection and that of the sympathetic, are destined, the author believes, to play an important therapeutic rôle in the future.

Presse médicale, June 19, 1901.

Mucomembranous Enterocolitis of Uterine Origin. By M. Henry Reynès.

Epidural Injections.—M. Brocard says that puncture of the sacral canal, according to Sicard's method, is easy in the human subject. The patient sits bending forward or lies on the side. The operator stands to the left of the patient with his finger upon the two sacral cornua. Between these, a depression of a triangular shape can be felt. Toward the superior portion of this triangle the needle is introduced, the passage of the needle through the ligament being easily perceptible. The method is painless and diminishes the pain of tabes, sciatica, lumbago, intercostal neuralgia, and zona. Soluble drugs may be administered by this method instead of by the mouth, or rectum, or under the skin.

Gazette hebdomadaire de médecine et de chirurgie, June 12, 1901.

Salol in Pancreatic Tests.—M. P. Noliecourt and M. P. Merklen conclude from a series of experiments that the bile and the mucous membrane of the

entire digestive tract are capable of splitting up salol, and that this property is not limited to the pancreas. It does not occur in the stomach on account of the acidity of that organ. Salol is, therefore, not clinically useful in determining the normal or abnormal action of the pancreas.

Wiener klinische Wochenschrift, June 6, 1901.

Diseases of the Bronchial Glands.—Dr. Friedrich Schlegelhauser reports three cases of pyæmia resulting fatally, the origin of which lay in suppurating bronchial glands. In one case, metastatic abscesses were found in the brain and the spleen. This patient had a pulmonary tuberculosis. The second patient also had deposits in the brain with meningitis, and the suppurating gland had perforated into the œsophagus. The third case also presented metastatic cerebral abscesses. The author says that it is well to bear in mind the probable ætiological rôle of suppurating bronchial glands in cases of so-called idiopathic abscess of the brain.

Physio-pathology of the Functions of the Stomach and Intestines. By Dr. Julius Weiss.

The Static Relations of the Human Skeleton. By Dr. Cesare Ghillini.

Centralblatt für Chirurgie, June 22, 1901.

Immediate Cystorrhaphy after Suprapubic Cystotomy.—Dr. Balacescu empties the bladder completely before operation. He reaches it by a vertical incision, releases the peritonæum a little from its vertex and its posterior surface and opens the bladder from before backward, layer after layer. A crescentic piece of the mucosa is then excised, it is freed from its muscular layer, and is then sewed to the mucous surface of the opposite side with catgut. Beginning from below, the muscular layer is next sutured, and this must be done with the greatest care, the angles especially being carefully approximated. With permanent catheterization, he has secured primary union in all his cases in from seven to fourteen days.

Centralblatt für Gynäkologie, June 22, 1901.

Strychnine as a Peristaltic Agent after Laparotomy.—Dr. Hermann Grube recommends the subcutaneous injection of small doses of strychnine, twenty-four hours after laparotomy, to induce the passage of flatus. In three doses, extending over six hours, one-sixtieth of a grain is given, and simultaneous enemata of glycerin or saline solution are administered. In his hands, this method has worked admirably in inducing intestinal peristalsis.

New Method of Extirpating the Carcinomatous Uterus.—Dr. Josef A. Amann describes his new method. He makes a lateral incision along the pubes, freeing the rectus muscle. Extraperitoneally, he reaches the ureter by blunt dissection and ties the uterine artery, at the same time freeing the bladder from the uterus and vagina. The peritonæum is then opened sufficiently to extract the fundus uteri with a bullet forceps, and is again closed at once. The left parametrium is then cleaned out as far as appears desirable. The uterus may be removed vaginally. Tension on the uterus before removal enables the right ureter to be liberated from the right broad ligament. The advantages are the accessibility of the broad ligaments, the ease of free-

ing (or of resecting) the ureters, the easy cleaning out of the parametria, the ligature of the uterine artery with the least hæmorrhage, the performance of almost the entire operation extraperitoneally, the fact that no carcinomatous material comes into contact with the wound, and the ease of removing infected glands.

Riforma medica, June 10, 11, 12, 13 and 14, 1901.

Toxic Amyloid Degeneration in Horses that have been Immunized against Diphtheria. An Experimental Study of Amyloid Degeneration. By Dr. Costano Zenoni.—The lesions found in horses during the process of immunization against diphtheria were as follows: Diffuse visceral amyloid degeneration, especially of the liver; hepatic and intraperitoneal hæmorrhages due to rupture of the liver; acute anæmia, embolism of the hepatic cells, and fatty degeneration of the "parenchymatous organs." These lesions are progressive and are clinically expressed in the horses by weakness, anorexia, loss in weight, and rapidly increasing anæmia; by jaundice, hæmoglobinuria, fever, prostration, and, finally, collapse and death. The acute anæmia is caused by the hepatorrhagia. The injections of toxine should be suspended at the first signs of the malady, and the horse therefore should be carefully watched for the development of symptoms of amyloid disease. Amyloid degeneration is the expression of a perturbed function of the cells affected. It is a result of a special alteration of the metabolism of the cellular protoplasm which is brought about by the influence of chemical, physical, or mechanical injuries. An organ which undergoes degeneration as the result of such influences gives off some of the cellular fluids into the lymph spaces and thence these fluids are distributed to other organs. In this way a diffuse amyloid degeneration takes place. Amyloid changes must be attributed to the action of specific albuminoid bodies, particularly to the coagulated albuminoids which represent a modified form of coagulated serum albumin. Ultimate analysis shows the formation of amyloid to be a process of coagulation or precipitation which takes place in the fluids of the tissues (lymph) that have been altered in their cellular chemism.

June 15, 17 and 18, 1901.

On the Chlorine Compounds in the Urine. By Dr. Agostino Bruno.—Steinauer, in 1879, showed that in the urine of normal individuals there existed a certain amount of chlorine in combination with organic substances, and that the total amount of chlorine eliminated by the urine varied from seven to nineteen per cent. Hayem and Winter showed that the elimination of chlorine varied with the secretion of gastric juice. The author studied the variations in the quantity of chlorine in organic combination in the urine of patients with affections of the stomach. He observed for this purpose patients whose gastric juice showed an excess of hydrochloric acid, and also those whose gastric juice was deficient in this respect. He found that the variations in the amount of total chlorine did not correspond to the amount of hydrochloric acid in the stomach

after test-meals. The variations in the total amount of chlorine were limited, and almost identical in the ten cases examined. If there is a difference in subjects with carcinoma, this difference should be attributed to dietetic influences. The author concludes that the variations in the total amount of chlorine in the urine do not depend upon gastric affections, but upon the diet, for the chlorides ingested with the food rapidly pass into the urine. In two of his cases the above rule seemed to be contradicted. In a woman affected with pernicious anæmia the chlorine was exceptionally low. In this case the chlorides were probably absorbed and not eliminated, but left to accumulate in the tissues. This patient died in a few days. The second patient was one with Reichmann's disease [a gastric neurosis accompanied by excessive secretion] and with a pyloric stenosis. This patient vomited large quantities of stomach contents, in which there was a great deal of hydrochloric acid, but, of course, his chlorides in the urine were low, inasmuch as this excess was never absorbed. In all his cases the author found some chlorine in organic combination, and he believes that these compounds are present in small quantities in normal urine. These organic chlorides were more abundant in the urines of those patients in whom the fixed chlorides were more abundant, but this relation was not constant. The amount of organic chlorides is, however, probably in proportion to the work done by the stomach, i. e., as regards the amount of food taken in and the amount actually digested.

Fratch, May 26 (June 7, New Style), 1901.

On the Diagnosis of Tuberculous Peritonitis in Children, with a Report of Fifty-four Cases. By Dr. A. A. Kissjel (*concluded*).—All the cases of so-called idiopathic peritoneal effusion were taken in the author's hospital to be cases of tuberculous peritonitis, and accordingly laparotomy was performed in all instances. In fourteen cases the diagnosis was confirmed by detailed pathologic examination. In only one case did microscopic examination give negative results. Cirrhosis of the liver in children is sometimes mistaken for tuberculous peritonitis, for the ascites may be the only symptom. It must be borne in mind that tuberculous peritonitis has been found in cases of cardio-cirrhotic ascites in children. The exudate in tuberculous peritonitis is not infrequently absorbed spontaneously under stimulating treatment, and the children recover. In most cases the onset is insidious, at first with emaciation and pallor which cannot be accounted for. The presence of a serous pleuritic exudate facilitates the diagnosis. The most valuable symptom is the thickening of the peritonæum, which can be felt by grasping the abdominal wall in the shape of a fold. The fluid in tuberculous peritonitis is rich in albumin and of high specific gravity. Often the whole peritonæum is found covered by dense tuberculous masses, although the patient's condition had been fairly satisfactory. The most difficult cases are the rare instances in which there is a tuberculous pericarditis in addition to a serous peritonitis. In rare cases the disease begins with acute symptoms.

On the Early Stages of Tuberculosis of the Synovial Sacs. By Dr. M. M. Dieterichs.—In investigating another problem regarding the synovia, the author examined a number of joints in persons who had died of tuberculosis of various organs. He found certain characteristic changes in these synovial membranes, which he describes in the present paper. The vessels of these synovial membranes, which did not show any lesions to the naked eye, were found to be markedly dilated, and filled with blood cells. The walls of the vessels were found to be considerably thickened, but on closer examination it was found that this thickening was only apparent, and that it was due to a diapedesis of white cells, followed by a deposit of fibrin and organization of connective tissue; thus the connective tissue formed a sort of sheath around the vessel. These appearances have been mentioned by Stieda. The presence of this dense connective tissue around the vessels renders their walls less elastic, and therefore the tendency to bleed, which has been noticed in synovial membranes, can easily be explained. The next phenomenon observed in these tissues is the appearance of giant cells in the connective tissue sheaths of the vessels, occasionally in the vessel wall proper. The author thinks that the disturbances in circulation and the formation of connective tissue may be forerunners of tuberculosis in these tissues, and intends to study the question more in detail in the near future.

Brandt's Method of Treatment in Diseases of Women and Some of Its Peculiarities. By Dr. D. D. Sandberg-Debele (*continued*).—Of the 25 patients whose histories the author cited in the previous issue, 19 were cured, 4 improved, and in 2 the treatment was discontinued. The diagnoses in these cases were as follows: Retroflexion with adhesions, 8 cases; retroversion, 5; lateral version, 2; fibromyomas, 4; inflamed adnexa and cellular tissue, 4; hæmorrhagic endometritis, 2. On closer analysis these patients were found to have several lesions, so that there was inflammation of the annexa, peritonæum, and cellular tissue in 24 out of 25 cases, displacement of the womb in 15, endometritis in 7, salpingitis, oophoritis, and para-oophoritis in 7, fibromyomas in 4, gonorrhœa in 4, hæmorrhagic endometritis in 3. (*To be concluded.*)

On the Influence of Work under Water on Man. By Dr. B. A. Liuboff.—(*Continued.*)

A Case of Fibromyoma in the Wall of an Ovarian Cyst. By Dr. V. E. Odintzoff.—The patient was a woman, aged forty-four years, in whom the abdomen gradually enlarged until it measured 137 centimetres in circumference. On abdominal examination there was found a growth having all the characters of a cyst, movable on the anterior abdominal wall. On pelvic examination a solid growth was felt occupying the whole of the pelvis. The diagnosis was ovarian cyst and fibromyoma of the uterus. At the operation it was found, however, that the fibromyoma was entirely independent of the uterus, but was connected with the cyst, and apparently was supplied by the vessels of the latter. The tumor was hemispherical in shape and was adherent to the cyst with its flat side.

Proceedings of Societies.

AMERICAN MEDICAL ASSOCIATION.

Fifty-second Annual Meeting, Held in St. Paul, on

Tuesday, Wednesday, Thursday, and Friday,

June 4, 5, 6, and 7, 1901.

Section in Nervous and Mental Diseases.

Address of the Chairman: The Relation of Nervous and Mental Disease to General Medicine.—Dr. H. A. Tomlinson, of St. Peter, called attention to the close relationship between somatic disturbance and chronic nervous disease, and stated that while the symptoms manifested might have their origin in a destructive or degenerative process in some parts of the nervous system, the real disease, upon the cure of which the ultimate recovery of the patient depended, had its existence in the vegetative organs. He said that it might be safely asserted that all disease processes began as intoxications, and that this was so even with chronic degenerative processes in the nervous system. During ten years of careful observation of the phenomena connected with the development and manifestations of insanity, in more than three thousand cases, he had never failed to find intoxication—the result either of imperfect elimination, or of failure in the processes of digestion and assimilation. Failure in elimination was most common, and involved most frequently the kidneys, then the lungs and skin.

Ætiology of Paretic Dementia.—Dr. Frank P. Norbury, of Jacksonville, Ill., read a paper with this title. He discussed the various factors which are regarded as important in the causation of paretic dementia, and gave the following as his conclusion: 1. Syphilis is the chief ætiological factor of paretic dementia. 2. Heredity is a potent factor. 3. Infectious fevers, with the toxæmia they give rise to, are contributing factors.

Discussion.—Dr. Harold N. Moyer, of Chicago, said that he did not think we were prepared to make the claim that paretic dementia was a para-syphilitic disease, although a history of syphilis was probably present in from 60 per cent. to 80 per cent. of cases. In connection with this question, the racial distribution of syphilis and paretic dementia should be studied. Among certain races, syphilis was very common, yet general paresis was exceedingly rare; while among other races the converse was true.

Dr. E. G. Carpenter, of Columbus, Ohio, said that he agreed with Dr. Moyer that syphilis, while a very potent factor in the causation of paretic dementia, could not be looked upon as the sole factor. In many cases the element of stress was an important factor. Exhaustion from sexual excesses or the stress of business, together with the excessive use of alcoholic stimulants, was sufficiently potent to produce paresis in one having a neuropathic constitution.

Dr. Richard Dewey, of Wauwatosa, Wis., said that he could recall six or eight cases of paretic dementia where syphilis—at any rate, acquired syphilis—could be excluded.

Dr. Sydney Kuh, of Chicago, called attention to the fact that syphilis was not only regarded as a very common ætiological factor in paralytic demen-

tia, but also in another disease closely allied to it—namely, tabes dorsalis. Whether or not it was the only causative factor it was impossible to say at present.

The chairman, Dr. Tomlinson, referred to the fact that while syphilis was a widely prevalent disease, paretic dementia was comparatively infrequent, and that, after death from the latter disease, no definite syphilitic lesions had been found.

Dr. Edward E. Mayer, of Pittsburgh, thought the assertion that paretic dementia was dependent upon syphilis should be based upon a more scientific basis. Because a patient with paretic dementia had had syphilis, we should not take it for granted that syphilis was the ætiological factor. Many years usually elapsed between the occurrence of the two diseases, and the lesions of syphilis had not been found *post mortem* in cases of paretic dementia.

Symptomatology of Cerebral Hæmorrhage.—Dr. F. Savary Pearce, of Philadelphia, said that under the head of cerebral hæmorrhage we included not only an extravasation of blood in or about the brain, but also thrombosis or emboli-producing symptoms of acute softening; it was difficult to distinguish the latter condition from a slow exudation of blood within the encephalon.

The symptoms of a typical case of cerebral hæmorrhage were divided into those of the acute stage and those of the later, or chronic, stage. While the patient might have some premonitory signs, such as dizziness, headache, and dulness of mentality, for some days or weeks before the onset of the attack, still it was the rule that he was feeling particularly well immediately preceding the apoplexy. The attack, in the majority of instances, occurred during the sleeping hours of the night. This was probably explained by the fact that inhibition was generally lessened during the early hours of the morning, and very likely there was much less resistance within the encephalon, thus allowing over-distention of the cerebral vessels, which produced the "breaking strain" in sclerosed cerebral arteries.

If the hæmorrhage had been massive, the patient would be found comatose. The conjugate deviation would occur toward the affected side. Other symptoms were the unequal dilatation of the pupils, the temporary abolition of the reflexes, the peculiar breathing, and the difference in the temperature between the two sides of the body. The paralyzed extremities might be hyperæsthetic. If the patient was going to recover, the temperature dropped at the end of four to six hours, the pulse became softer, its frequency was but slightly above the normal, and the flushing and cyanosis of the face disappeared.

Discussion.—Dr. Patrick, of Chicago, said the common belief that cerebral hæmorrhage was likely to occur more frequently during the sleeping hours was not based on fact and had been disproved a number of times.

Dr. F. W. Langdon, of Cincinnati, said that he agreed with the statement made by Dr. Patrick regarding the frequency of cerebral hæmorrhage at night. An attack coming on during the sleeping hours was more likely to indicate thrombosis than hæmorrhage. The former accompanied low blood pressure, the latter high blood pressure.

Dr. John Punton, of Kansas City, referred to the importance of coma as a prognostic condition in

cerebral hæmorrhage. The longer the duration of the coma, the less chance had the patient to recover. The symptom of coma should also receive more attention in studying cerebral hæmorrhage from a surgical standpoint. Dr. Punton called attention to the fact that hæmorrhage of the brain not infrequently occurred much earlier in life than formerly. The text-books taught that it was a disease occurring rather beyond middle life, usually between fifty and sixty years of age. The speaker said that he had seen several cases which occurred between the ages of thirty and thirty-five years.

What Can Be Done for the Epileptic in a Medical Way?—Dr. Robert H. Porter, of Chicago, presented a paper with this title. He said that the utter hopelessness with which the epileptic was usually regarded had retarded very much the proper study and treatment of the disease. A thorough and careful examination of the patient should be made in every case, in order to discover, if possible, the primary origin of the disease, the exciting cause, and any complications that might exist. The speaker said that he favored the theory that the primary origin of idiopathic epilepsy was due to a degeneration of the cells of the central nervous system, resulting from impaired nutrition. When these brain cells, with their impaired or perverted nutrition, were excited or greatly stimulated, they produced incoordination or perverted functional activity. Dr. Porter next referred to the strong psychical element present in some cases of epilepsy. Whatever served to stimulate the brain circulation, such as excitement, worry, hard study, or close mental application usually increased the severity and frequency of the attacks. Remedies that stimulated the brain or produced an increase in the blood pressure generally had the same effect. On the other hand, the various measures that diminished the brain circulation and reduced the blood pressure aided greatly in controlling the seizures. In the treatment of epilepsy, the speaker said, it was a well-known fact that a mental impression was often sufficient to arrest the convulsion, even in the worst cases.

Discussion.—Dr. Lambert Ott, of Philadelphia, said that he had listened to Dr. Porter's paper with rapt attention, hoping to hear of some new remedy for epilepsy, but he was disappointed. After a large experience with this disease he had come to the conclusion that we possessed absolutely no remedy which cured epilepsy, and we had but one which influenced the epileptic seizures decidedly, and that was the bromide of potassium.

Dr. Kuh said that various theories had been advanced regarding the cause of the epileptic seizure, but the subject was still in doubt. The experiments that had been made had given absolutely conflicting results. Some asserted that hyperæmia of the brain was the cause; others, anæmia.

Dr. Riggs said that while a discussion of the subject of epilepsy was a good field for mental gymnastics, it was not very profitable. He was not in sympathy, however, with the trend of opinion that nothing could be done for these patients. With the use of the bromides, and proper attention to the digestion and elimination, as well as with the correction of the habits of life, much could often be accomplished. One cause of failure in the treatment of

epilepsy was that the patients were not kept under observation long enough.

Dr. S. Savary Pearce, of Philadelphia, said that he believed in the general systemic treatment of epilepsy and the correction of all reflex causes of irritation. He said that, in a number of cases during the past winter, he had given the fluid extract of *Solanum carolinense* (horse-nettle) in fairly large doses with apparently good results.

Dr. C. A. Drew, of Massachusetts, said that he thought the epileptic seizure was partly due to irritants circulating in the blood. He did not regard the reflexes as the basal cause of epilepsy, but he believed that all sources of reflex irritation should be corrected. His experience with the bromides had not been very encouraging.

The Treatment of the Acute Psychoses in Private Practice. By Dr. C. Eugene Riggs, of St. Paul.—The essayist said that, since the representative medical schools had introduced a course of psychiatry as an essential part of their curriculum, the attitude of the profession had radically changed with reference to insanity. It was now believed that no person ought to be sent to an institution who was a suitable subject for home treatment. Dr. Riggs said that he was convinced, as the result of a large experience, that home care in properly selected cases (by home care meaning care in either a private family or a private hospital) would materially shorten the length of an attack. There could be no question that the association of the insane with each other not only added greatly to their suffering as the result of personal contact, but that self-suggestion intensified and prolonged indefinitely the morbid mental state. It was the absence of these conditions, together with the opportunity for individualization of treatment, which made home care so desirable and successful.

Discussion.—Dr. R. Dewey, of Wauwatosa, Wis., said that the general practitioner very seldom considered for a moment the possibility of keeping an insane patient at home. The speaker said he had seen such patients who might well have been cared for in their own homes sent away to institutions. Generally speaking, however, such cases were better taken care of in proper institutions than they could be at their homes or in general hospitals. A physician who had not had the opportunity of studying this class of patients was liable to fail in appreciating the necessities of the case.

Dr. Punton said that in the treatment of any form of acute psychosis he was a firm believer in the importance of absolute isolation of the patient, whether the treatment was carried out at home or away from home. Many general practitioners could not realize the importance of this measure and made all sorts of compromises with the family, which proved harmful to the patient. Acute insanity rapidly passed from a curable to an incurable stage, and it was upon our treatment during the first three months that the patient's chance of recovery largely depended.

Dr. J. G. Biller, of Cherokee, Iowa, said that he differed somewhat with the writer of the paper in regard to treating cases of acute insanity at home. Such experiments usually resulted disastrously, and, generally speaking, the sooner the patients were removed from home, the better their chances of recovery.

ery. Such patients required constant, intelligent, and careful watching, and this they could only get in a well-kept hospital.

Dr. F. W. Langdon, of Cincinnati, said that he had been obliged to treat a number of cases of acute psychoses outside of institutions, and a fair proportion of these had terminated favorably. We knew, however, that the environment of a patient in which the abnormal state developed was not the best for his recovery, and while under exceptional circumstances such cases might be successfully treated at home, the wisdom of this course was open to doubt.

Dr. Harold N. Moyer, of Chicago, said that while he was in accord with the general consensus of opinion that cases of acute psychosis were best taken care of in special institutions, there were some families who would not consent to having the patient removed from home, and under those circumstances we must do the best we can.

(To be concluded.)



DR. GEORGE M. KOBER,

who delivered the Oration in State Medicine, at the Fifty-second Annual Meeting of the American Medical Association.

Section in the Practice of Medicine.

(Continued from page 137.)

The Modified Treatment of Typhoid Fever was the title of a paper by Dr. T. B. Greenley, of Meadow Lawn, Tenn., in which he advocated the use of acetanilide with quinine; he asserted that acetanilide was soothing and quieting, and prevented the possible irritating effects of the quinine. No depressing effects of this drug upon the heart had ever occurred among his cases. The dose was increased or

diminished according to the rise or fall of the temperature.

Mental Shock. By Dr. O. T. Osborne, of New Haven, Conn.—The author did not wish to appear as advocating the use of this term for conditions of failing heart due to distinct pathological conditions; or to a gradual break-up in the system by very acute or prolonged intense processes; he thought that the term was justifiable when a badly acting and gradually weakening heart was the most urgent cause for anxiety, and its weakness was out of proportion to the pathological conditions or symptoms present. He believed that we were justified in using the term "mental shock" as we were in using the term "surgical shock." The symptoms were a more or less rapid heart, irregular, perhaps dicrotic or intermittent, pulse, incomplete respirations without much actual dyspnoea, interspersed with frequent sighs; and the subjective symptoms of precordial oppression. The temperature was generally low, the flesh cool and clammy, and, if quick relief was not obtained, death would soon take place by heart failure or mental shock. He believed that mental shock was just as certainly a vasomotor paralysis as surgical shock and, as a consequence, that the major part of the blood was to be found in the abdominal veins. The blood flowed slowly into the dilated, and therefore non-elastic, arterioles, and thence slowly into the capillaries; it returned slowly in the veins and imperfectly filled the heart cavities. The heart contracted irregularly, incompletely, and arrhythmically. The aorta had not the pressure ahead or the forcible quota of blood from behind, and consequently did not give enough elastic rebound to force blood properly into the coronary arteries, and the heart muscle was imperfectly nourished. By the lowered blood pressure all the functions of the body began to fall, all digestive processes were impaired, and molecular death began to take place. Severe acute nerve pain would, if continued, give a lowered vasomotor tension, and if too long continued or too severe, would produce vasomotor paralysis or shock perfectly similar to that due to profound injuries of these nerves, or surgical shock. In acute feverish processes our aim should be to make the elimination at least equal to the production of the decomposing and fermenting products and to prevent the absorption of these products, if possible. In all diseases and conditions there was a piling up in the blood of absorbed poisons, be they from typhoid fever or dysenteric ulcers, from pus collections, from malarial plasmodic or hæmoglobinuric debris, from cancerous disintegration, unhealthy catarrhal oedematous mucous membranes, etc.; any treatment which hastened the evacuation of the bile impregnated with toxines would prevent systemic and nervous poisoning and ultimately vasomotor disturbances and mental shock.

Coughing as a Means of Disseminating Tubercle Bacilli: A Study of Fifty Cases. By Dr. E. Napoleon Boston, of Philadelphia.—The causes which prompted him to investigate as to the degree to which tubercle bacilli were disseminated were, first; that from the mouth of an inmate of the Philadelphia Hospital he had noticed that fine droplets of sputum were ejected with each act of coughing, and, secondly, that coughing was often excited by eating. He thought that this was a potent factor in the dis-

semination of tuberculosis, and that it possibly explained why patients in the early stages of the disease did badly in this institution, where every possible attention was given to ventilation, light, and the disinfection of the sputum. The spray was collected by a mask, the essential features of which were, that it was made from German silver wire, one piece of which was moulded to fit the face, resting on the nose, cheeks, and chin. To prevent irritation, it was covered with rubber tubing. Suspended from this wire was a second oblong portion, provided with two lateral grooves, which served to accommodate two microscopic slides. When the mask was in position the slides were held directly in front of the mouth and nose at a point about three inches distant from the lips. The piece was held in position by an elastic band. The patients were allowed to wear this about an hour and only during that part of the day when they coughed the least, and they were instructed to remove it during attacks of coughing. Of the fifty specimens obtained from fifty patients, thirty-eight were found to contain tubercle bacilli in variable numbers, from four to six being the smallest found in any specimen. In three of the twelve negative cases, the patients were so weak that they could scarcely talk while wearing the mask. It was shown that the secretions of the mouth and respiratory tract were atomized and given off in the form of sprays, in both health and disease, and that this spray contained bacteria and other cellular elements known to be common to such secretions, and therefore it was rational to suppose that many other diseases were conveyed by this medium, and that the work accomplished through the study of consumptives was but a step in a direction which bade fair to modify the hygiene of infection. Conditions affecting these organs, and consequently their secretions, must of necessity be spread in this way; especially was this true of diphtheria, amygdalitis, and, possibly, small-pox, measles, scarlet fever, whooping-cough, mumps, etc. Droplets alighting on clothing must serve as a favorable means of conveying the disease from house to house; and it appeared highly probable that men might become infected by the spray projected by horses, cows, and other domestic animals suffering from glanders, tuberculosis, and similar affections.

The Value of Throat Cultures in Diphtheria was the title of a paper by Dr. M. H. Fussell, of Philadelphia, in which he said that the following propositions could be proved: 1. True cases of diphtheria may have few or no clinical symptoms. 2. Cases of amygdalitis or pharyngitis may have severe symptoms and be serious, but no true diphtheria or Klebs-Loeffler bacillus be present, and consequently the patient was not able to transmit the disease. 3. A diphtheritic exudate may be easily detached and leave no bleeding surface. 4. An exudate due to some other organism may be a true membrane, impossible to detach from the mucous membrane. He said that cultures could most surely and with less risk of mistake be made at the laboratories, but that they could be made at home, and should be made there, if we intended to keep pace with the rapid strides of recent medicine.

Genito-urinary Examinations by the General Practitioner, with Demonstrations on Patient. By Dr. Ferd. C. Valentine, of New York.—It was the

author's desire to show (1) that all genito-urinary examinations should be painless; (2) that the operator should conduct no examinations unless his arms were bared to above the elbows and his clothing protected by a gown and apron; (3) that during every examination the physician should protect his eyes with spectacles (not eye-glasses), even if he had no visual defects; (4) that ideal examinations were made in the morning before the patient had passed his urine; (5) that the amount and character of a urethral discharge could be estimated only by correct technique in expressing the urethral contents; (6) that the color of the urethral discharge changed when it dried upon the patient's garments; (7) that the meatus should be cleaned before passing urine for examination; (8) that the manner of urinating was often pathognomonic; (9) that the epithelium found in the urine was indicative of the locality of the lesion; (10) that examination of the urethral adnexa was a necessary part of the steps for complete diagnosis; (11) that no instrumental ingression of the urethra should be attempted without most thorough efforts at rendering it aseptic; (12) that the technique of striving at urethral asepsis was neither complicated nor difficult; (13) that the soft bougie-à-boule was the only instrument that could be used for tactile exploration of the urethra; it was purely a diagnostic instrument; the rigid sound was wholly a therapeutic instrument; (14) that urethroscopy with a modern instrument was not difficult; (15) that the general practitioner was perfectly competent to examine the vast majority of genito-urinary cases; (16) that such examinations only exceptionally required extraordinary skill or a large armamentarium; and (17) that the pathology of genito-urinary diseases in nowise differed from that of other affections.

Clinical Observations in Pericarditis. By Dr. Frank Billings, of Chicago.—The author stated that pericarditis was essentially a secondary process occurring in the course of some general infection. The local manifestations might be so slight as to escape observation and the general symptoms to which the local disease might give rise might be obscured by the constitutional disturbance of the primary general infection. Therefore it often happened that the diagnosis of pericarditis was more often made at autopsy than clinically. The histories of several cases were given which presented, clinically, so far as the heart and pericardium were concerned, practically the same signs and symptoms. The cases further illustrated the importance of the three cardinal signs of pericarditis—namely, the pericardial friction rub, the form of outline of the pericardial dulness, and the position of the apex beat, especially in relation to the left border of pericardial dulness. In every case the pericardial friction rub was doubtless present in some period of its course. It was practically the sole local sign in plastic pericarditis. In pericarditis with effusion it might not be recognized, although it was probably present in every case at an early stage of the disease, and in cases of recovery after the disappearance of the effusion; it might be present, too, during the stage of effusion. The form of this outline of dulness in pericardial effusion was characteristic—the pear-shaped outline with the base downward; the dulness, even in the early stage of effusion in the

fifth right interspace close to the sternum, obliterating the resonant angle formed by the lung, heart, and liver; the dulness over the sternum extending to or above the second rib, together with the outline of the left border dulness, were easily recognized and almost pathognomonic. It was also true that a greatly enlarged heart with all the chambers dilated from myocarditis and a weak diffusible apex beat might present an outline of dulness which so nearly resembled that of pericarditis with effusion that it might be impossible to distinguish between them without puncture. The location of the apex beat in pericarditis with effusion was characteristic. It would always be found, when it was perceptible, that the left border of dulness was relatively far removed from it, as it was not in any other cardiac disease. It might be obscured in large effusions, and at other times the right ventricle might strike the chest wall in the region of the nipple, or undulatory waves might be seen as the only evidence of the heart beat against the chest wall. However, it mattered not how the apex-beat or the impulse of some other part of the heart against the chest wall was ascertained, it would be found that the point of contact of the heart against the chest wall was always relatively far removed from the left border of precordial dulness, as compared with the relations of the apex-beat to the left border dulness in all other conditions. The signs of compression of the left lung evinced by the left subscapular dulness and bronchial breathing, the relatively rapid respiration and dyspnoea, the rapid heart action, the pulsus paradoxus, and the asymmetry of the radial pulse, the irregular type of temperature, the paralysis of the left recurrent laryngeal nerve, the unequal pupils, the disturbed mental state of the patient, and still other phenomena, were signs and symptoms not so characteristic as the three cardinal signs first named, but were important and significant when present. Frequent careful systematic examination of the præcordium should be made in all infectious diseases, and if this was done by the clinician, pericarditis would not escape him. It was an easily recognized condition.

Pathology and Pathogenesis of Pericarditis. By Dr. Joseph McFarland, of Philadelphia.—He said that the disease occurred more frequently in men than in women, probably because they were more exposed to its causes. It was customary to divide the cases into those which were primary or idiopathic, and those which were secondary or metastatic. Concerning the relative frequency, authors varied in opinion. Traumatism as a cause of pericarditis was of importance only as it afforded an avenue of entrance for micro-organisms, or produced conditions favorable to their colonization in the tissues. Lymphogenous metastasis might occur in many of the local affections in which no actual traumatic lesions existed. In this manner, disease of the mediastinum, pleura, etc., might occasion pericarditis. Hæmatogenous metastasis was seen in nearly all of the infectious diseases, but especially in rheumatism, pyæmia, septicæmia, pneumonia, chorea, scarlatina, etc. There was no specific micro-organism of pericarditis. Breitung had collected 324 cases of pericarditis among the autopsies of the Berlin Charité, between the years 1866 and 1876, and had found them distributed as follows: Peri-

carditis serofibrinosa, 108; pericarditis hæmorrhagica, 30; pericarditis purulenta, 24; pericarditis tuberculosa deuteropathia, 24; pericarditis tuberculosa idiopathica, 2; pericarditis adhæsiva partialis, 111; pericarditis adhæsiva totalis, 23; pericarditis ossificans, 2. It was an error to think of these names as referring to distinct forms of the disease; they were, for the most part, stages of the same process. In 39 cases studied by Louis the exudations were serous, 9; purulent, 7; serosanguinolent, 10; seropurulent, 13.

The effect of pericarditis upon the heart was of great importance; no considerable disease of the epicardium was possible without involvement of the heart. The superficial layers of muscular fibres usually showed cloudy swelling; later, hyaline or fatty degeneration. The pus also gradually worked its way between the muscular bundles, in cases with purulent exudate. The changes that thus took place during the height of the disease predisposed to acute dilatation of the heart, and a fatal termination of the disease might thus be brought about. If this did not occur, and if the patient recovered from the pericarditis, the regenerative cicatricial processes that went on led to fibroid interstitial changes in the wall of the heart.

The General Ætiology of Pericarditis.—Dr. Robert B. Preble, of Chicago, gave the following conclusions: 1. Cases of acute pericarditis, clinically primary, occur, but are rare. 2. Diseases to which pericarditis appears as a complication are, in order of their frequency, pneumonia, 34 per cent.; rheumatism, 23.36 per cent.; chronic diffuse nephritis, 11.2 per cent.; tuberculosis, 10 per cent.; sepsis, 4.7 per cent.; aneurysm, 2.6 per cent.; typhoid, 1.7 per cent. 3. The more extensive a pneumonia, the greater the danger of this complication. 4. The danger is somewhat greater with left than with right-side pneumonia. 5. Where only one lobe is involved, the danger is least with a right upper-lobed pneumonia and greatest with a right middle or left upper-lobed pneumonia. 6. With a unilobar pneumonia, the changes of a pericarditis are one in forty; with a bilobar or trilobar, one in ten; with a quadrilobar, one in five; and with a pneumonia of the entire left lung, one in eight. 7. The mortality of pneumonias with pericarditis is 92.4 per cent. 8. Rheumatic pericarditis is complicated by endocarditis in 60 per cent of the cases—*i. e.*, three to four times the normal rate of cases of endocarditis. 9. The danger of pericarditis complicating rheumatism is the greater the younger the individual, and is somewhat greater with males than with females. 10. So far as acute pericarditis is concerned, the site and extent of the endocarditis is apparently of no importance. 11. Pericarditis appears as a complication of all forms of nephritis, but particularly of the chronic diffuse nephritis with contraction. 12. It is an extremely ominous thing, for twenty-two (*i. e.*, 84.6 per cent.) of the patients died. 13. It is still uncertain whether the pericarditis is toxic or infectious. 14. Tuberculosis excites only one tenth of the cases, and when one considers the extreme frequency of tuberculosis, tuberculous pericarditis must be regarded as a rare complication. 15. Pericarditis may be a part of a generalized acute tuberculosis, but is more often the result of a chronic tuberculosis of the lungs or mediastinal glands. 16. Septicæmia and pyæmia

contribute a very considerable number of cases of pericarditis. The primary focus may be remote or close to the pericardium. 17. Aneurysm of the aorta causes 2.6 per cent. of all the cases, a very high figure when one recalls the comparative infrequency of aneurysm. 18. Typhoid fever, which is rarely complicated by inflammation of the serous membranes other than the peritonæum, contributed four cases, or 1.7 per cent. 19. The cases of obliteration of the pericardium are due to the following causes, arranged in order of importance: Endocarditis, tuberculosis, chronic nephritis, aneurysm. 20. More than one half of the cases, in which the cause was clear, were due to endocarditis, or rather to some cause common to both the endocarditis and the pericarditis, and more than one half of these cases showed a combined aortic and mitral endocarditis. 21. Relatively six times as many cases of obliteration of the pericardium occur with aortic and mitral endocarditis as with either lesion single. 22. Tuberculosis causes but few cases of oblitative pericarditis. 23. Pericarditis, accompanying nephritis, is not always fatal, but may apparently aid in the formation of adhesions.

Adherent Pericardium was the title of a paper by Dr. Robert E. Babcock, of Chicago, in which he stated that adherent pericarditis was encountered in two forms, first, where there were adhesions between two layers of the sac, but not of the pericardium to the surrounding parts—pericarditis interna; and, secondly, the pericardium adherent to the epicardium and also to the neighboring structures—pericarditis interna et externa. He then considered the effects on the heart and general circulation, with special consideration of its effect on the liver, leading to the so-called pseudo-trophic cirrhoses of the liver. Diagnosis, in the first form mentioned, was usually very difficult and often impossible. He then made a cursory enumeration of signs. If the adhesions were limited to the two layers of the sac, and if they were unassociated with valvular diseases, the result might be only hypertrophy of the heart, and the circulation would be carried on adequately and no subjective symptoms be produced. If pericarditis led to adhesions while the heart was in dilatation from endocarditis, then the heart was prevented from ultimately returning to its previous size and the symptoms due to stasis were likely to occur. In the second form mentioned the diagnosis was often easy, in consequence of the signs resulting from the pulling of the adhesions upon the surrounding soft parts.

Tuberculous Pericarditis. By Dr. C. F. McGahan, of Aiken, S. C.—The author stated that this disease was much more prevalent than had heretofore been generally accepted. He believed that a great many cases of obscure heart troubles occurring in the anæmic without valvular disease or marked symptoms of pericarditis, but where we had certain marked symptoms of the cardiac disease, were due to tuberculous pericarditis, particularly if later the patients began to lose weight and to assume a cachectic appearance. This condition usually progressed insidiously, and he believed that it was communicated to the pericardium through the lymphatics, the arterial, and venous systems, and from all the sources that tended to cause tuberculous troubles in the peritonæum. The symptoms of tuberculous

pericarditis were those that we got from enlarged heart, and from an adherent heart, together with the general symptoms of malaise, and more disturbances of the general system than could be found in a simple pericarditis, or one secondary to rheumatism or the exanthematous diseases.

Cardiac Lesions as Observed in the Negro, with Special Reference to Pericarditis.—This paper was read by Dr. Frank A. Jones, of Memphis, Tenn. He made the following recapitulation: 1. Aortic regurgitation in the negro is the most frequent and most dangerous of all valvular lesions. 2. The next most frequent is aortic stenosis. 3. The next, mitral regurgitation. 4. Mitral stenosis had not been diagnosed in the cases he reported from the physical signs and symptoms. 5. Tuberculosis and syphilis act both as exciting and predisposing causes in the production of muscular and valvular lesions. 6. A syphilitic history is more frequently found in mitral regurgitation than one of rheumatism. 7. The murmur of aortic regurgitation is most frequently musical.

Some Points in the Treatment of Pericarditis.—Dr. Frank Parsons Norbury, of Jacksonville, Ill., said that it behooved us in the treatment of rheumatism, acute infectious fevers, and septic processes, to keep ever in mind the possibility of pericarditis as an aftermath and to govern ourselves accordingly by insisting upon absolute rest and quiet until this danger was past. Each case must be treated upon its individual merits. Quiet surroundings and rest must be enforced; this was important because it curbed the symptoms and placed the patient under the most favorable condition for speedy recovery. Milk was the most suitable diet. It should be given in small quantities every two or three hours. It was well to remember that nearly all cases of rheumatic pericarditis got well, if we let them alone; the patients should be kept at rest and indications carefully met as they arose. A blister over the pericardium would be sufficient for the relief of pain, or, if it continued, cold applications, cold cloths, or an ice-bag used as needed. When other means failed, morphine should be given, guarding it with proper cardiac support. For the restlessness he preferred bromide of sodium given during the day, usually commencing about noon, and repeated at 4 or 6 in the afternoon and at bedtime. For the insomnia he used trional; if combined with sulphonal, its effects were prolonged. For the cardiac distress, strychnine might be given, or, if necessary, digitalis with strophanthus. To deal properly with the effusion was one of the prime essentials of treatment. If moderate, unless septic, it would be absorbed, and, even if large, the chances were that, with the cautious use of diuretics and purgatives, it would disappear. The indications for surgical intervention were, according to Osler, "dyspnoea, small, rapid pulse, dusky, anxious countenance" and, he added, the physical signs of extensive effusion. The aspirator was recommended.

(To be concluded.)

Mercury Salicylate Unstable.—According to J. A. Larrin (*Pharm. Jour.*), no preparation of mercury salicylate should be used which is more than a month old.

Letters to the Editor.

THE KIUKIANG XIPHOPAGUS.

U. S. Steamer *Helena*, SHANGHAI, China, June 15, 1901.

To the Editor of the *New York Medical Journal*:

SIR: In your issue of April 27, 1901, I noticed a review of Dr. Edouard Chapot-Prévost's article on



THE KIUKIANG TWINS.

the Kiukiang twins. I enclose a photograph of them, said to have been taken seven years ago.

RICHMOND C. HOLCOMB,
Assistant Surgeon, U. S. N.

*.*We are very much indebted to Dr. Holcomb for the photograph, which we here reproduce. Some of our readers may remember the following interesting statements regarding the twins: "One may sleep while the other is awake. One is sometimes hungry when the other is not. On one occasion whiskey was given to one of them only, when both became intoxicated, the one that had not taken the whiskey being more drunk than the other."

THE PHYSICIANS' ASSOCIATION OF AMERICA.

RICHMOND HILL, BOROUGH OF QUEENS, July 2, 1901.

To the Editor of the *New York Medical Journal*:

SIR: I wish to recount my experience with the above-styled concern, which sent out circulars to

the profession offering to collect their accounts for them. I gave them a few of my accounts to collect, only one of which did they succeed in getting money from. It was an account of \$28. They collected \$25 and notified me. But after extensive correspondence with them, I only succeeded in getting them to reimburse me after putting the thing into the hands of a lawyer. He, after many persistent efforts, got \$13.75 from them, which he sent me. This is all I ever got from the Physicians' Association of America directly.

They profess to publish a *Confidential Report*, a sort of black list, which they promise to issue every three months with monthly "supplements." I subscribed to the *Report* last February, with a proviso that four other physicians' names in my immediate neighborhood be also secured. I have never heard of their being secured, and I have not as yet received a *Report* or supplement; yet they deducted \$7.50 from the \$25.00 they collected for me when my lawyer secured what he did. The \$7.50 was for six months' subscription to the *Report*. For that sum I have received absolutely nothing. *Dictum sapienti*, etc.

W. C. FISKE, M. D.

THE QUESTION OF A HOTEL FOR CRAIG COLONY.

SONYEA, N. Y., July 8, 1901.

To the Editor of the *New York Medical Journal*:

SIR: In your editorial in the July 6th issue of the *Journal* on The Craig Colony for Epileptics, you refer to the matter in our *Seventh Annual Report* concerning a public house of some kind at the colony to meet the requirements of the large number of people who have occasion to visit this institution. "We presume," you say, "that Dr. Spratling does not mean to recommend that the State should actually go into the inn-keeping business." I am pleased to say that the assumption is entirely correct. I am of the opinion that the State would not make a very successful landlord; but I do feel that local conditions are such as to warrant the State in letting someone else erect and keep a public house on the colony premises, the character of the traffic of the place and its management to be entirely under the supervision and control of the colony authorities.

Any one who is familiar with the vast size of the colony estate, embracing nearly 2,000 acres, will appreciate the fact that a hotel might be built on the premises without interfering in any manner with suitable sites for homes for patients. The colony is rather remote from the larger centres of population, and the cost of transportation to friends and relatives of patients coming here is very great, and when they do come they like to stay some time. For these reasons I recommended that a public house of some kind be established on the premises. I believe the State now owns a hotel in connection with one of its large hospitals for the insane. I found at the German colony for epileptics at Bielefeld an excellent house in which visitors and strangers could find pleasant accommodations for any desired length of time.

W. P. SPRATLING, M. D.

Book Notices.

Physical Diagnosis in Obstetrics. A Guide in Antepartum, Partum, and Postpartum Examinations for the Use of Physicians and Undergraduates. By EDWARD A. AYERS, M. D., Professor of Obstetrics in the New York Polyclinic, etc. With Illustrations. Pp. viii-276. New York: E. B. Treat & Company, 1900. [Price, \$2.]

The author has already published, in serial form, the contents of the present volume in the obstetrical journal of which he is the editor, so that the work cannot be regarded as new. He goes minutely into the examination of the pregnant, parturient, and puerperal woman, and it is in the wealth of detail offered that the greatest obstacle to reviewing the book presents itself. It may safely be assumed that the methods described by Dr. Ayers are followed by all modern obstetricians in similar or modified form; and yet his book has a specific value in teaching the general practitioner and the student the technics of the obstetric means of diagnosis as they are practised to-day. While in a few points obstetricians differ even in these methods, it is in manner and not in substance; so one may say with accuracy that Dr. Ayers's book is scientific, modern, and thoroughly practical and sensible. We should like to know what "partum" means. Why could not the author have said *intrapartum*?

La cryoscopie des urines. Application à l'étude des affections du cœur et des reins. Par H. CLAUDE, Ancien interne, etc., et V. BALTHAZARD, Interne des hôpitaux de Paris. Avec 21 figures dans le texte. Pp. 5 to 94. Paris: J. B. Baillière et fils, 1901.

The facts pertaining to cryoscopy are succinctly set forth in this concise monograph, the opening portion of which deals with the very essential physical laws on which cryoscopy is based. The authors have tested this method of determining the freezing point of urine excreted in the various forms of acute and chronic nephritides, contrasted with normal urine. The observations set forth lead to the conclusion that the greatest advantage of cryoscopy lies in the fact of its being confirmatory of the physiological theory of Bowman and Heidenhain as to the mode of urinary secretion. Instances are cited, with graphic charts, demonstrating fluctuations in the freezing point of urines in nephritis that coincide with the well-known clinical phenomena of remission and exacerbation of the various forms of Bright's disease. These fluctuations, dependent on the degree of molecular concentration of the urinary constituents, are solely an expression of the degree of renal function. This new and highly interesting subject is treated of with moderation and with a spirit of conservatism as to its extreme utility.

Cancer of the Stomach. A Clinical Study. By WILLIAM OSLER, M. D., and THOMAS McCRAE, M. B. (Tor.), of the Johns Hopkins Hospital, Baltimore. With Illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1900.

Dr. Osler and Dr. McCrae have written a most interesting monograph on the cases which have come

under their observation at the Johns Hopkins Hospital, some 150 in all. They lay little stress on heredity as a factor in the causation of the disease, and conclude that the present-day knowledge as to the ætiology of cancer does not warrant any speculation or theorizing. While the stomach is the most abused and most irritated of all the organs of the body, the uterus and the breast, which are comparatively idle, share with it the most frequent incidence of cancer. In the young, the disease runs a rapid course, may be accompanied by fever, and is never latent; it is, rather, overlooked.

The authors go minutely into the symptoms of the disease and its associated and secondary symptoms, including metastases. In seventy-six per cent. of their cases a tumor was diagnosticated during life. About one third of the cases were subjected to a thorough blood count. The red corpuscles averaged 3,712,186, a high figure considering the advanced and cachectic cases. In fourteen of the cases, the hæmoglobin was reduced to between thirty and forty per cent. In a number of cases pernicious anæmia was simulated by the disease. The pylorus was involved in 53.3 per cent. of the cases, the cardia in 6.6 per cent., the greater curvature, the same, the lesser curvature in eleven per cent. Metastases were usual and perforation was found in four per cent.

Nourishing diet, analgetics, and lavage for vomiting offer the medical forms of treatment recommended by the authors. Surgical treatment, dependent upon early diagnosis, offers the only chance of recovery.

We have cited summarily some of the data given by the authors to show how thoroughly they have investigated and studied their cases. Like most of the Johns Hopkins publications, this monograph is worthy of study by every practitioner of medicine who values accuracy and completeness. The illustrations are very fine.

Physical Diagnosis of Diseases of the Chest. By RICHARD C. CABOT, M. D., Physician to Outpatients, Massachusetts General Hospital, etc. With One Hundred and Forty-two Illustrations. New York: William Wood & Company, 1900. Pp. xv-310.

The author has written this book for students and because he has "not been able to find any small work upon the subject which does not contain glaring errors." Certainly, Dr. Cabot's book will not be condemned for this reason, for every page gives evidence of the care employed in securing accuracy of statement and theory. Some superstitions, handed down from text-book to text-book, are summarily dealt with, especially those relating to disputed points in the diagnosis of cardiac disease. The entire chapter on the heart is admirable and contains practically all that a student need know of the subject. The diagnosis of pulmonary disease is also made very clear by text and diagram.

The work is rather more pretentious than most of those on the subject and is splendidly illustrated, mostly by new diagrams and photographs. Some Röntgen-ray pictures are clearly shown. The book may be unhesitatingly commended for the use of students, as well as for the perusal or study of practitioners.

Operative and Practical Surgery. For the Use of Students and Practitioners. By THOMAS CARWARDINE, M. S. (Lond.), F. R. C. S., Assistant Surgeon, Bristol Royal Infirmary. With 550 Illustrations, most of which are Original Drawings by the Author. Pp. xx-661. Bristol: John Wright & Company, 1900.

This book is one of the best of its kind that could be placed in the hands of the student or the general practitioner. The matter in each chapter is strictly up to date, and the author has succeeded most admirably in eliminating the antiquated and unimportant material that pads so many of our medical works. The English is always terse and perfectly intelligible. The book is well planned and systematically executed, and the important subjects are treated with sufficient fulness for all but the specialist. The author has exercised a careful selective function regarding the material in his book; for instance, instead of wearying his readers with a recital of the hopeless multiplication of amputations about the shoulder joint, he picks out three good typical operations, the Spence, Furneaux Jordan, and deltoid-flap methods, describes them clearly, and ends by mentioning the advantages and disadvantages of each.

Moreover, the portions of the specialties, which it is important for the general practitioner to know, are treated in the same clear, concise manner.

The one thing to be said of the book is that it is "practical."

A Practical Treatise on Materia Medica and Therapeutics, with Especial Reference to the Clinical Application of Drugs. By JOHN V. SHOEMAKER, M. D., LL. D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Medicine in the Medico-chirurgical College of Philadelphia, etc.: Fifth Edition, thoroughly Revised. Pp. vii-766. Philadelphia, New York, and Chicago: The F. A. Davis Company, 1900. [Price, \$4.00.]

Dr. Shoemaker has decided to divide the fifth edition of his valuable and well-known work into two independent issues, one for students and one for practitioners.

The students' edition includes nothing but official preparations of the pharmacopœias of the United States and Great Britain, while the physicians' edition will, in addition, include the many new remedies introduced within the last few years.

In this edition the author throws his influence on the side of the metric system by giving all doses in its terms, putting, however, its old-fashioned equivalent in parenthesis.

The consideration of each drug includes the results of the latest researches. The earlier part of the work is devoted to a clear, concise résumé of the general measures of therapeutics, prescription writing, etc.

Medicosurgical Aspects of the Spanish-American War. By Dr. NICHOLAS SENN, Lieutenant-Colonel and Chief Surgeon, United States Volunteers, etc. Pp. 10 to 379. Chicago: American Medical Association Press, 1900.

This book contains the communications of Dr. Senn to the *Journal of the American Medical Association* during his military service.

Some of the more important ones are on Typhoid in the Puerto Rican Campaign, Experiences in Military Surgery after the Battle of Santiago, The Surgery of Camp Wikoff, Nurses and Nursing in War, etc.

He says: "The surgeon who understands the principles and practice of good cooking is of more service to the troops than the one who can repeat, word for word, the contents of the most exhaustive treatise on materia medica and therapeutics."

Much of the book is devoted to matters of non-professional interest, while many pages contain matter of the highest medical importance. The author's observation of the great number of herniæ in the men after the campaign is most interesting. These were apparently caused more by tissue relaxation following disease and increased abdominal pressure from intestinal affections than by hard marches or violent exertions. The infrequency of inflammation of the vermiform appendix was remarkable. At Camp Wikoff not one case demanded an operation.

BOOKS, ETC., RECEIVED.

Anæsthetics and their Administration. A Text-book for Medical and Dental Practitioners and Students. By Frederic W. Hewitt, M. A., M. D. Cantab., Anæsthetist and Instructor in Anæsthetics at the London Hospital, etc. With Illustrations. London and New York: The Macmillan Company, 1901. Pp. xxiv-2 to 528. (Price, \$4.)

Crazes, Credulities, and Christian Science. By Charles M. Oughton, M. D. Chicago: E. H. Colegrove, 1901. Pp. 9 to 121. (Price, \$1.)

The Health Resorts of Europe. A Medical Guide to the Mineral Springs, Climatic Mountain and Seaside Health Resorts, Milk, Whey, Grape, Earth, Mud, Sand, and Air Cures of Europe. By Thomas Lynn, M. D., Fellow of the New York Academy of Medicine, etc. London: Hirschfeld Brothers, 1901. Pp. 281.

Die Protozoen als Parasiten und Krankheitserreger nach biologischen Gesichtspunkten Dargestellt. Von Dr. F. Doflein, München. Mit 220 Abbildungen im Texte. Jena: Gustav Fischer, 1901. Pp. xiii-274.

Die Serum-, Bakterientoxin- und Organ-Präparate. Ihre Darfellung, Wirkungswelke und Anwendung. Für Chemiker, Apotheker, Aerzte Bakteriologen, etc. Von Dr. pharm. Max von Waldheim. Wien: A. Hartleben, 1901. Pp. viii-404.

Military Government of Porto Rico from October 18, 1898, to April 30, 1900. Appendices to the Report of the Military Governor.

Sodium Iodate in Muscular Rheumatism.—Dr. Otto (*Therap. Monatshefte*) has had excellent results from the injection of 0.05 to 0.1 cc. of a five-per-cent. solution of sodium iodate, followed by massage and hot applications, in both chronic and acute muscular rheumatism. The solution should be freshly prepared.

Quinine for Cancer.—Jaboulay, of Lyons (*Deutsche Aerzte Zeitung*), uses quinine internally in doses of 15 grains for cancer instead of the subcutaneous injections hitherto resorted to. The alkaloid is also applied externally where the digestion is impaired. Fowler's solution may be given for a few days to allow the stomach to regain its tone.

New Inventions.

Miscellany.

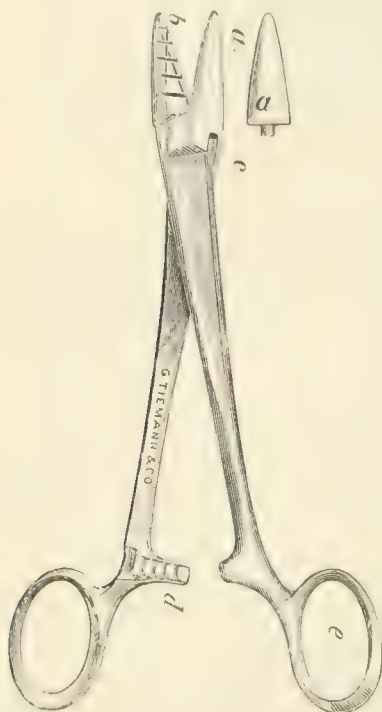
A NEW NEEDLE FORCEPS.

By J. S. WIGHT, M. D.,

BROOKLYN.

PROFESSOR OF OPERATIVE AND CLINICAL SURGERY AT THE LONG ISLAND COLLEGE HOSPITAL.

The accompanying cut represents the instrument. Its length is about eight inches. The jaws are three quarters of an inch in length. The pin, *c*, of the French lock is about an inch and three eighths from the end of the jaws. The upper jaw, *a*, is in the form of a cylinder, and is slightly grooved. The



A New Needle Forceps.

lower jaw, *b*, is flat and grooved transversely and obliquely. For clamping the needle, a simple ratchet, *d*, is used. It has flat ring clasps, *e*, for the thumb and fingers of the right hand.

This instrument has the following advantages: It is simple and easily kept aseptic; there is no new movement to learn; the upper jaw, being in the form of a cylinder, will not break a curved needle of the smallest size; the grooves in the upper jaw, as well as in the lower, prevent flat-curved needles from rotating. The instrument is made by George Tie-mann & Co.

The Ontario County Medical Society.—The annual meeting of the Ontario County Medical Society was held at Canandaigua on July 9th and the following officers elected: President, Dr. W. A. Howe, of Phelps; vice-president, Dr. C. C. Thayer, of Clifton Springs; secretary and treasurer, Dr. Daniel A. Eiseline, of Shortsville; censors, Dr. A. D. Allen, of Gorham; Dr. W. S. Hicks, of Bristol, and Dr. O. J. Hallenbeck.

The Dangers of too Technical an Education.—The following comments from the *New York Times*, for July 8th, apply, as it seems to us, with equal force to the subject of medical as to that of electrical education: Earnest opposition is expressed by the *Electrical Review* to the strictly specialized education which produces men with a good knowledge of one branch of applied science, but without information on other subjects and no general culture. It points out, too, that the lauded practicality of the technical schools is one way a delusion, since the young men graduated from them are by no means capable of entering at once upon the practice of the higher work of their professions, but must devote at least a year, usually at very low wages, to learning over again from actual experience what they have already learned from books, lectures, and such approximations to reality as the school shops provide. In effect, the *Electrical Review* advises the would-be engineer to acquire, as the foundation of his professional career, something very much like a college education. It tells him to learn German and French, in order that he may be able to take in at first hand all that is best in the scientific literature that interests him, and it advises especially a much more extensive study of the higher mathematics than is favored in some of the technical schools. A man who knows a great deal about electricity and nothing about anything else is declared to be not nearly so valuable or so likely to succeed as one who knows half as much about electricity, but has a good general education and the degree of culture that goes with it. "In the United States we need at present," concludes the article, "two kinds of electrical men—skilled and thoroughly trained artisans, and men of high scientific attainments combined with wide general culture. From the first class we may expect practical work of the utmost value, and from the second we may look for discovery and invention, research and calculation, that will form the basis for the labors of ensuing generations of artisans. For the half-educated electrical engineer there is practically no place at all." All this, says the *Times*, is excellent doctrine, not limited in application to electrical engineering, and, coming from the source it does, sufficiently answers the eminent but misguided individuals who have of late been advising young men to learn nothing not directly bearing on the work they intend to do.

Such is Fame!—The *New York Times* magazine supplement for June 16th is responsible for the following:

"Some years ago," said Bishop Potter, in a recent speech, "I was traveling in Minnesota. A man approached me on the railway platform and scanned my features closely.

"'Excuse me,' he said, finally; 'but haven't I seen your picture in the papers?'"

"I was compelled to confess that he might have done so.

"'I thought so,' continued the inquisitive one. 'May I ask what you were cured of?'"

Special Articles.

"INOPERABLE" RECURRENT CANCER OF THE BREAST; RELIEF BY BEATSON'S METHOD.

By ROBERT ABBE, M. D.,

NEW YORK,

SURGEON TO ST. LUKE'S HOSPITAL.

The profession stands ready to welcome any thought that sheds new light upon the universally dreaded disease, cancer, the study of which from both the obscurity of cause and the uncertainty of treatment, is still an unsettled problem. Following the line of progress of modern scientific surgery, it is reasonably certain that at some future day, perhaps within our time, there will be a more perfect understanding of cancer and a more certain cure for it. But to-day we have only one promising method of cure, viz., eradication of the apparent area of disease, either by the knife or by caustics. Hundreds of cured patients are living to-day, many years after successful excision of the tongue, lip, breast, and so on, but in the majority recurrence is the rule. In mammary cancers after operation recurrence has heretofore seemed like a death sentence, but recent thoughtful observations of a most able surgeon of Glasgow, Mr. Beatson,¹ afford food for thought which may be an argument for methods which will deal more successfully with this class of cases than others heretofore resorted to.

The rational treatment of disease is through (a) operation, (b) drugs, (c) bacteriotherapy, or (d) organotherapy. In the treatment of cancer the only approach to the latter method is by the suggestion of Mr. Beatson. His thoughtful writings may well be studied by the reader. Beatson's thought takes the following logical direction:²

Cancer is essentially a tumor originating in epithelium. The essential feature is a continuous and excessive growth of this epithelium, invading lymphatics and spreading thereby to various organs. Once begun, nothing yet known stops it. Among the epithelial masses certain characteristic cell bodies are found (Lebert, Russell, Darier, or Plimmer bodies), which are not yet proved to be the cause. The younger the patient the more prolific the growth and the more rapid the toxæmia. Recurrence after cancer operation is due to the "left-over" particles; hence the better statistics of the more elaborate modern operations.

Beatson's idea of cell growth emphasizes the fact that the human body represents groups of highly

differentiated epithelium originally starting as a single cell, the ovum, developing through its three layers the various organs of the body, each unique in its action and practically incapable of generating any new bodies. In the ovary and testicle there remains in each organism a unique germinal epithelium, a begetting cell, as it were, capable of undergoing elaboration into other compound beings, and, so, different from any other cell in the body.

Beatson thinks the so-called special cancer cells will be found to be vacuolated germinal cells corresponding with those found in the ovary alone (Graaffian follicles). Klebs also concludes that cancer epithelium is a form of ovum cell. Special cancer growth seems to be due to epithelium taking on characteristics of germinal epithelium; the distinguishing cells are not normal epithelium; although, *en masse*, they seem to resemble hypertrophied epithelium, they act differently, as in metastases, in which a particularly characteristic cell is "hived off," as he says, and begins a new group of the same malignant variety. He thinks ovarian influence works this change in the active processes of mammary cancer, in which the epithelium takes on the characteristics of germinal epithelium.

With such preliminary thought, Beatson applies to the human subject an observation made in Australia, where some farmers are in the habit of spaying cows during lactation in order to prolong the period of lactation indefinitely. Granting the truth of this observation, he explains the fact by noting that in normal lactation the epithelium lining the acini and galactophorous ducts undergoes rapid and enormous proliferation. This hypertrophy results in swelling of the heaped-up cells, which undergo fatty degeneration, burst their cell envelopes, and pour their finely divided fat particles in the form of milk into the ducts. Thus we see an enormous reproductive cell activity, with rapid destructive cell metamorphosis. He observes that the same cells involved in this process are of the identical epithelium which undergoes hypertrophy in cancer of the breast, the apparent difference being that in mammary tumors continued growth of the epithelium takes place, instead of its breaking down. If, he argues, removal of the ovaries in the cow during lactation brings about a persistence of the cell degeneration, thereby continuing the formation of milk, might we not hope the same operation in those afflicted with mammary tumors would also produce a retrograde metamorphosis. Applying the theory to small animals, he found that lactation was prolonged after removal of the ovaries and continued as long as the suckling was maintained. When this was stopped excessive deposits of fat took place in the animal's own tissues, notably suprarenal fat. He

¹George T. Beatson, surgeon to the Glasgow Cancer Hospital.

²*Lancet*, July 11 and 18, 1896; *British Medical Journal*, February 18, 1899; review by Stanley Boyd, *British Medical Journal*, October 20, 1900; Herman, *British Medical Journal*, October 20, 1900.

finally ventured to apply the practice to a case of "inoperable" recurrent mammary cancer in the human subject, and met with such startling results as led him to believe that the ovarian influence over the epithelial growth in the breast was a permanent one.

Beatson's first case was that of a young woman, aged thirty-three years, whose recurrent cancer mass entirely disappeared some months after oophorectomy. In connection with the subject he also used thyroid extract, believing it was a powerful lymphatic stimulant.

This notable success stimulated a few of his friends to venture upon a repetition of the experiment, and something over forty cases were collected by Stanley Boyd (*British Medical Journal*, October 20, 1900), with a review of its results. A very few other cases have been reported since, and to these I may add my own observations of seven additional ones.

The first case in which I ventured to do a double oophorectomy was that of a woman of forty-two years, still menstruating, who had been operated upon ten months before by Henry C. Coe, of New York, for very malignant carcinoma of the breast. A complete operation was done, the axillary lymphatics being removed, but recurrence took place in six months. The patient neglected to present herself until ten months had passed. At this time the opposite breast presented a tumor of the size of a hen's egg, typically carcinomatous on palpation and associated with a typically cancerous lymph chain in the axilla running from the tumor to the apex of the axilla. Around the scar of the operation was a nodular recurrence spreading over an area 7 inches long and 4 inches wide, including about one hundred nodules, the central mass along the scar forming a solid cake attached to the ribs and invading the pleura, with recurrence within and a pleuritis, apparently cancerous, the fluid rising to the level of the fourth rib. Dr. Coe pronounced the case absolutely "inoperable," and returned the patient to her physician, who referred her to me to be reassured. The case was only too plain. No possibility of operation could be thought of. The supraclavicular glands were also involved.

On March 4th I performed oophorectomy. The ovaries were full-sized, apparently normal, the left (corresponding with the side of the original tumor) slightly adherent. Uneventful convalescence occurred, without rise of temperature. Two days after the operation she menstruated for the last time, at the regular date. In one week changes were noticed in the nodules nearest the scar of the first operation. In two weeks most of the nodules were becoming pale and flattened. In three weeks the flattening resembled umbilication. In some, simply a ring of tissue remained. At four weeks most of the nodules had disappeared. The tumor in the right breast was becoming smaller. At six weeks every nodule but one or two near the axilla had disappeared, and the right breast tumor was scarcely to be felt. At eight weeks every vestige of cancer that had been felt was gone, and the involved scar

showed atrophy where the nodules had been. The fluid in her chest had not yet been diminished.

At the present date (four months after the removal of the ovaries) the patient remains absolutely well, with no trace of malignant remnant anywhere; the fluid in the chest is subsiding and causes no concern. The disappearance of the cancer recurrence was in every instance in the order in which the nodules had originally appeared. The last nodules to disappear were the axillary glands on the side not operated on.

The patient was exhibited to the Practitioners' Society eight weeks after the operation, and the perfect disappearance astonished the pathologists and surgeons present.

Two weeks after the above-described patient was operated on, a woman seventy years of age presented herself whose breast I had removed two years before for typical cancer. She now showed a recent recurrence, consisting of six nodules (three large ones, of the size of the end of one's finger, and three small subcutaneous ones) in the neighborhood of the lower part of the scar, also a large malignant ulcer of the lower part of the scar, an inch and a half in diameter, typically malignant, with a dense, heaped-up wall and an excavated base resting upon the intercostal tissues. It would have been impossible to remove the ulcer without resecting the ribs and pleura. Although the patient was old, I felt that I could do no better than to offer her the alternative of oophorectomy or nothing. The operation was done on April 15th. The ovaries were atrophied and apparently normal. Microscopical examination of these and of the ovaries of the former patient showed both to be normal in structure. I could scarcely expect much in this case, on account of the condition of the atrophied ovaries and the age of the patient. What was my surprise, therefore, to observe the same retrograde changes taking place in the malignant tissue after the end of the first week! The ulcer began to show pink granulations instead of the dark, ugly, malignant appearance observed before the operation. During the second week the edges of the ulcer flattened perceptibly. During the third week cicatrization began, and the ulcer acted in every way like a most healthy, healing ulcer.

The patient was given no medicine. The wound was simply washed with boric acid, and some rubber tissue laid upon it. At eight weeks cicatrization of the ulcer was complete and it had healed as any healthy ulcer would. During the third week the nearest nodule began to flatten; at the fourth week it had become umbilicated. At eight weeks it presented the appearance of a ring where the original nodule appeared. The larger nodules were also growing paler and flattening.

At the present time, three months and a half after the operation, the patient is in perfect health; the ulcer remains healed and looks healthy. The nodules have shown less rapid progress, but still are very slowly wasting in thickness, though covering the same area.

Encouraged by these two cases, I ventured further in five succeeding cases that seemed to be perfectly hopeless, but my results, while interesting,

have not shown the startling exhibition of the two cases mentioned. As they are yet too recent, I will reserve the report for a future date, but say that one, which presented massive third recurrence, showed a temporary halt and then progressed unretarded. Two others have shown arrest and slight diminution in recurrent nodes. The fourth was in a woman of seventy years with an "inoperable" growth, never previously operated upon, in which two atrophied ovaries were removed for the sake of studying the case. One month only has passed, and only slight atrophy of the cancer mass nearest the nipple has been noted, but it is fair to say that no increase has been observed in other points. The fifth patient was operated upon but a few days ago.

A review of the cases published by Boyd notes a comparative success in thirty-five per cent. of those in which oophorectomy was performed, but, as usual, and as is true of my own seven cases, thus far little attempt has been made at selection, hence we may hope for much better reports when the treatment is applied to properly selected cases. One may expect improvement or occasional cures in one third of the cases so operated upon after recurrence in apparently "inoperable" cases. A number of recurrences were seen many months after an apparent cure by oophorectomy, but at least one case had continued more than three years and a half without return. It is probable that the patients operated upon before the menopause will show the largest percentages of change, but the same effect seems to follow in patients as old even as my patient of seventy years. Incidentally, it may be remarked that in most patients reported by Boyd a striking improvement in general health followed the operation, and this has been borne out by my experience.

What will be the ultimate outcome of the thought thus suggested, it is too early yet to say, but it would seem that one was justified in offering this resort to patients beyond hope from other measures. Certainly, in analogy we find justification for further experiment and observation. The effect of castration upon the hypertrophied prostate, or of removal of the ovaries upon fibroid tumors, is strikingly suggestive of the powerful influence of these organs upon conservative processes in the bodily secretions or suggestive of their inhibitive action in degenerative processes. In studying this new field of thought one cannot be unmindful of the result of disease in even so minute an organ as the pituitary gland in acromegaly, or of the suprarenal gland in Addison's disease, or of the marvellous control of thyroid treatment in myxœdema. Nor is one so much startled by this procedure when one reflects upon the normal influences of the menopause, with atrophy of the ovaries and coincident bodily changes. Accumulated experience is needed and will be forth-

coming within the next two or three years from many cases which are, unfortunately, only too near at hand to every surgeon.

Whether or no one accepts Mr. Beatson's view of the cause of the remarkable retrograde metamorphosis and disappearance of cancer nodules and masses in some patients following simple oophorectomy, the fact remains to be explained by the pathologist.

Original Communications.

CANCER, PARTICULARLY CUTANEOUS CANCER.*

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The term cancer is one which at various times has been applied to almost every malignant growth, and which, even to-day, is differently understood by different observers; but the tendency is becoming more marked to restrict its use to those anomalies of growth which are malignant and which originate from epithelial cells.

The term "malignant," too, is one which is very loosely used, but is generally applied to growths which are dangerous, not by reason of their immediate gravity, but by their potential capacity for recurrence or metastasis. This in many cases depends, not on the structure of the growth entirely, but partly on circumstances of age, location, and general condition.

While Norman Williams has shown that internal cancer, contrary to the general impression, very rarely originates from benign growths, it is very commonly found that in cases of cutaneous cancer there is a history of a wart or mole that has, after years of inactivity, become malignant.

The same authority argues that traumatism and irritation have both very little to do with the formation of cancer, for, while men are several times as prone to injury as women, the latter are more than twice as subject to cancer. Yet if we exclude the distinctively feminine organs, such as the uterus and the breast, and compare the liability of the sexes to cancer of parts which are physiologically comparable, we find that cancer of the skin occurs four times as often among males; of the tongue, seven times; and of the lower lip, two hundred times as often. The enormous preponderance of cancer of the face and lip in men who are especially exposed to injury of those parts, especially the slight and repeated injuries of shaving and smoking, would certainly seem to indicate that if traumatism is not an essential it is often an exciting cause. The part

*Read before the New York Medical Union.

played by local irritation is well shown clinically by the so-called chimney-sweep's cancer once so common. The very rare precancerous condition in infants, first described by Kaposi as xeroderma pigmentosum, is primarily caused by irritation of the uncovered portion of the skin by rays of light. An analogous condition in adults is described by Unna as "sailor's skin," in which cancer appears as the final stage in a series of apparently benign growths due to exposure to wind and weather.

The possibility of cancer being the result of the presence of micro-organisms, either directly or indirectly through irritation of tissues, has engaged the attention of observers for a good many years, and from time to time we read that a new organism is under suspicion; but, from the psorosperms of Darier and Wickham down to the fuchsine bodies of Russell and the blastomycetes of San Felice and Plimmer, all have thus far failed to substantiate their claims. There are, on the other hand, quite a number of facts which are decidedly opposed to the germ theory. While cancer is certainly autoinoculable, it has, so far, never been satisfactorily transferred from one individual to another, and very few cases which might indicate contagion are on record, as, for instance, cancer of the genitals in both husband and wife. It generally comes at a time of life when individual vigor and resistance to infectious diseases is greatest. Williams quotes statistics which seem to show that it is more common in vigorous, well-nourished individuals as opposed to the sickly, and in well-fed communities as against badly fed ones, and in the country rather than in the centres of population, all of which facts are contrary to our experience with infectious diseases.

On the other hand must be considered the occurrence of the disease in many generations of the same family, even under widely varying conditions, and the occurrence of so-called cancer houses where people die regularly, for years, of cancer, in the entire absence of any predisposition by birth or relationship.

When large numbers of cases are studied together it is very interesting to observe the apparent relation of cancer to general health. For instance, it seems certain that cancer attacks the strong and spares the weak. Ulcer of the leg is said to be very rare in cancer patients; and the converse is also true, that patients with ulcer rarely have cancer. The same may be said of syphilis and tuberculosis. This fact was so well established that in the last century it was common for surgeons, after operating for cancer, to inoculate with syphilis or to establish an issue in the leg, with the idea of preventing relapses. According to Roger Williams, the relation between cancer and phthisis and insanity is a very peculiar one. Of the descendants of tuberculous

stock, a small proportion, the more robust, have an apparent predisposition toward cancer, and seem to escape their liability to phthisis. A very much larger percentage develop phthisis or insanity, which are often associated, and seem thereby to escape their liability to cancer.

All these factors, which seem to be established by statistics on a large scale, must be taken into account in studying the ætiology of the disease.

We know that the unit of life is the cell, endowed, in the lower organisms, with merely the properties of life and reproduction, but in the higher ones, each cell takes on special functions, the coordination of which means health to the individual. What the power is which governs this careful coordination of cell activity we cannot tell, but we do know that even the most highly specialized cells are capable of reproductive activity far beyond the ordinary needs of the body, and this is particularly true of epithelial cells.

When certain epithelial cells, therefore, by reason of injury or irritation, or germ activity if you will, cease to exhaust their protoplasmic activity in the line of their special function, and, ceasing to respond to the unknown power which coordinates growth, devote themselves to the lower function of undue reproduction, they far outstrip their fellows in growth, and we get masses of epithelial cells, displacing tissues by their pressure, inducing secondary inflammatory changes by their irritation, and by their fertility causing growths similar in cells and in structure, wherever detached cells are deposited by the circulation.

If, then, we can consider epithelial overgrowth as the cause of cancer, we should naturally expect to find it in the tissues of those who have enjoyed vigorous health, rather than in the syphilitic and tuberculous, and at the time of life when the tissues are at the zenith of their maturity in middle age, and in those organs in which cell-reproduction is normally most active, as in the milk ducts of the breast and in the uterus; all of which accords very well with the facts.

Cutaneous cancer, like other varieties of the same disease, occurs most commonly in persons in middle life, being rare before forty. It is several times as common among men as among women, and, of the total number of cases, by far the larger part occurs on the face, favorite locations being the lower lip and the regions about the wings of the nose and the eyes. Frequently the site has been occupied by some benign growth, such as a wart or mole, and many times there is a history of constant, long-continued irritation of the part by picking or shaving, a fissured lip kept open by the stem of a pipe, or a mole on the forehead constantly rubbed by the band of a hat. In a few cases, the remains of other

diseases, like the scars of lupus or the leucoplakia of syphilis, with advancing years take on characteristics of malignancy and become cancerous. Clinically, it is not always easy to distinguish between benign growth of the skin and incipient epithelioma, and it is only by microscopic examination that one can be certain of a correct diagnosis.

Epitheliomata can be classed clinically as either superficial, deep, or papillary, the different appearances being due to peculiarities of origin and conditions of nutrition and growth, and the designations are important, rather for purposes of description and recognition, than as indicating any essential variation; for one often sees superficial cancers develop into deep, and both into papillary ones. In all three the condition is essentially the same; a few cells, whether arising from a papillary body, a sebaceous gland, or a sweat coil, instead of growing normally toward the surface and gradually cornifying, seem to be reversed in their growth and spread inward with the cornifying cells furthest from the surface.

Owing to the double pressure from without and within, these cells often arrange themselves in concentric layers, the cells in the centre being more cornified than those at the periphery. These so-called epithelial pearls are pathognomonic, though not an ever-present feature.

Many attempts have been made to distinguish varieties of epithelioma by the portions of skin from which they arise, but the early inflammatory changes generally make it impossible to trace them to their origin, and we see constant transformations of one variety into another.

But all cancers have certain clinical features in common. In the beginning, whether they are superficial, deep, or papillary, they have characteristics which distinguish them from benign growths. The first is a hardness beyond that of the surrounding tissues, almost cartilaginous in character. There is a certain peculiar waxy appearance at the margin, caused by the pressing out of the blood by the close packing together of corneous cells; then over this hard, waxy margin a few small dilated blood vessels make their way. When the lesion is plane and tends to creep slowly over the surface, we have the superficial form; when it begins deeper and tends to penetrate as well as spread, we have the deep variety; when irritation, heat, and moisture are combined with abnormal internal resistance, there occurs the rapid proliferation of epithelium which causes the papillary cancer of the anus and genitals.

But all forms have a common tendency to ulceration. Cancer cells, by the very rapidity of their growth, are comparatively short lived and of low vitality. They act as foreign bodies in the tissues and excite inflammation, which is fatal to many of

them; the oldest ones at the centre become necrosed and an ulcer is formed. This ulcer is still characterized by the hard waxy, distinct margin, with the dilated blood vessels; the floor bleeds easily and secretes a thin, and not very profuse, pus, which is often bloody. Ulceration does not always occur, for the cell may undergo degeneration and absorption.

A very common type of ulcer is the so-called rodent ulcer which, instead of spreading at the periphery, penetrates vertically, going through soft tissues and bone alike, but with a slowness that may leave the wretched victim years of misery before a vital part is reached. In all those varieties of cutaneous cancer, pain is the exception rather than the rule.

The diagnosis is often difficult. Warts and moles cannot be pronounced malignant with any certainty till considerable progress has been made, but such growths in males of the right age should be objects of suspicion. Sarcoma of the skin is rare, develops more rapidly, has secondary deposits sooner, affects younger patients as a rule, and has a comparatively slight tendency to ulceration. Tuberculosis of the skin commonly begins in childhood, the lesions are usually multiple instead of single, the individual tubercles have more of a purplish color, and have none of the induration of cancer. In fact, they are distinctly soft.

Syphilis is the cause of most errors in diagnosis, but, aside from the history of the patient, the syphilis develops much faster; it is often indurated, but has none of the cartilaginous hardness of epithelioma. It ulcerates much sooner, showing a punched-out edge, often an undermined one, and a more profuse discharge. Syphilis, too, has a marked tendency to heal on one side while advancing on the other in a serpiginous form. A week's observation and treatment will generally decide the question if doubt exists.

It remains to say a word regarding the prognosis in cutaneous cancer. The individual lesions are of such slow growth that often the disease could hardly be considered a malignant one, were it not for the possibility of metastasis. Primary cancer makes its reappearance after extirpation in one of three ways: A nodule appears in the scar, which is to be understood as indicating that a few cells have been overlooked, to renew the growth. Or the lymphatics nearest the growth enlarge and finally show secondary appearances very much like the original tumor. This taking up of cancer cells may occur very early, and may be far more extensive than can be determined by looking for simple glandular enlargement. A third cause for dissemination is involvement of the blood vessels themselves in the growth, enabling large or small masses of cancer cells to break loose

in the circulation and lodge in various organs. It is probable that very few of these cancer emboli survive the change, and that they only grow under favorable circumstances, otherwise we should have a much larger percentage of secondary growths in the lungs, which, from their location and the fineness of their capillaries, probably arrest most of these emboli. The same reasoning must explain the frequency of secondary growths in the liver and their rarity in the spleen.

Dissemination, as can readily be seen, is chiefly governed by two factors: First, proximity of lymphatics and vessels; and, secondly, a tendency to looseness of structure on the part of the cancer, leading to easy detachment of fragments. In cutaneous cancer, fortunately, while local recurrence is common enough, dissemination is comparatively rare. In the superficial varieties, for instance, the lesions are not in contact with the lymphatics and blood vessels which occupy the deeper layers of the skin. In deep cancers, like those of the hand, lip and penis, the abundant lymphatic supply is apt to lead to early dissemination. That the structure of the growth has often more than its extent to do with metastasis is well shown by the contrast between rodent ulcer and Paget's disease. The first penetrates deeply, and, though it lasts for years, never causes gland-involvement; the other is very superficial, at first closely resembling an eczema, but very early causes retraction of the nipple and involvement of the whole breast.

The treatment of cancer of the skin requires great good judgment. No internal medication has so far proved of any value, nor is there any promise of such medication. To operate or not to operate, that is the question. In many cases, whether because of the extent or location of the disease or because of the condition of the patient, operation is not to be thought of. It must be borne in mind that a partial operation may frequently be worse for the patient than non-interference. Superficial epitheliomata and those occurring in the very old, are much less in need of active interference, for both are commonly very indolent. On the other hand, growths in the vicinity of active lymphatics should be removed at the earliest possible moment. Removal of tissue for examination is a dangerous procedure, for there are many cases on record where, in this as in actual operation itself, cancer cells have been disseminated through previously healthy tissues. Instruments that have been in contact with cancerous tissues are a constant source of danger to the healthy tissues of that individual, till they have been disinfected. This same danger makes the operation under infiltration anæsthesia objectionable. In those epitheliomata in which lymphatic involvement has not yet taken place or is not to be dreaded, removal by some

caustic will often be consented to by a patient who would refuse an operation, and the results ought to be equally good. Arsenic, which has a selective affinity for cancer cells, is to be preferred to chloride of zinc or caustic potash, which cause destruction of diseased and healthy tissues alike. In the caustic treatment, as in others, thoroughness is the main thing, and superficial caustics, like carbolic acid and nitrate of silver, often do more harm than good. Arsenic, whether used as a paste or a solution, causes a necrosis of cancerous tissue, and by the inflammatory action excited destroys the low vitality of cancer cells far beyond the range of its actual application; and, in this way, reaches outlying cells which would not be included in an operation by the knife. The resulting wound is a foul one to the eye, but more likely to yield a good result than though it were aseptic. It rapidly fills in with granulation tissue and often gives a surprisingly good cosmetic result. The great drawback about the method is that it has no certain action when the lymphatics are involved. When the lymphatics are actually involved, the knife is the only resort giving any reasonable promise of success. In well-marked cancer where dissemination is taking place, amputation will often in the end prove the most conservative policy; the glands should be dissected out as thoroughly as possible and the danger always be borne in mind of infecting a healthy wound during the process of the operation itself. The inoperable cases must be treated palliatively according to their individual needs, dressed with antiseptics and deodorants, and if painful the lesions must be sprinkled with some analgetic which gives long-continued relief.

117 EAST TWENTY-SIXTH STREET.

Passage of Urea in the Sputa.—M. Delore (*Gazette hebdomadaire de médecine et de chirurgie*, June 20th) recently showed to the Lyons Medical Society photographs of crystals obtained from dried sputum, evidently due to the excretion of urea thereby. This urea had been decomposed, by mingling with secretions of the bronchi and the mouth, into ammoniacal salts. The crystals, fern-leaf in appearance, were formed of many different salts, and not only of the ammonium-lime salts. There were crystals of ammonium carbonate, sodium carbonate, sodium chloride, and ammonium chloride. In reply to a question as to the condition of the patient furnishing the sputum, M. Delore said that he was not in very bad health. He eliminated from about 18 to 21 grammes of urea daily in his urine, and his kidneys were acting well, as also his other organs. The amount of urea contained in the sputa was small, a litre giving only 0.8 gramme of urea. The sputa contained very little carbonate or chloride of ammonium; the great mass of crystals consisted principally of sodium chloride, but the other salts had imposed their formation and compelled crystallization in fern-leaf form.

A YEAR'S EXPERIENCE IN THE TREATMENT OF THE EUSTACHIAN TUBE BY MEANS OF THE ELECTRO-BOUGIE.*

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No contribution in recent years to the treatment of catarrhal disease of the middle ear has excited greater interest and offered more promise of success than that proposed by Duel in a paper read before this society in Cincinnati in 1899, entitled *The Value of Electrolytic Dilatation of the Eustachian Tubes in Chronic Tubal Catarrh and Chronic Catarrhal Otitis Media*. Since this original paper by Duel, many aurists in different parts of the country have been testing the value of electrolysis, and papers have appeared by Kenefick, Brandegee, and others. Any method of true merit welcomes the fullest investigation. With an idea of further testing the value of this method, the writer has devoted most of his time in the ear department of the Manhattan Eye and Ear Hospital for the past year to the application of electrolysis to suitable cases. The subject has been approached without bias and in an entirely impartial spirit. This work was rendered possible by, and at the suggestion of, Dr. Wendell C. Phillips, who afforded every courtesy and opportunity for making these investigations in his clinic. Out of over 75 cases referred, some 33 were regarded as suitable. These, with the two exceptions to be noted, all showed the presence of stricture in one or both tubes. Each case was carefully tested with acoumeter and tuning fork at the beginning of treatment; many had previously received a full course of treatment by means of the catheter. So far as possible the technique as practised by Duel was followed out. A Wappler machine was employed in connection with the street current. In a majority of the cases a silver catheter wound with thin rubber was used; later on, a hard rubber catheter was substituted. Care to sterilize all instruments was continually exercised. A current of not more than three milliampères was the rule—in every instance, the sign of "bubbling in the ear" was sought for—and no increase in the strength of the current was made after that point was reached. As little force as possible in advancing the bougie was employed. Inflation after bougieing was always avoided. The negative current was employed for a period not exceeding five minutes. In each instance, with the exceptions to be noted, the bougie

was caused to enter the tympanum. The bougies were the graded gold bougies made by Ford.

Among the questions sought to be answered were:

(a) The value of electrolysis as compared with other methods of treatment in the relief of tinnitus due to middle-ear catarrh.

(b) Its relative value in improving the hearing.

(c) How permanently the structure is relieved.

(d) What dangers, if any, lie in its use.

(e) What is the true nature of the process or phenomenon taking place.

In the 33 cases treated, 26 had tinnitus of a chronic nature (no acute cases). Of these 26

1 was cured,

13 were improved,

12 were not improved.

26

Seventeen of the 33 complained only of hard hearing. Of these

12 were improved,

5 were not improved.

17

That is to say, as regards tinnitus 55 per cent. were cured or relieved, and as regards hearing 72 per cent. This can be compared with Duel's results of 42 cases of tinnitus, where 38, or 90 per cent., were relieved in whole or in part. An analysis of the 13 cases of tinnitus reported above as improved is in order, inasmuch as improvement may be much or little, temporary or permanent:

Case 1.—After three months of treatment, reports tinnitus lessened in degree, but still persisting. No previous treatment.

Case 2.—Three months under treatment. Much relief to tinnitus, which at times ceases. Much previous treatment.

Cases 3, 9 and 10.—Some improvement.

Case 4.—Three treatments; no decided improvement, but patient was relieved.

Case 5.—Relief to tinnitus, but it was not permanent; stricture dissolved.

Case 6.—Decided benefit. No other treatment availed; but no stricture present.

Case 7.—Considerable improvement, but stricture never passed. Three months of weekly treatments.

Case 8.—Tinnitus lessened, but persisting; character changed.

Case 11.—Tinnitus lessened, but persisting; character changed.

Case 12.—Immediate and marked improvement. No previous use of celluloid bougie.

Case 13.—Two treatments only. A slight improvement followed, but the patient disappeared from observation.

In brief, of these 13 cases reported as improved,

*Read at the seventh annual meeting of the American Laryngological, Rhinological, and Otological Society, held in New York on May 24, 1901.

2 were much relieved,
9 were partially relieved,
1 was much relieved, but no stricture was present,
1 was only temporarily relieved.

Of the two cases reported as cured, one disappeared after the second treatment, and no subsequent report could be obtained from either until recently, when the second patient returned at the end of four months and reported the tinnitus as bad as ever.

successfully passed, except in two cases. In one case electrolysis caused an increase of the tinnitus.

A similar study of the 12 cases where improvement in the hearing was noted, reveals three in which the improvement was only slight—about three inches; in 3, the gain was from six inches to three feet for the whispered voice; while in the remaining 6 the improvement was noteworthy—four feet to twelve feet. In short, real benefit to hearing was

No. of case	Age	Sex	Tinnitus	Tuning Forks		Whispered voice	Acoumeter	Situation of Stricture	No. of times bougie	Whispered voice last test	Acoumeter last test	Tinnitus	Length of observation	Condition of tubes
				A. C.	B. C.									
1	28	F.	Yes	0	10	8	8"	1 in.	8	2'	20	improved	3 m.	open
				25	15									
2	22	F.	No	0	12	6"	20"	1 in.	6	45"	5'		4 mns.	"
				17	2									
3	38	F.	Yes	24	12		15	1 1/2 in.	4			no change	2 1/2 mns	stricture reformed
				13	5									
4	23	F.	Yes	0	8		2'	1/4 in.	4			"	2 mns.	open
				8	3									
5	31	M.	Yes	25	10		30	mouth and isthmus	7			"	2 "	"
				8	7									
6	27	M.	No	10	7		20'	1 in.	4		30"		2 "	admit bougie but much swollen
				14	0									
7	21	F.	No	10	20	15"		1 in.	10	6'			1 yr.	
				25	10									
8	24	M.	Yes	17	18	20"	5'	1 in.	6		6'	improved	6 m.	open
				30	—									
9	30	M.	Yes	10	5	30"	20'	1 in.	10	4'	but does not think he hears better		6 m.	
				17	7									
10	20	M.	Yes	01	3	1"		mouth and 1/4 in.	8	1 1/2'		no change	3 m.	Tinnitus ceased for a time, tubes very much swollen
				5	0									
11	40	F.	Yes	0	8			1 in.	3			"	5 wks.	
				12	0									
12	24	F.	No			3'		1 in.	4	3"			5 "	open
13	18	F.	Yes	10		15'		1 in.	4	15'		gone	2 mns.	narrow
				15										
14	33	F.	No	12			30'	1 in.	5		30"		3 mns.	stuffed up hearing gone
				15										
15	69	F.	Yes	01	6	20"		none	1	20		no change		open
				10	0									
16	26	F.	Yes			30'	30	1 in.	6	30	30'	improved	3 mns.	adhesion at mouth
17	49	F.	Yes	25	5		4'	1 in.	3		4'	"	1 mn.	open
				10	0									

We can then with certainty point to only 2 cases out of 25, where strictures were present, in which permanent and marked relief to the tinnitus was experienced.

A further analysis of the 12 cases where there was no improvement shows that all were classed as mixed or sclerotic (combined involvement of middle and internal ear).

Strictures were encountered in every instance and

made in 8 of the 17 cases, or in a little less than half. Later examination of two cases shows all improvement lost.

Two patients who complained only of a sense of fullness in the ears—one of them after much previous treatment by the catheter—were signally relieved. One case of persistent non-inflammatory pain in ear, resisting all other treatment, was much benefited.

An important question is how permanently the

strictures are relieved. Here my experience is at variance with Duel's. In many instances, after thoroughly opening the tube and passing the stricture into the tympanum, at our next electrical treatment, although the ears had been carefully inflated in the mean time, a reforming of the obstruction was met with. This was particularly true in Case 7, where, after two months' absence, the work had to be done over again. This patient never made the

from 4 to 5 milliampères. At an interval of a month, electrolysis was again tried, but all attempts to introduce the bougie failed. It was an unusually favorable case to see that the catheter was in the right position, for there was a marked cleft palate admitting of direct inspection, and revealing adhesions directly at the pharyngeal mouth.

In this connection it may be said that, in our experience, bubbling is not always a reliable sign. In

No. of case	Age	Sex	Tinnitus	Tuning forks		Whispered voice	Acometer	Situation of Stricture	No of times bougie	Whispered voice last test	Acometer last test	Tinnitus	Length of observation	Condition of tubes
				C.	IV C.									
18	31	M.	Yes					1 in.	1			worse	1 mn.	open
19	32	F.	Yes	A. C. 3 B. C. 7	3 —		1-2"	1 in.	4		1'	improved	7 wks.	"
20	32	M.		17 8	0 0		1'	1 in.	6		1"	no change though at times better	2 mns.	"
21	60	M.	Yes	10 17	7 0		0	none	0		2"	improved	2 mns.	"
22	19	F.	Yes	0 20			7"	1 in.	5			"	2 mns.	stricture not passed
23	49	M.	Yes	0 15	5 0		0	1 1/4 in.	6		0	"	2 mns.	open
24	46	F.	Yes	3 20	5 0		3"	1 in.	6		36"	no change	1 mn.	narrow and stricture reformed
25	39	M.	Yes					1 1/2 in.	1			slightly improved		open
26	22	F.	Yes	0 16	5 3		0	1 in.	2		1"	no change	3 mns.	"
27	32	F.	Yes	0 10	4 0	III	2'	3 1/4 and	6	4"	4'	improved	2 mns.	stricture reformed
28	23	F.	Yes	10 19	7 5	12"	2	1 in.	9	10"	3"	"	10 wks.	open
29	28	M.	Yes	10 17	15 6			1/2 in.	3		2'	"	3 wks.	"
30	47	M.	No	18 10	9 0	15'	15'	1 in.	3	15'	15'	pressure gone	3 wks.	"
31	22	M.	No	0 25	III 0	0		none	3	0			2 mns.	"
32	25	F.	Yes	0 10	10 0				2			improved	1 mn.	"
33	40	M.	Yes	10 0	8 4		8'	1 in.	3			no change	1 mns.	"

same improvement after the second course of treatment, gaining at first fifteen feet, and later only from four to six feet. We are convinced, too, that the electric current is capable, even when properly used and within moderate limits of strengths, of causing adhesions in the tube. One instance of this was particularly well demonstrated. It was the case previously referred to as presenting catarrhal pain in the ear. Several strictures were encountered and passed, with much relief to pain. The "bubbling" symptom was met with only at current strengths of

many instances it will be noticed by the patient at 1, 2, or 3 milliampères. In other cases 5, 6, or 7 milliampères have to be reached. Several times the patients reported a similar bubbling after removal of the bougie, and in at least three cases no bubbling was ever secured; only increased tinnitus or pain, such pain always evidencing the cautery effect of the current. Care was exercised in each case to secure as thorough asepsis as possible. In spite of this, suppuration of the ear followed in four cases. In three of these cases the recovery was rapid, ten days

to two weeks, and was unattended by any unpleasant sequelæ, not even reducing the hearing for a long time. The fourth case deserves to be reported at greater length.

The patient was a young lady, twenty years of age, who presented herself for hard hearing. An operation for adenoids and septal exostosis was performed. This was followed by an attack of grippe, confining her to bed. This seemed to be a relapse from a previous attack just before she entered the hospital, not known about at that time. Upon what appeared full recovery, electrolysis was applied to the tube opposite to the side of the nasal operation. A slight stricture was encountered and passed at $1\frac{7}{8}$ inches. Improvement in hearing was noted, with no unpleasant results. The following week the bougie was again introduced. This time no stricture was met, but at exactly $1\frac{1}{2}$ inch, as was carefully ascertained after removal, a distinct snap was heard both by the patient and myself, followed by severe pain. Examination showed that Shrapnell's membrane was much reddened. The pain disappeared for three hours, then returned with much severity. I saw the case on the day following or at the end of twenty-four hours, found a bulging drum, and performed a paracentesis. Examination of the discharge showed many streptococci. No pain over mastoid. The day following, pain developed in the mastoid and five days from the electrical treatment I opened the mastoid, and found pus. The recovery was uneventful and no permanent loss of hearing was sustained.

Here, clearly, there was a short Eustachian tube. One and a half inch meant a forcible tenotomy of the tensor tympani or possibly a luxation at the incostapedial joint. It is questionable if even this could cause all the disturbance which followed without the presence of bacteria. These could have been introduced by means of the catheter or bougie, in spite of the care which was exercised. As these had been properly sterilized it is possible that bacteria were already present in the ear as a result of the grippe, and that the traumatism served thus as an exciting factor. This case is full of significance. We feel that it is time to sound a warning note against the widespread use of the method on the ground of its entire freedom from danger. Recently we have heard of still another complication. In two cases, in the hands of an experienced, competent man, the bougie has broken off *in situ*.

We may conclude:

1. That the assumption that the length of the Eustachian tube is $1\frac{1}{2}$ inch in all cases, is an unsafe rule to follow, and that, beyond $1\frac{1}{4}$ inch, the greatest care is to be exercised as to its further introduction. We are told that we learn when we have entered the tympanum by the touch gained by experience, but this experience may be gained at too great a cost.

2. That too scrupulous care in the way of antiseptics cannot be exercised. The experience of Ducl

was that force in advancing the bougie was not necessary; this has not coincided with ours. In many cases, it is true that mere contact of bougie caused a dissolving of the stricture. In others a considerable amount of pressure needed to be employed. To know just how much force to use in a given case is often a delicate matter. The liability to cause a false passage is constantly to be borne in mind. This has actually occurred in the experience of several of my confrères. In two cases it was impossible after repeated efforts—and using as much current and force as seemed warranted—to pass the obstruction. It gave the sensation of a wall of bone.

The nature of the process is full of interest. In our mind there seems considerable question whether it is truly an electrolytic process. It seems scarcely possible to believe that a fibrous mass of years' duration can be dissolved in thirty seconds, as is often the time in which a stricture gives way, by a two-millampère current exerting its influence, not merely on the end of the bougie, but also over its sides. It is not an infrequent experience to find that a stricture which had been originally passed could not be passed at the second sitting, but at the third sitting no difficulty in passing it was encountered.

Following the suggestion made by Dr. J. F. McKernon at a recent meeting of the Section in Otolaryngology of the New York Academy of Medicine, several cases of dilated tubes were subjected to the treatment. In one case only was there decided benefit to tinnitus and hearing. Here, a reflex action on the auditory nerve was probable.

A still weightier question is the true nature of the obstruction we meet with, which we commonly designate a stricture. Does there really exist in most cases a true fibrous deposit, causing narrowing or actual obstruction? Repeatedly we could succeed in getting good inflation sound when the bougie encountered an obstruction, and, as has just been stated, an obstruction present one day and impassible, was strangely manageable the next day.

Much emphasis is to be put on the necessity of following up our cases to get the true results. It will be recalled that several patients reported as cured or improved, returned at a later period without any improvement. It is a question whether some of the cases would not have shown improvement equally well without the electricity, using only the bougie.

Electrolysis, while a new procedure in the ear, has been used for years in the urethra. Dr. Robert Newman has been its most energetic supporter, asserting that it affords a certain and permanent cure to urethral stricture, if properly applied.

That his views are not held by all workers in that

specialty is shown by the conclusion to an article on the subject by so distinguished a syphilographer as Dr. E. L. Keyes, who, after a careful study extending over several months, says:

"My study of the subject and the experience it has brought me, digested with all the impartiality I possess, lead me to state that the allegation that electricity, however employed, is able to remove organic urethral stricture radically, lacks the requirement of demonstration. The confidence of its advocates that it will *radically cure organic fibrous stricture* is, in my opinion, due either to the combined *credulity* of the patient and the *imagination* of the surgeon, or to some special but *fortuitous* act of Providence, upon the cooperation of which, in the case of his own patients, the general practitioner cannot with any confidence rely."

We feel warranted in drawing the following conclusions:

1. The electro-bougie has a place in our aural therapy—though a less important one than was at first supposed.
2. It should be used after, and not before, other methods of treatment.
3. It will be most liable to fail if any associated internal ear disease is present.
4. Its results are not always permanent—the stricture may re-form—we may hope rather for a diminution than a disappearance of the tinnitus.
Two cases totally relieved out of 25.
Two cases partially relieved.
5. Its use is not without danger—and a proper knowledge of the anatomy of the parts and of the technique is essential.
6. It is a question whether the process is a true electrolytic one, or if in many instances the obstruction is a true fibrous stricture.

117 EAST FORTIFIFTH STREET.

Itching of the Throat as a Symptom of Secondary Syphilis.—Dr. A. Scot Skirving, according to the *Medical Times and Register* for July, citing the *British Medical Journal*, reports two cases in which he noticed a troublesome itching of the throat appearing shortly after the onset of the sore throat—about eight weeks after the appearance of the chancre—as a symptom in syphilis. As syphilitic eruptions are not usually irritating, this symptom is noteworthy, and is worthy of further investigation to ascertain its actual relationship to syphilis.

The Rapid Sterilization of Gum Catheters.—Dr. Herman (*Semaine médicale; Revue médicale*, July 17th) recommends soaking the catheters for from three to five minutes in a boiling saturated solution of ammonium sulphate. This solution has also been proposed by Elsberg for sterilizing catgut.

NATIVE MEDICAL PRACTICE IN THE PHILIPPINES, WITH INTRODUCTORY OBSERVATIONS.

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A proprietary interest in the Philippine Islands now makes all accurate information concerning them of interest to the people of the United States, to whom but a few years ago they were almost a *terra incognita*. In the establishment of a government best suited to serve the mutual interests of the United States and the islands and to secure the most desirable and speediest development of the latter, the fullest information about everything which can be collected by commissions and furnished by individuals will be needed. Not the least vital and interesting matter in this connection relates to climate and diseases, and as the latter are not only the outcome of meteorological peculiarities, but also of the habits and customs of the people, a few words upon the latter topic may not be out of place before proceeding to the consideration of matters more strictly medical.

The writer has been in the Philippines now the better part of a year and has had opportunities of making observations in Manila, in Mindanao, and in the Sulu group, which have been of a general character, a special effort having been made to collect data of medical interest.

The peoples, according to linguistic divisions, are too numerous to even recapitulate by name in a paper of this kind, and it must suffice to refer to them in very general terms.

There are three distinct native races in the Philippine archipelago: Aborigines (Negritos, Igorrotes); Malays (Tagalos, Visayans, etc.); and Indonesians, the latter confined to the interior of Mindanao¹. There are many Chinese, a few Japanese, Spanish, English, Hindus, etc. We find, in addition, innumerable mixtures between Filipinos on one hand, and Chinese, Japanese, and Spanish on the other, resulting in the product of a very mixed race entitled Mestizos. Many of the Spanish Mestizos are among the finest looking and most intelligent people in the islands. The Chinese Mestizo has a bad reputation. The Tinguianes of Luzon are descendants of Japanese; they are semi-civilized, but are pagans and few in number.

The Negritos, of whom there are twenty-one tribes scattered throughout the islands, are in the main a puny and decaying race, and will, in all probability, soon be extinct. They resemble the negro in physical and mental traits. The Igorrotes, on the

¹Report of First Philippine Commission.

other hand, appear to be able-bodied, active, and fairly prolific, presenting many of the peculiarities of North American Indians. There are sixty-nine wild tribes, each differing more or less from the others by linguistic and other peculiarities. Their respective numbers are small. Head hunting is practised by some of these people of North Luzon, and some of them have even been charged with cannibalism. Two tribes in the interior of Mindanao are said to practise human sacrifices.

The Malay races constitute the bulk of the population and are divided into about forty-seven tribes. The Tagalos of Luzon and the Visayans of the Visayan group and Mindanao are the most numerous of this branch, and are the only people who have seriously opposed the American occupation of this territory. Of these Malay races there are eight civilized tribes, who comprise the bulk of the population. They are not advanced in enlightenment to so high a degree as that observed among the people of Europe or America, but still they are possessed of considerable intelligence and have fairly good ideas of government. The Moros, another considerable branch of the Malay family, who inhabit the Zamboanga peninsula and many other sections of Mindanao, as well as the Sulu archipelago and the Island of Paragua, have acquiesced in United States rule, and so far as my observations extend, are decidedly partial to Americans. They are an interesting and picturesque people, wedded to their religion and their customs. They are Mohammedans, and any future trouble with them will arise from misguided attempts at evangelization among them. So long, however, as they are left alone they will pursue their occupations as fishers and weavers, and remain peaceable. They have not only adopted the Mohammedan religion, but much of their dress and many of their customs are directly traceable to Arabic influences. They are good-natured and have a keen sense of humor. Their respect for authority is profound and unquestioning. A Moro will stand at attention on the street when an American officer passes and make respectful salutation by a graceful obeisance, at the same time bringing the right hand to the side of the turban. This, however, is because his *dato* has signified acceptance of American rule, and his followers take their cue from him.

They live in huts built of bamboo and nipa palm along the immediate shore of the ocean, many of their houses being entirely surrounded by water during high tide. There are no Moros remote from the water's edge, as they depend almost wholly upon the fish they catch for their livelihood. They are not specially cleanly in their habits or their habitations, but sickness is not prevalent among them, on account of their simple diet and life in the open air. Their dwellings are usually crowded at night, but

the outside air has free access. Polygamy has existed in Asia from time immemorial under the old religions, and Mohammedanism adopted and confirmed the practice; but the Moro of the present day, as I understand it, has in reality only one wife proper, though he may have wives of second rank, who are women kept only for cohabitation and reside elsewhere than at the home of his legal wife, and this is concubinage rather than polygamy. Chastity among native women and girls is an easy fitting garment worn mostly for appearance's sake. Sexual morality is patterned after a different model from our own, following Spanish lines, which require an assumption of modesty without its assets. Promiscuity is, according to my best information, less common than in Europe and America.

Among the Moros, too, there exists a species of slavery, which it has been asserted is of milder form than that which formerly existed in the United States. Under the provisions of our constitution it will in course of time be done away with, for, when stripped of all euphemisms, the institution is as oppressive and as inhuman as any form of slavery that ever existed. The Moros are governed by a code of laws which provides punishments for crimes and misdemeanors, and is more enlightened than would naturally be inferred from appearances. It is sufficient here to say that their laws and customs are similar to those of Mohammedans in other parts of the world. The different Moro tribes are not necessarily on friendly terms with each other, but, on the contrary, there has been, and is still, much enmity between them.

The Christian Filipinos, of whom there are about 6,000,000, are mostly, if not entirely, of the Roman Catholic faith. They probably represent the most advanced type of intellectual development to be observed among the natives, but even they have not passed the stage of youth in the process of evolution as compared with the most civilized nations. Their character has been described in detail by other observers, and a mere passing reference thereto is all that is necessary here. They are dominated by the grossest superstitions, profess devout faith in the teachings of their church, and yet, owing to developmental immaturity, they have a great many faults and not many counterbalancing virtues. Among the first are laziness and improvidence, lack of stability and loyalty; their promises cannot be relied upon if they think it is to their interest to break them. They are cruel and vindictive, and witness suffering without manifestation of sympathy. They are mostly dishonest and untruthful. They lack the higher æsthetic sentiments of the best human nature, art and poetry among them having only a rudimentary development. Although very fond of pleasure, they ordinarily are not jovial, and seldom laugh except at

sights which in more altruistic natures would excite pity. For instance, a young Filipino of more than common intelligence, who was employed in the house in which the writer lived, was in the habit of pouring kerosene oil on captured rats, setting it on fire, and allowing the ill-starred creature to make its escape from the trap. It would run frantically a short distance enveloped in flame, make an agonizing struggle, and die. The effect upon the Filipino of this scene was magical. He would be thrown into a paroxysm of joy, capering about and giving vent to uncontrollable peals of laughter. They bear their own misfortunes well and maintain a stoical indifference to incidents which to finer natures would excite the liveliest sorrow. Let the native have his nipa hut, his cigarette, his rice, his betel nut, and a hard bamboo bed to sleep on, and he is contented.

On the other hand, the Filipinos are very fond of music, both vocal and instrumental, and they readily acquire a certain degree of proficiency on the various musical instruments, but their interpretation of musical meaning is limited to an extremely narrow range. Their favorite class of composition includes but little beyond the melodious ballad or popular dance music. The so-called "coon-songs" are immensely popular among them. They possess considerable mechanical ingenuity, and, in adapting the bamboo and other natural products to their various uses, they display an aptitude amounting to little less than genius. They are generous with what they have, extremely hospitable to their guests, and their social intercourse is seldom marred by jealousies or quarrelling.

The Filipino is fond of home, and generally kind to his children; at times he will work with all the energy of his nature, but his enthusiasm is usually short-lived and he soon finds an excuse for taking a rest. It is reasonable to look for a marked improvement in the course of time among these peoples as a result of contact with a more advanced and more honest government. Their control will require a strong arm, fair treatment, and a reasonable toleration of their time-honored customs. Any necessary changes which it may be desired to bring about should be accomplished by degrees. A great improvement has already been observed among the natives at Zamboanga, resulting from the object lessons in industry, enterprise, and impartial enforcement of the law set before them by the Americans; whether this will continue, remains to be seen.

The climate is among the most healthful in the tropics. Some parts of the islands are extremely malarious, but there are many places which are almost entirely free from that noxious influence. The summers and winters vary but slightly in temperature. The nights are almost always cool, and during the greater part of the year a blanket is needed

for comfort. But although it can be truthfully stated that the climate of the Philippines is comparatively healthful for the tropics, the white man who comes here to remain for a period greater than a few months will have to observe certain precautions as to dress, diet, and habits, if he desires to preserve his health. Even with great care, debility and anæmia come sooner or later. The clothing should not only be light but of proper color. For soldiers or others who must be exposed considerably to the direct rays of the sun there is no more serviceable color or material than khaki. According to von Schaemdel, a white man who wears white or light blue clothes in the tropics reflects by such colors the heat rays, but exposes himself to the full force of the chemical rays, and in a relatively short time his health is endangered. (*Vide New York Medical Journal*, October 27, 1900, page 741.) This is, of course, a theory, but there are certain practical considerations which make it plausible. The acclimatizing fever called by the Dutch "Röthen Hund"—the red dog—from which Europeans suffer in the tropics, is supposed to result from an insufficient protection afforded by light-colored clothes against the penetrating chemical rays. Furthermore, the gradations in the amount of brown pigment in the skins of races observed from the equator northward, indicate a natural protective selection against the chemical rays, as the colors correspond to those of the spectrum which not only are not chemically active, but almost, if not quite, neutralize the chemical rays. Whether true or not, it is an attractive theory and well worth investigating. Whether it is best to wear light flannel next the skin, or an abdominal band, or both, are questions largely to be settled by the idiosyncrasies of the individual. I have tried both and found them so uncomfortable that I preferred the uncertainty of an attack of sickness to the certainty of the discomfort. I think I have derived positive benefit from leaving them off. Others, prone to intestinal disorders or to chilling from slight changes in temperature, would do well to wear very light flannels.

The bath is a daily necessity. Many use the shower bath and find it agreeable and hygienic, but upon some it produces depression. In such instances, a sponge bath at 11 a. m. or from 3 to 6 p. m. answers every purpose.

As to the possibility of the white race, as such, becoming acclimated to the tropics in the unrestricted sense of that term, it is, in my opinion, extremely doubtful. It is a question upon which there is a division of opinion, but the preponderance of evidence is opposed to the view that acclimation takes place. Practical, scientific, and historical observations, all tend to deny it. In the most healthful regions, where malaria exists in mild form and can by

care be avoided, a healthy white man, by observing certain precautions, may live to an old age, but his children, if born of a white mother, will be noted for a partial loss of vitality, and the stock will in successive generations deteriorate and, finally, in the majority of cases become extinct; or, if it survives it must be as a new variety of the genus, with a darker skin, smaller stature, and decreased mental and physical vigor. The influence of environment on the human race is fairly well known, and it would appear that no fact is clearer than that sustained residence in either extreme zone of temperature, the torrid or frigid, will eventually produce marked and permanent changes in the natives of temperate climates.

The presence or absence of malaria has been regarded as the criterion by which to judge the salubrity or insalubrity of a climate, but, according to my experience, unaided and continuous moist heat acts as a distinct pathogenic factor, inducing feeble digestion and various forms of debility and anæmia.

The Philippines are probably as healthful as any other tropical country, and in the course of time boards of health, by requiring greater cleanliness among the natives and by applying methods now known to sanitary science to limit or prevent the generation and spread of disease-causing organisms or influences, may make it possible for the fair-skinned races to reside in many parts of these islands in comfort for indefinite periods.

The diseases to which strangers are liable, and those generally prevalent, are typhoid fever, malarial fevers, diarrhœa, dysentery, dengue, sprue, beriberi, tuberculosis, anæmia, and cutaneous affections. Leprosy is not uncommon among the natives, to which class it is confined, but the writer was informed by a member of the Leprosy Commission that the disease did not prevail to the extent usually believed. An island or isolated place is about to be set apart for use as a leper colony. The chief quarantine officer for the Philippines, Surgeon Perry, M. H. S., reports officially that he estimates the total number of cases of leprosy in the entire archipelago as 20,000, the greatest number being in Southern Luzon and the southern islands. (*New York Medical Journal*, March 30, 1901.)

Tuberculosis is very common among the natives, who herd together in small buildings, and who are profoundly ignorant of the nature of the disease and its prophylaxis. Sunstroke is seldom seen, but heat exhaustion is frequent. Recovery of the patient in the latter affection usually takes place rapidly, so soon as he is removed from the direct rays of the sun.

Filariasis, ankylostomiasis, and animal parasites generally are not more frequently met with in the Philippines than in the United States. I know of

no parasite peculiar to these islands. Yellow fever is unknown, bubonic plague has appeared in Manila during the American occupation, but prophylaxis has kept it within narrow limits, though it has not succeeded in stamping it out. Among the natives, small-pox has been at times extremely prevalent and fatal, and many are met who show the scars of former attacks. The Spanish authorities made attempts at protective vaccination, but, owing to the imperfect methods used, prevention was only partial. The army medical department has taken the matter in hand vigorously, and vaccination is extensively practised among natives and newcomers alike, with fresh caribao virus and by aseptic methods. It is believed that the disease will be practically stamped out at no distant day.

Moulds and smuts abound in infinite variety, attacking articles made of leather especially, but sparing nothing affording them a suitable place for lodgment and growth. The ready development of the minute fungi no doubt stands in a causal relationship to some of the skin diseases, as well as to some of the systemic affections, observed in these islands. Bacterial life and chemical activity are favored naturally by high atmospheric temperature and moisture, so that prophylaxis will demand the constant enforcement of sanitary regulations. Contrary, however, to what might have been expected, surgical and accidental wounds heal with great rapidity in this climate in healthy persons, and infection is of the rarest occurrence.

It may not be uninteresting, before glancing at some of the medicinal plants of the archipelago, to refer briefly to the indigenous fruit and food products commonly used and sold in the markets.

Of oranges there are several kinds, none so good as the California variety, but one called *pomelo* is of four times the size of the largest European kind. Belonging to the same family, the citron (*Citrus medica*), a very large lemon with a thick, rugged skin, and the *shaddock*, a Malay word (*Citrus decumana*), our grape fruit, grow in various places.

Bread fruit (*Artocarpus incisa*, L.), very dry and insipid.

Custard apples (*Anona*), a pulpy berry, of about the size of a plum; the seeds are poisonous and are used to exterminate destructive insects. The bark is a drastic cathartic.

Jack fruit (*Artocarpus integrifolia*), much esteemed for its sugary pulp, but with a carrion smell. Its seeds are eaten cooked.

Lombay (*Calyptanthus jambolana*, L.), the fruit of which resembles the damson.

Santol (*Sandoricum ternatum*), a species of wild strawberry, but very inferior.

Chico (Tagalo word), a small round fruit about as large as a lime, with a pericarp of the color of the

potato; pulp, soft and sweetish, but dry and not specially palatable.

The lanzon (*Achras sapota*, L.) is a small globular, yellowish-colored fruit; its pericarp exudes, when broken, a milky, viscous fluid which gums the fingers. The fruit is of a sweet and acid flavor, and is in three divisions inside the inner membrane, each containing a very bitter seed.

Banana (*Musa sapientum*). Although there are seventy odd varieties of this fruit in the Philippines, only two varieties that I have eaten are equal to our own. The *lacatan* and the *bongalon* (Tagalo words) are delicious varieties, and the only kind I have eaten with genuine relish.

The mango (*Mangifera indica*, L.) attains great perfection in certain localities and is superior to the Cuban fruit of the same name. Pineapples appear in the markets in April and are abundant, but scarcely equal in flavor and texture to those grown in Florida and Cuba.

The mangosteen (*Garcinia mangifera*) of the Sulu archipelago is very delicious.

The durian (Malay), fruit of the *Durio zibethinus*, grows in the southern islands of the archipelago. It is from eight to ten inches long, with a hard, prickly rind, and contains a soft, cream-colored pulp of a most delicious flavor and offensive odor. Its seeds are eaten roasted like chestnuts.

Alligator pear (*Laurus persea*), a large and agreeable fruit, is reported abundant on the eastern coast of Mindanao.

Figs (in Cebu), tamarinds, chillies, ginger, and vanilla grow wild. Coffee, chocolate, tobacco, gutta percha, and cocoanuts flourish in nearly all parts of the archipelago, and are among the most profitable products.

The yam (*Convolvulus batatas*), known locally as camote, is cultivated and is a delicious and valuable food. Rice, as in most tropical countries, is the staple article of diet.

The chain of islands is of volcanic formation, and many destructive earthquakes have occurred from time to time. Unlimited quantities of sulphur exist in many places, and red lead, silver, and gypsum are also found. Indigo, quicksilver, lead sulphate, and vermilion are found in many localities, and deposits of iron of excellent quality are said to exist.

The archipelago is a paradise for the naturalist. The fauna and flora are exceedingly rich and interesting, and among the latter are many medicinal plants, mostly already known to science, but some hitherto undescribed unless possibly by some local author. The list, which has been collected by the writer from various sources, is a long one, embracing cathartics, astringents, antiseptics, tonics, anti-periodics, emmenagogues, escharotics, emollients; in short, representing the entire range of therapeu-

tic action. But it is thought sufficient for the purposes of this paper to refer to those more peculiar to this part of the world, or to those made prominent by popular use or by specially interesting properties.

It is proper to bear in mind that many of the plants used medicinally by native practitioners and others, do not necessarily possess the virtues alleged for them, and while, no doubt, in many instances experience will make good the claim, in not a few others they will be found to be partly or wholly illusory.

The betel nut, the product of the *Areca catechu*, a small but beautiful palm, is, on account of its almost universal use by the natives, a substance of much interest. The nut grows in the midst of a tangled mass of small branches below the crown of leaves, and is gathered at any season. It is of an orange color when ripe. A few grains of the nut, with a small amount of lime procured by calcining sea shells, are rolled up in a leaf of the *Piper betel* (*Chavica betle*) (*buyo*), and chewed. Tobacco, cloves, or camphor may also be added. It is reported to possess tonic, stimulant, astringent, and aphrodisiac qualities, and to increase, like kola nut, the powers of endurance. More exact research shows the nut to contain an alkaloid called arecaine which resembles muscarine in its effects upon the system, and acts like *pelletierine* as a tæniacide. It acts as a meiotic when given internally or applied locally. Internally, it depresses the respiratory function and the heart, and causes cerebral excitement and convulsions; it increases intestinal peristalsis to a marked degree. Another derivative from the areca nut, *arecoline hydrobromide*, acts as a sialogogue, as a laxative, as a remedy in tapeworm, and as a meiotic in glaucoma.

The papaw (*Carica Papaya*, L.) is found growing everywhere in these islands, and is interesting as furnishing a melon-like fruit of rather agreeable flavor and the digestive ferment known as *papain*, *papayotin*, or *papoid*. The latter is obtained by scratching through the skin in various places of the unripe fruit. One fruit will yield about one fluid ounce of the liquid, and this, after standing for a few minutes, separates into two parts, an aqueous liquid and a white, pulpy, semi-coagulated mass. The aqueous portion contains the digestive ferment, which is precipitated by alcohol. By many authorities, papain is considered a more reliable digestive than pepsin, as it acts equally well in acid and in alkaline media. The Indians use the fresh leaves of the papaya plant to wrap meat in, to make it tender, and as a dressing for foul wounds. The leaves, when bruised, exude a saponaceous liquid which is utilized by the natives for washing clothes. The fruit in appearance is like a small musk-melon; it has a fine soft pulp, but is somewhat insipid, resem-

bling what might be regarded as a fine variety of pumpkin.

The *Piper betel* (buyo) leaf, in addition to the use already described, is reputed among the natives as being an antidote to snake-bites. The leaves are bruised and applied locally as a poultice. The leaves are also used as a remedy in cholera, and a decoction prepared from them is applied locally for the relief of infantile colic. Indeed, the buyo leaf among some of the natives is the chief if not the only medicine proper used.

The bark of the Dita tree (*Alstonia scholaris*, R. Br.) is used by the local practitioners as an anti-periodic and is believed to possess the virtues of Peruvian bark, but in less degree. It is also used in dysentery and as a tonic, in doses of from five to ten grains. *Ditame*, one of the active alkaloids of dita bark, has some of the medicinal action of quinine. Harnack found it to act upon mammals in a manner very similar to the South American arrow-poison, woorari (U. S. D.).

In a variety of bamboo a kind of stone is found which the native Indians believe will cure many kinds of sickness. From another variety a white substance is obtained which is esteemed of value for the treatment of conjunctivitis, a common disease in the archipelago on account of the intensity of the sun's rays (Lala). The former is undoubtedly the white concretion which is found in the tubular parts of the bamboo at certain seasons and is called in India *tabasheer*. It consists largely of pure silica, and is valued by the Hindus as a medicine for the cure of bilious vomiting, dysentery, hæmorrhoids, and other diseases. It possesses probably little, if any, remedial value.

Stewed monkey is thought to be of value by some of the Philippine natives in the treatment of cutaneous diseases.

Leeches are numerous in swamps and stagnant pools. One small species found in dense forests is said to have the disagreeable habit of leaping from the trees upon passers-by and at once beginning to help itself to its victim's blood.

The fragrant Ylang Ylang (*Cananga odorata*, Hooker; *Mona incinata*, Blanco) grows extensively in the Philippines. It blooms during the greater part of the year, shedding a delightful perfume into the surrounding atmosphere. From the flowers is obtained a complex and fragrant oil. The famous "Maccassar oil," used for generations as a hair dressing, is said to be simply cocoanut oil scented with Ylang Ylang. A decoction of the leaves is used as a remedy in cholera, and parts of the tree are said to possess emmenagogue qualities.

Gurjun balsam, obtained from several species of the genus *Dipterocarpus*, is used as a succedaneum

for balsamum copaibæ, given in half teaspoonful doses two or three times a day.

The *Strychnos philippinensis*, Blanco, is used as a tonic. The *Cocculus indicus* (*Anaminta cocculus*, Wight) grows here, and is used as a fish poison.

The Moros are the principal consumers of the betel nut as a stimulant-narcotic, although many Filipinos also use it. Opium is largely consumed by the Chinese by smoking, and the Moros, also, are considerably habituated to its use.

The Tagalos, Visayans, and others of allied tribes manufacture alcoholic liquors of various varieties. One is called "tuba" and is prepared from the juice obtained from the cocoanut tree. The flower stalk is punctured, and into the incision is inserted a small bamboo tube; below a larger bamboo vessel is placed; or the stalk is cut off and a bamboo tube fastened below to catch the drippings. The cut end is freshened daily. This is a pleasant beverage, and at first non-intoxicating, but when fermentation takes place it acquires a considerable percentage of alcohol. A wine is also obtained from the Nipa palm (*Nipa fruticans*) which is distilled through bamboo tubes, the condensing pipe being conducted through a hollow log having a stream of cool water running through it. A brandy is also made from sugar-cane. There is little or no drunkenness among the natives. The Mohammedans are restrained by their religion and the Filipinos are temperate by habit and custom.

The practice of obstetrics among the natives is less difficult than it is among races who have modified natural processes by artificial customs, and little is required to be done among the former than to let unaided nature take its course. As a very general rule, delivery takes place without complications, and I am told that, notwithstanding the neglect of antiseptic precautions, puerperal fever is extremely rare among them. I have questioned several experienced natives concerning child-bed fever, but they profess to know nothing about it.

The prevention of conception is practised among them, but probably much less than among more civilized nations. Abortions are occasionally produced, but, as a very general rule, the natural course of procreation is much less interfered with by native women than by their more refined and fashionable white sisters of Europe and America. To prevent conception it is stated that a mixture of burnt lime and lemon juice is taken. Miscarriages are procured by rough massage of the abdomen, and by the administration of a mixture composed of the leaves of a plant called by them "pandakakay," and the juice of a partly roasted green pineapple. These are boiled together and given twice daily. My informant assures me that it is effective. Instruments are never used for this purpose, internal remedies

only being relied on. No special precautions are observed during the period of pregnancy, as to food, drink, exercise, etc. There are some special kinds of herbs which they gather in the mountains and use locally and as a tea, under the belief that delivery is thereby rendered easier. It is not probable that much benefit is thus derived, although there are emmenagogues and oxytocics known to be in use among the natives, for example, the leaves and oil of the Benne plant (*Sesamum indicum*), *Michelia champaca*, *Utex negundo*, *Jasminum sambac*, and *Morinda citrifolia* (Tavera).

Expert professional aid is seldom required by a Moro woman in labor. In some villages there are Moro *practicantes* who attend, and in most settlements there are midwives who officiate.

The pregnant woman makes it a rule to retire to her bed two weeks, or thereabouts, before confinement. They compute the period of gestation at 270 days.

As to the decubitus assumed by Moro and other native women during labor, with a view to facilitate delivery, I am informed that no special position is taken, but the recumbent posture is usual. No effort is made to check post-partum hæmorrhage, which is believed to be a salutary process, and is rather encouraged by drinking red wine for from a week to a month, or so long as the flowing continues. Mild stimulants are given the woman to revive her in case of debility. She does not drink anything cold for forty days, during which time she keeps her bed. This is done under the impression that fever is thereby prevented. Soon after labor, the Moro mother walks to the river and bathes, taking her infant. The placenta is delivered spontaneously or by traction on the cord, and I am informed that retention is uncommon. The cord is tied with a few fibres of abaca (hemp) and severed three to six inches from the body of the child by means of a bolo, a razor, or a thread. A bamboo knife is sometimes used, as the latter is supposed to be less apt to excite inflammation than a steel blade.

Circumcision of male infants is practised among the Moros as a requirement of their religion. It is performed by a Mohammedan priest, called by them *lebbe* or *kali*, who comes to the house by invitation. The boy is carefully washed and dressed, and is then taken around the village attended by a large procession of relatives, headed by the priest and a band of native musicians. Upon returning to the house, refreshments, consisting usually of sherbet and coffee, are served, and partaken of by the entire gathering. Subsequently, the priest mutters a few prayers, takes the child, places him naked on a rice pounder or block of wood, reads a prayer from the Koran, seizes the prepuce between the thumb and forefinger, draws it out, and with one incision of

a sharp blade, kept expressly for this purpose, removes about one fourth of an inch. This completes the ceremony. The child is then laid on a mat or bed, and kept on his back for seven days. On the eighth day he is bathed, but not allowed to leave the house until the wound is thoroughly healed. No stitches are taken, but the repair is allowed to take place entirely by granulation. Girls two to three years old, usually, but sometimes older, are subjected to an operation performed by a Mohammedan woman, in which the hymen is cut with scissors to the extent of about one twelfth of an inch. No ceremony is observed in connection with this. A small percentage of the Filipino children are treated by slitting the prepuce from below upward with a knife.

The mother's milk is, as a rule, not given to the child for three or four days after birth, a neighboring woman supplying the needed nourishment. Mastitis is a very uncommon complication during confinement, and if it occurs very little is done for it.

In difficult or complicated cases of labor, such as abnormal presentations, failure of the pains, etc., they are without rational or effective resource. For tedious labors, it is said that the native *curanderos* procure a piece of human skull, grind it to a fine powder, mix this with lime juice, and, with this liquid, paint the soles of the patient's feet. Among the Moros, prayers and charms are likewise relied upon, and Arabic remedies brought from Mecca are held in high esteem. They have no instruments for use in the artificial aid of delivery. Death of the new-born is not uncommon, but a fatal result seldom happens to the mother. Multiple births do not often occur, twins or triplets at most.

There is no knowledge or practice among the Moros that can be dignified by the name of surgery. It is believed that this is in general a correct statement, although my information is somewhat conflicting upon this point, some of my informants telling me that they have a rude and limited surgery, setting broken bones with splints of the midrib of the cocoanut leaf, using certain herbs for cuts, etc. But, certainly, among the Moros generally, there is no surgery, and absolutely no rational practice of medicine. The latter is simply a species of Shamanism, which is observed among most primitive races, by whom it is believed that spiritual or supernatural powers, both good and evil, occupying the earth and surrounding space, cause all things to happen. They are firm believers in incantations, charms, and witchery. Their preventive medicine consists in wearing an amulet which is purchased from a *pandita* or priest. The latter reads a prayer from the Koran and writes it down upon paper, parchment, silver, copper, or lead; this he wraps in many layers of paper, and finally sews into a muslin

cover colored with saffron and made with long tapering extremities, with a noose at one end; this is fastened about the waist or other part of the body by the owner, and, while so worn, is supposed to protect against sickness and evil. The *panditas* ask different prices for these charms, alleging that the higher priced ones are most potent. The Moro name for this article is *aguimat*, and it is known as *anting-anting* among the Filipinos, who also believe in its efficacy, but whose belief in the Christian religion causes them to reject the idea that there is any virtue in the Koran, so that among them a peculiar stone or pebble is used, one of peculiar shape, color, or markings, which is likewise sewed into a piece of muslin long enough to be tied around the body and so worn as an amulet.

It appears, however, that they are not all wholly ignorant or indifferent to other and better modes of practice, as, in severe or chronic ailments, they are glad to avail themselves of the services of skilled practitioners, and some Moros and many Filipinos at Zamboanga have sought the advice of army surgeons, and expressed willingness to undergo any treatment, surgical or medical, they considered best.

A tribe of natives called Tirurayes, living in and around Tamontaca, a town near Cottabatto, Mindanao, have customs somewhat similar to those of the Moros. From a pamphlet describing these people, written in the Tiruraye language by Jose Tenorio-Sigayan, and translated into Spanish by a Catholic missionary, I have obtained a full account of their treatment of the sick and disposal of the dead. Their practice in these respects is a *mélange* of nonsensical superstition, both curious and amusing. As, doubtless, among the multitude of native tribes throughout the archipelago, similar customs and beliefs prevail, a brief account of them may be of interest in this connection.

Among these people it is customary, when one of their number is taken sick, to surround his house with "bejuca," a species of rattan, which they call "uar," in order to frighten away the "*bolbol*," an evil spirit that flies at night and eats men. This spirit can also cause sickness by inflicting an invisible wound. The reason the *bolbol* fears the rattan, they suppose, is because when it sees it, it thinks it is a snake, and, moreover, the uar, the natives believe, has itself the power of turning into a snake. The *bolbol* is an ugly customer indeed, because, in addition to all his other nefarious traits, he frequently indulges in the cheerful practice of eating the livers of the sick. They consider it very important, therefore, to keep a sharp look-out at night and have their *kris*es ready at hand to attack the *bolbol* should it make its appearance. The writer of the monograph has no hesitation in affirming his belief in this malign spirit, as he gravely asserts that he

saw one killed one night in his house over the room in which his mother was sick, and felt the house rock with the contortions of the evil spirit, as if a caribao (water-buffalo) were rolling over and over on the floor, and saw the kris of the doughty native dripping with gore when he descended from the room above.

The Tiruraye medicine man who treats the sick only touches the patient with his hands, and prays in a whisper, petitioning God to cure the invalid.

They use the buyo leaf (*Piper betel*) by local application in the treatment of many forms of disease, and say they know a plant which, if eaten, will cause people to laugh. In case the patient dies, they procure a looking glass and suspend it just above the face of the corpse, so that the *bolbol* seeing two faces and only one body will be frightened away.

During the night no one sleeps, a strict watch or wake being kept up. In the morning the watchers partake of a collation, at which no outsiders dare be present, for fear the dead would invite them to die. Even those who partake of the food do not think it safe to call themselves by their right names.

After this ceremony the body is wrapped in a mat, and with the clothing, spears, etc., of the deceased, is placed on a rude litter made of poles, and is borne on the shoulders of two friends to the burying ground. The grave is dug very deep. Each person attending the funeral throws some dirt on the remains to signify that all must go the same way. With the point of a bolo they then draw a line around the grave to keep out malign spirits, and a bamboo trap is then placed near the grave to catch any evil spirit that happens to be fooling around. If either man carrying the body to the grave stumbles or steps on the heels of any one, it is a sign that he will meet death in the same way as the person they are about to bury.

For seven nights after the funeral, fire is kept burning in front of the house of the deceased, so that he can find his way back; and, at each meal for a week, they hang some rice and fish to the rafters for the nourishment of his soul. This is because he stays around that length of time and then takes up his abode for good in the land of spirits.

When a child dies, they hang its body to the limbs of the balet tree, supposing that it will be fed by the milk-like sap that exudes from the tree. This tree is held sacred, and no one would venture to cut it for anything in this world.

Among the lower classes of natives in the Philippines the superstitions in vogue are not unlike those believed in by the Indians of North America. They resort to charms for the accomplishment of all their wishes. Under the generic terms of *aguimat* and *lambus*, which may be translated as amulet and talisman, the Tirurayes, Moros, and others use a vast

variety of substances as special charms, which they believe to possess occult power, to gain the affection of others, to guard from sickness and evil spirits, to make them invisible, to render an enemy immobile, to gain wealth easily, to foretell future events, etc. The priest, or Shaman, prays over the article, invoking the aid of the Great Spirit, who is supposed to invest it with magical powers. If the charm fails, they always have a ready explanation and their faith is not shaken in the least.

Ascending the racial scale, we find that a knowledge of medicine and surgery among the natives of the Philippines becomes more and more exact, *pari passu* with the increase of intelligence, until it culminates in the educated practitioners of Manila and the larger cities, who have obtained their education at reputable schools and colleges, and whose practice conforms to that of educated physicians elsewhere. But there are thousands of *practicantes*, *curanderos*, and old women, throughout the islands, whose practice is purely empirical when emancipated from the fraud and artifice of priestcraft, and it is of these that I shall now speak.

Typhoid and malarial fevers and the so-called "calentura" are all treated very similarly. They recognize typhoid as somewhat infectious, but adopt no prophylaxis in dealing with it. It is treated by decoctions of a plant called *amurgosa* or *amplaya* (*Momordica balsamina*), balsam apple, and *maka-buhay*, *Tinospora crispa*, administered in small doses twice daily. In the treatment of malarial fever they prefer barks and herbs of the bitter class, and if the disease is intractable, they apply for medicine to the town *practicante*, who probably gives quinine.

Small-pox has prevailed extensively in Mindanao and the Sulu group, and is especially apt to occur when the Mohammedan hadjis, or pilgrims, return from Mecca. In its treatment the patient is kept within doors, and, when the eruption is well developed, purgatives are given every few days, and the use of water for bathing is strictly prohibited for fourteen days. Cooling drinks, such as cocoanut water, the juice of sugar cane, milk, or sweetened water, are given to relieve the inflamed throat. Incidentally, it is believed that vows to be true to the Church, and the placing of a crucifix or sanctified image near the patient, will greatly assist the favorable action of the medicine. The Moros at Jolo, under the direction of Arab hadjis, use salines and powdered burnt ox-hides mixed with sugar, internally, and paint the body with *amurgosa* oil, obtained from the nuts of the tree growing in India. The latter is astringent and is said to keep flies away from the ulcerated surfaces.

Dysentery and diarrhoea are among the most prevalent diseases; they are treated by the natives by the administration of astringent roots and herbs,

and recoveries in non-infectious cases occur; but tropical dysentery is not infrequently amoebic, and such cases, after persisting for months, will ultimately apply to more skilled practitioners, who treat according to old Spanish methods, but death is the usual ending.

Constitutional syphilis is met with not infrequently, but among 200 Filipinos examined by the surgeon in Zamboanga for enlistment in the force of native troops, only about half a dozen cases were discovered, and of these only one was at all severe. In its treatment the natives use what they call the "China root decoction," which has the reputation of being efficacious. The treatment for gonorrhoea, which disease is met with not infrequently, consists in the administration *per os* of cubebs and sarsaparilla infusions, cooling drinks, local bathing, and the partaking plentifully of boiled green peas.

No hygienic precautions are taken or any very definite treatment pursued in cases of pulmonary tuberculosis. Certain roots and herbs are given in the form of infusions, and the leaves of the stramonium, which grows abundantly here, are dried and smoked.

Insanity and cancer are very uncommon among these people, a fact of some interest and significance. Puerperal insanity occasionally occurs among them, but they have no treatment for it except by prayers, etc. The Moros, in such cases, resort to the use of charms or to incantations to Satan, the cause of the evil, to cure the patient.

Ulcers are very common and are treated in many ways. The natives of Zamboanga apply a poultice of marshmallow leaves or boiled rice, until the ulcer is well cleaned; they then touch it with copper sulphate, and apply soothing oils. Occasionally they apply a disc of metallic copper to chronic ulcers.

Their method of preparing medicines is of some interest. As will appear from what has been said, they depend entirely upon the vegetable kingdom for their medicines for internal use, and the decoction or infusion is the form in which they invariably use the drug. It is prepared in the following manner: The leaves, roots, or barks, are placed in a rice pounder and bruised; they are then transferred to an earthen pot and, when mixed with one cupful of cold water, the depth is measured with a stick: water is then added to make a total of eight cupfuls. The mixture is then boiled until the remaining amount measures the same as it did after the first cup of water had been added. When cool, it is strained and administered to the sick twice daily.

In conclusion, it is proper to add that some differences are to be observed in modes of native practice in different parts of the archipelago, owing to the operation of local influences, such as the influence of the Chinese, of the Arabic, of isolation, of reli-

gious beliefs, etc., but so far as the writer has been able to ascertain, the above data, while by no means exhaustive, are fairly representative, and afford a tolerably correct perspective of primitive practice in the Philippines.

The writer is under obligations to Dr. A. V. Pereira, an educated native practitioner of Zamboanga, for much of the above information concerning native practice, and to many army officers and civilians for data of general and professional interest used in the preparation of the foregoing paper.

ZAMBOANGA, MINDANAO, PHILIPPINE ISLANDS.

FLAGELLATED MALARIAL PARASITE: OBSERVATIONS UPON ITS STRUCTURE, SHOWING THAT THE FLAGELLA ARE PREFORMED IN THE BODY OF THE ORGANISM.*

By JOHN T. MOORE, M. D.,

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NERVOUS CLINICS, JOHN SEALY HOSPITAL DISPENSARY, GALVESTON.

Since the discovery of the parasite of malarial infection by Laveran in 1880, many observers have spent much time in the study of the structure and life cycle of this interesting pathogenic agent.

While much is known about the plasmodium, there are no doubt some things yet to be learned.



FIG. 1. Microgametocyte
Flagellating body.



FIG. 2. Macrogametes
Non-flagellating body.



FIG. 3.



FIG. 4.



FIG. 5.



FIG. 6.



FIG. 7.

There is still a lack of agreement among the observers concerning the structure and function of the various forms of this protozoan.

That it has two developmental cycles, one in man of asexual segmentation, discovered by Golgi, and the other cycle in the mosquito, discovered by Ross, almost all observers agree.

McCallum, in 1897, discovered that there were present in the blood male and female elements. He

described and named them; the male element he called the microgametocyte (Fig. 1) and the female form the macrogametes (Fig. 2). He saw, while studying the forms in the Halteridium of birds, the male body give off an element, which he called the microgametes. This element was seen to enter the female body to fertilize it. He afterward was fortunate enough to see the same course of events while studying the blood of man infected with the æstivo-autumnal parasite.

I have in my observations been able to verify the descriptions of the various forms and phases of the parasite as occurring in the cycle, while man is the host. Most of my work has been confined to the study of the blood taken from malarial fever cases. The hyaline and granular bodies spoken of as the male (Fig. 1) and female form (Fig. 2), have been seen by me quite often.

My interest in them has been intensified by my recent study of the part they take in flagellation. I have frequently observed the flagella spring, as it were, from the hyaline bodies and rapidly wriggle away, never re-attaching themselves to this, or to a similar body. I have not, as yet, been able to follow them to the granular, or female body, the one having a wreath-like arrangement of its pigment. But I have several times seen flagella attached to these female bodies that have been described by McCallum and others.

I have never observed one of the microgametes leave this granular form to attach itself to the other form. I naturally came to the conclusion that I had seen all of the steps as observed by McCallum, except that I had not followed the fertilizing elements from the male body to see it enter the granular female form. What I have said leads up to special observations, which this paper is intended to record.

I have tried, by studying both fresh and stained specimens, to find out the origin, structure, and destiny of these worm-like processes that seem to project from the periphery of the parasite.

I am convinced by what I have seen that these flagella are fertilizing elements coming from the hyaline ovoid bodies, that pass to the granular forms to prepare them for further development in the mosquito cycle, as taught by the best observers. My observations have led me to doubt the teaching, as I understand it, concerning the origin of these flagella or microgametes. The drawings I have seen of both fresh and stained specimens seem to show the flagellum as a pseudopod-like process coming from the periphery of the body, and having the same structure as the protoplasm of the parasite itself. Many of the organisms in fresh blood seem to suggest this idea.

Since taking up the study of this particular point

*Paper read at December, 1907, meeting of South Texas Medical Society.

I have looked over the literature at my disposal, and find that Manson, in *Tropical Medicine*, holds that the microgametes are preformed in the microgametocytes, from the chromatin of the nucleus. Sak-havro believes that the flagella are filaments of chromatin from the nucleus of the parasite.

Marchiafava and Bignami, in the *Twentieth Century Practice of Medicine*, say: "Study of the structure has, in fact, shown that the flagella are not preformed in the crescents and round bodies; within these, we find the filaments of chromatin, which go to make part of the flagella, but not to form them in their entirety."

I have seen the granular body in both the tertian and æstivo-autumnal parasites containing pigment, all at once set in commotion, as if something very active were on the inside trying to get out, as in Fig. 3. In a short time a slight projection would be seen, as in Fig. 4, and, a little later, out would come a thin hyaline filamentous body, as in Fig. 5. In one of these cases, careful focussing convinced me that one half of the flagellum could be seen in the parasite, as in Fig. 6. I have observed this before, but not so convincingly as in this case. I first assured myself that the flagellum was neither in front of nor behind, the parasite, and then I asked several members of the graduating class to notice it carefully and tell me how it impressed them. They said, "It is coming out from the inside."

I shall endeavor in a succeeding paper to present in stained specimens, as Manson asserts (Fig. 7, Manson, *Tropical Diseases*). Staining has repeatedly shown a greater amount of chromatin in those bodies that become flagellated.

I have not been able to show flagella preformed my work more in detail.

Note.—The drawings, except Fig. 7, were made from personal observations on the blood of a subject of double tertian malarial fever, December 2d to 4th, 1900, and were kindly reproduced by Dr. W. Keiller.

The Fish-hunger of Vegetarians.—The *Poly-clinic* for July says that Robert Louis Stevenson, in the South Seas, mentions that "in at least one ocean language, a particular word denotes that a man is hungry for fish, having reached a stage when vegetables can no longer satisfy." In these islands flesh food other than fish is rarely obtainable except by cannibalism and hence the great value which attaches to fish. In most of them leprosy has long prevailed, perhaps in all. It is to this fish-hunger, which is common to all people who are for the most part restricted to vegetable food, that those who hold that leprosy is due to fish-eating attribute its prevalence near to fishing stations and its occasional occurrence at a great distance from them.

SPICULUM OF BONE, FROM SHOT FRACTURE OF SKULL, WHICH RESTED AGAINST THE BRAIN FOR FORTY-FOUR YEARS.

By D. S. LAMB, M. D.,

WASHINGTON, D. C.

ARMY MEDICAL MUSEUM.

The specimen is a portion of the skullcap, of irregularly oval shape, and measuring one inch and a half by five eighths of an inch in diameter. It was removed *post mortem* from the right fissure of Sylvius, adjacent to the first temporal, ascending parietal, and supramarginal gyri. The temporal was somewhat atrophied, as if from pressure. The part of the spiculum belonging to the outer table was half an inch in diameter; the inner table, much the larger, showed many small depressions, as from



Spiculum of bone lodged in brain for forty-four years.

necrosis. The spiculum was imbedded in the pial vessels, and appeared to be vascular. Minute bits of lead were still adherent to it.

At the *post-mortem* examination, which I made by request of Dr. J. Ford Thompson, I found a small dark spot on the scalp one inch and a half above, and one third of an inch behind, the right external auditory meatus; a rounded opening one third of an inch in diameter, filled with membrane, occupied apparently the postero-inferior part of right parietal bone (the sutures of skull were mostly obliterated); there were firm adhesions of the scalp around the opening; on the anterior inner margin of the opening was some new osseous growth. The dura was generally and firmly adherent to the calvarium and showed a corresponding rounded opening. The brain was generally normal.

The deceased, a well-known detective of Washington, died on March 21, 1901, aged sixty-one years. In an election riot in Washington, on June 1, 1857, he was accidentally shot; the volley was fired by a company of the U. S. Marine Corps, which then used the round bullet with three buck-

shot form of ammunition. The wounded man was attended by Dr. M. V. Bogan and Dr. Thompson, then a medical student, was also present. Dr. Bogan probed thoroughly for the bullet, which was presumed to be lodged in the brain. The recovery was prompt and complete; there was no clinical sequel of the injury by the bullet or the probe. The former must have glanced.



Therapeutical Notes.

For Migraine in the Gouty.—Professor Combe and Dr. L. Ingelrans (*Echo médical du Nord*, May 19th) recommend:

℞ Lithium salicylate..... 150 grains;
Water..... 3,750 minims.

M.

A tablespoonful at the principal meals.

For the Pain of Toothache.—Dr. Caumartin (*Echo médical du Nord*, June 16th), in cases of caries of the third degree in which the pulp is alive, recommends the following for use on a pledget of cotton, as insuring the disappearance of pain in a few minutes:

℞ Carbolic acid, }
Cocaine hydrochloride, } of each... 30 grains;
Laudanum, }
Chloroform, } of each..... 45 minims.

M.

Personal Hygienic Measures in Eruptive Fevers.—Professor Ausset (*Echo médical du Nord*, June 23d) recommends, with a view to assuring antiseptics of the mouth in eruptive fevers, and especially in measles and scarlatina, that gargles and mouth washes of thymolized water (1 per 1,000) or of Labarraque's solution (25 per 1,000) be used, and that local applications be made night and morning with a pledget of cotton soaked in the following mixture:

℞ Glycerin, } of each..... 225 minims;
Alcohol, }
Salicylic acid..... 15 grains.

M.

For Coryza.—The *Revue médicale de Normandie* for July 10th cites the following from the *Annales de pharmacie*, of Milan:

℞ Powdered menthol..... 3¾ grains;
Powdered betol..... 37½ "
Cocaine..... 7½ "
Powdered roasted coffee..... 60 "

M. To be used as a snuff.

Disulphide of Carbon Water in Typhoid Fever.—*Revue médicale* for June 19th, citing the *Gazette des hôpitaux*, says that M. Bardet, at a recent meeting of the Société de thérapeutique, preconized the

following formula formerly employed by Dujardin-Beaumez:

℞ Carbon disulphide..... 6 drachms;
Distilled water..... 16 ounces;
Essence of peppermint..... 30 drops.

M.

The dose is from ten to twelve tablespoonfuls daily in any desired beverage. The mixture exerts a most remarkable antiseptic action on the stools. [This dose is somewhat larger than is commonly recommended in the United States.]

Alcohol Pencils.—*Lyon médical* for June 16th cites from the *Monatsshefte für praktische Dermatologie*, Bd xxxi, No. 117, the following curious formula, under the name of *Stili spirituososi d'Unna*:

℞ Sodium stearate..... 6 parts;
Glycerin..... 2 "
Alcohol, enough to make..... 100 "

The pencil is encased in a layer of tinfoil, and is indicated for use in impetigo, sycosis, acne pustulosa, and rosacea pustulosa.

Inhalations for Scarlatinal Sore Throat.—Dr. A. Malinowsky (*Semaine médicale; Revue mensuelle des maladies de l'enfance*, May) preconizes the following:

℞ Beechwood creosote..... 8 minims;
Thymol..... 7½ grains;
Spirit of camphor, } of each... 375 minims.
Oil of turpentine, }

M.

For external use. To be sprayed with an atomizer for ten or twenty seconds every two hours into the throat and nose.

The Treatment of Pruritus Ani.—Dr. James P. Tuttle (*International Journal of Surgery; Medical Standard*, June) says that after bathing in water as hot as can be borne, the local application of black wash is excellent. In his own practice he has also found the following formula serviceable:

℞ Carbolic acid..... 2 drachms;
Salicylic acid..... 1½ "
Borax..... 1 drachm;
Glycerin..... 1 "

M.

Apply at bedtime and during the night if necessary.

Methylene blue, five per cent., is also an excellent remedy.

In cases in which there is fissure, or in those marked cases of atrophic catarrh in which the mucocutaneous border cracks whenever it is stretched open, the following ointment is very effectual:

℞ Extract of conium..... 2 drachms;
Ointment of stramonium..... 1 ounce;
Lanolin..... 1 "

Sig.: Apply well at bedtime and before having a stool.

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TUBERCULOUS DISEASE IN CATTLE AND IN THE HUMAN SUBJECT.

Several years ago Robert Koch startled the world by announcing that in tuberculin he had found practically a remedy for incipient tuberculous disease. At that time he had already achieved great distinction as a bacteriologist, and physicians everywhere, relying implicitly on his expressed convictions, vied with each other in obtaining and promptly employing the product, but it soon appeared evident that it was of no considerable curative efficiency save in the particular form of tuberculous disease known as lupus. Enthusiasm did not rise so high over his more recent *tuberculinum residuum* (T. R.), and now we hear little about it. It is no wonder, then, in view of the virtual failure of tuberculin, that when, before the recent British Congress of Tuberculosis, Koch belittled the precautions generally taken at the present day against the spread of tuberculous disease from cattle to man, there was a very general dissent from his views. It will, we think, take more than a few experiments, coupled with rather sweeping deductions from common observation, to demonstrate to the medical profession that the supposed fact by which those precautions are warranted is no fact at all, for that is what Koch's contention will generally be interpreted as amounting to.

Professor Koch seems to have convinced himself that cattle are nearly, if not quite, insusceptible to infection with the micro-organism that occasions tuberculous disease in human beings. His experiments, not many in number, but extending over a considerable period of time and persistently and systematically carried on, it must be admitted, have failed to convey the human disease to cattle, whether

they consisted in feeding them with tuberculous sputum, in implanting it in a serous cavity, or in injecting it beneath the skin, whereas the same forms of inoculation with tuberculous material of bovine origin promptly resulted in infecting the animals with tuberculous disease. Great weight should undoubtedly be accorded to these experiments and to any opinion expressed by so acute an observer as Professor Koch, but in our opinion they cannot be held to be decisive by themselves alone. Opposed as they are to almost universal conviction, they cannot be accepted off-hand as final. Further experiments, varied perhaps in some ways that have not occurred to Professor Koch and that possibly will not at once suggest themselves to the minds of others, will have to be made before the question of the transmissibility of human tuberculous disease to cattle can be regarded as quite settled. Perhaps there are few qualified observers who would at the present time declare without reserve that "tuberculosis of man and cattle is identical," as the United States Veterinary Medical Association did by resolution in 1896, but at least they are so nearly identical that each is capable of yielding a product known as tuberculin, and surely that is a dangerous approach to identity.

Furthermore—and this is a far more momentous matter for the human race—Koch argues against the transmissibility of bovine tuberculous disease to man. Deliberate experiments to decide this point are of course out of the question, but Koch thinks that the world is unconsciously performing experiments that suffice to sustain his view; that is to say, that beef, milk, and butter contaminated with living tubercle bacilli are constantly being ingested by many human beings, and yet primary tuberculous disease of the digestive tract is rare. To argue from such observations that the disease is not transmissible from cattle to man seems to us rather inconclusive. Theoretically, it may be granted, a tuberculous process at the initial point of contact of the germ with receptive tissue should be set up before an invasion of other parts took place, but we cannot regard it as proved that such is always the case. Who can say that in every instance of tuberculous disease of the meninges, of a joint or of any other structure not directly exposed to contact with germs a local tuberculous process is first set up at the point of their original lodgment? Reasoning from analogy, we

may refer to M. Jullien's article, entitled *Two Clear Cases of Syphilis without a Chancre*, published in the *Medical Press* for July 3d and abstracted in this issue of the *Journal* under the head of Miscellany.

Finally, let us consider the action of tuberculin. Are we to take it for granted that all the tuberculin that is capable of giving rise to the diagnostic reaction in cattle is of bovine origin? Apparently, that would have to be the case if human tuberculous infection were not transmissible to cattle. If it is the case, Koch's deductions will receive support in a substantial form, though it must still be borne in mind that, as a rule, infectious diseases which affect both man and the lower animals are not so readily transmitted from the one to the other as they are from one individual to another of the same species. All things considered, we must still urge upon sanitary officials the folly of discontinuing the precautions now resorted to until the needlessness of them is much more clearly shown than it has been thus far. As subjects of thought and further investigation, Professor Koch's propositions are quite in order, but that, it seems to us, is all that can be said of them at present. Even if they ultimately turn out to be well founded, the interests of stock-breeders and dairy-farmers will still require the extermination of tuberculous cattle.

TEMPORARY RESTORATION OF CONSCIOUSNESS IN DIABETIC COMA.

For the gratification of the patient's family, if not for certain legal purposes, it is often an object to restore consciousness even if there is no hope of final recovery. Lépine's recommendation of large alkaline intravenous injections to accomplish the purpose in cases of diabetic coma has lately been strengthened by the report of a case treated by M. Rondet, of Neuville, on whose behalf M. Lépine presented it at a meeting of the Lyons National Society of Medicine (*Lyon médical*, July 7th). The case was that of a youth found in a state of coma as the result of diabetes of probably the acute variety. Having provided himself with a funnel, a long tube, and a Potain's needle, M. Rondet endeavored to administer an intravenous injection of sodium bicarbonate at the bend of the elbow, but the veins could not be made sufficiently large to admit the needle. Three subcutaneous injections were therefore given, one into the buttock, another in the deltoid region, and

the third into the lateral abdominal wall, all on the right side. In all, there were thus injected 600 grains of sodium bicarbonate dissolved in about a pint of distilled water. The process occupied an hour.

At first the boy remained inert, but when the injections were finished he complained of the abdominal puncture, recognized his father and other members of the family, and answered a few simple questions. This was in the evening. He had a good night, sleeping a little, but preserving his full intelligence up to 10 o'clock in the morning, when he showed a tendency to relapse into coma. As his condition was otherwise grave, M. Lépine was called in consultation and the same amount of the alkaline solution was injected as before, half into the left abdominal wall and half into the outer side of the left thigh. Consciousness again returned and was maintained until 4 o'clock the next morning, when it forsook the boy, and he died an hour later. It is noted that the decomposition of the body was extremely rapid. The death was rather sudden, and M. Rondet thinks is probable that it was due to heart disease.

The mode of injection practised in this case as a matter of necessity, said M. Lépine in the discussion, was not to be recommended; if the boy had recovered, he would probably have had abscesses, owing to the great delicacy and susceptibility to infection of the skin and subcutaneous cellular tissue in diabetics. Intravenous injection would have been preferable. In this view M. Mayer concurred, and he pointed out that the insertion of the needle of a hypodermic syringe into a vein would have answered the purpose.

THE VERTEBRAL CANAL AS A ROUTE OF MEDICATION.

It not infrequently happens that a novel procedure leads to substantial advances even when of itself it proves unsatisfactory. This may turn out to be the case with anæsthetization by endomeningeal spinal cocainization. Some recent reports tend to show that epimeningeal medication—that is, the application of drugs in the space between the vertebræ and the dura mater, commonly called "epidural" medication—may prove effective in the treatment of certain morbid conditions. At a recent meeting of the Medical Society of the Hospitals, of Paris (*Presse*

médicale, July 3d), M. Souques reported a case of sciatica of five months' standing, in a woman sixty-four years old, in which two injections of about a third of a grain of cocaine were administered. After the first injection there was immediate relief, but it was only transitory; after the second there was the same instantaneous relief, and it was then permanent so far as could be inferred from the fact that up to the time of the report, a period of five weeks, the pain had not returned.

It seems that the applicability of this mode of medication is not restricted to painful affections, and that it may perhaps be employed to advantage for the introduction of other drugs besides analgetics. M. Mauclaire recently reported to the Paris Society of Biology (*Gazette hebdomadaire de médecine et de chirurgie*, July 11th) on his employment of iodoform injections in the treatment of certain forms of Pott's disease, namely, those characterized by lesions of the bony wall of the rhachidian canal or by tuberculous pachymeningitis of the dura mater. The introduction of the needle into the sacral canal is easy, says M. Mauclaire, in any posture of the patient, and he has found by experiments on the dead bodies of children that by throwing iodoformized glycerin in very slowly it may be made to penetrate as far as the upper dorsal region. In his trials upon the living subject he has generally used a saturated solution of iodoform in liquid vaseline, prepared with the utmost regard to asepsis. The injections may be administered once in two weeks, and the author thinks that larger amounts than he has thus far employed will be found perfectly safe.

He first injected about a drachm and a half of iodoformized glycerin in the case of a man affected with angular curvature in the lower dorsal region. A little pain of brief duration followed, but there was no unpleasant after-effect. He then tried the procedure on three children having Pott's disease in the lumbar or the lower dorsal region, injecting from half a drachm to a drachm of iodoformized oil. In one of the children there was a slight elevation of the temperature for two evenings after the injection. He is convinced that these injections, employed with due precautions, are quite harmless, but as to their utility, he can at present only say that it seems probable. At all events, he looks upon this method of treatment as only an adjuvant to Sayre's plan of immobilization with the plaster jacket.

DR. SAJOUS'S CYCLOPÆDIA.

We congratulate Dr. Charles E. de M. Sajous and the F. A. Davis Company, of Philadelphia, on the completion of the sixth volume of the *Annual and Analytical Cyclopædia of Practical Medicine*, which closes the first series. It contains a general index which will greatly facilitate reference to the volumes. We presume that the first volume of the second series is now in preparation. The work is recognized as of the greatest value to the entire medical profession.

AN UNWARRANTABLE ATTEMPT AT A PLAGUE SCARE.

From Indianapolis and Milwaukee, as is recorded in our news columns, there have recently come to the newspapers certain dire prophecies by a few physicians of the imminence of a general prevalence of the bubonic plague in the United States. It is almost needless to say that those who are the best fitted to form a trustworthy opinion on the subject see nothing in this forecast but the cry of the alarmist. New York is always ready to deal with stray importations of the disease, and San Francisco, we trust, has learned a lesson from recent events.

EXTUBATION BY MEANS OF THE ELECTRO-MAGNET.

Of late years the magnet has played a notable part in the removal of foreign bodies, especially from the eye. Recently, at a meeting of the Lyons Society of the Medical Sciences (*Lyon médical*, July 14th), M. Collet proposed the use of the electromagnet for extubation, a procedure often calling for no little skill. A portable storage battery and a slender magnet suitably curved, says M. Collet, are the only appliances needed, and with them anybody can remove a laryngeal tube instantly, and that is a great object in cases of sudden obstruction of the tube.

A TACK IN THE VERMIFORM APPENDIX.

At a recent meeting of the Paris Anatomical Society, which is what we should call a pathological society (*Gazette hebdomadaire de médecine et de chirurgie*, July 18th), a case of foreign body in the vermiform appendix was related, and the appendix shown, which rather casts the grape-stone findings into the shade, although it is several classes behind the case of the old fowler (recounted, if we remember right, by Dr. John W. S. Gouley, of New York) whose appendix, after his death from some disease having no connection with that structure, was found

crammed with bird-shot. In the French case a tack about a third of an inch long occupied the distal portion of the appendix, which was removed from a young man at the time of his third attack of appendicular inflammation.

A NOTABLE BREACH OF PROFESSIONAL SECRECY.

In the *Revue médicale de Normandie* for June 25th a writer who signs himself R. S. properly rebukes Dr. Caulet, who, having been engaged to attend the Queen of Servia in confinement, made a physical examination and a diagnosis of pregnancy. As everybody knows, the confinement never came to pass, and, to excuse his error (a very pardonable one), Dr. Caulet has seen fit to publish in a newspaper a detailed account of his examination, describing the condition of the Queen's abdomen, the size of her breasts, her pelvic hyperæsthesia, the size of her uterus, etc. As "R. S." well says, to publish such things in a medical journal, calling the patient "Mrs. X," is allowable, but to give the patient's name in connection with them, especially in a newspaper, is unpardonable.

MENSURATION IN THE DIAGNOSIS OF OVARIAN TUMORS.

A Paris journal, not mentioned by its title, is quoted in the *Lyon médical* for July 14th as saying: "All the classical treatises teach that a good way of distinguishing ascites from an ovarian cyst is by measuring the distances between the umbilicus, the pubes, and the xiphoid cartilage. In ascites the distances remain normal, the umbilicus being nearer to the pubes than to the sternum, while in the case of an ovarian cyst the relation is reversed." This remarkable statement is said to have been made apropos of a case in which, in Guy's Hospital, a diagnosis of ovarian cyst was made solely on the strength of the fact that the distance between the umbilicus and the pubes was greater than that between the umbilicus and the sternum, although there was a cardiac murmur which made the existence of ascites probable. Abdominal section was performed, but there was no cyst, only ascites. Thereupon, the account goes on to say, the physicians of the hospital began to measure every woman's abdomen at their disposal, including those that were ascitic, and concluded that the "classical rule" was a grave error. We can hardly credit the story; certainly at the present time nobody would rest a diagnosis on such a datum.

A Medical Dramatist.—The *Gazette médicale de Paris* for June 29th states that Dr. Pierre Corneille, in collaboration with M. Jacques Landau, has just finished a dramatization, in five acts, of Tolstoi's *Resurrection*.

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general, during the week ending July 27, 1901:

Smallpox.	United States	Insular
Alaska.....	Juneau..... July 3.....	9 cases.
California.....	Los Angeles.... July 6-13.....	1 case.
".....	San Francisco.. July 7-14.....	1 case.
Illinois.....	Chicago..... July 13-20.....	1 case.
Louisiana.....	New Orleans.... July 13-20.....	1 case.
Massachusetts	Boston..... July 13-20.....	2 cases.
".....	Fall River..... July 13-20.....	1 case.
Michigan.....	Detroit..... July 13-20.....	1 case.
Minnesota.....	Minneapolis.... July 7-20.....	6 cases.
".....	Winona..... July 6-13.....	1 case.
New Jersey.....	Jersey City..... July 14-21.....	2 cases.
".....	Newark..... July 14-20.....	8 cases.
New York.....	Elmira..... July 6-13.....	2 cases.
".....	New York..... July 13-20.....	35 cases.
Ohio.....	Cleveland..... July 13-20.....	1 case.
Pennsylvania.....	Lebanon..... July 13-20.....	1 case.
".....	Philadelphia.... July 13-20.....	4 cases.
Tennessee.....	Memphis..... July 13-20.....	1 case.
Utah.....	Salt Lake City.. July 13-20.....	1 case.
Washington.....	Tacoma..... July 7-14.....	1 case.
Wisconsin.....	Milwaukee..... July 13-20.....	1 case.
Philippines.....	Manila..... May 25-June 15	8 cases.

Smallpox—Foreign.

Austria.....	Prague..... June 29-July 6	4 cases.
Belgium.....	Antwerp..... June 29-July 6	2 cases.
China.....	Hongkong..... June 8-22.....	4 cases.
Colombia.....	Panama..... July 8-15.....	4 cases.
France.....	Paris..... June 29-July 6	10 deaths.
Gt. Britain.....	Glasgow..... July 5-12.....	5 cases.
".....	Liverpool..... June 29-July 6	1 case.
".....	London..... June 29-July 6	6 cases.
India.....	Calcutta..... June 15-22.....	6 deaths.
Japan.....	Nagasaki..... June 21-30.....	1 case.
Italy.....	Messina..... June 29-July 6	21 cases.
Netherlands.....	Rotterdam..... July 6-13.....	4 cases.
Russia.....	Moscow..... June 22-29.....	11 cases.
".....	Odessa..... June 29-July 6	2 cases.
".....	Warsaw..... June 15-22.....	6 deaths.
Spain.....	Corunna..... June 29-July 6	1 death.
Straits Settlements	Singapore..... June 1-8.....	1 death.
Switzerland.....	Geneva..... June 22-29.....	1 case.
Turkey.....	Smyrna..... June 8-16.....	1 death.
Uruguay.....	Montevideo.... May 25-June 8	49 cases.

Yellow Fever.

Mexico.....	Vera Cruz..... July 6-13.....	3 cases.
Salvador.....	San Salvador... June 20.....	Present.

Cholera.

India.....	Bombay..... June 18-25.....	3 deaths.
".....	Calcutta..... June 15.....	37 deaths.

Plague—United States and Insular.

California.....	San Francisco.. July 6-11.....	5 cases.
Hawaii.....	Honolulu..... July 6.....	1 death.
Philippines.....	Manila..... May 25-June 15	57 cases.

Plague—Foreign.

Africa.....	Cape Town..... To June 29.....	749 cases.
".....	Maitland..... June 9-15.....	2 cases.
".....	Port Elizabeth.. June 9-15.....	3 cases.
".....	Simonstown.... June 9-15.....	1 case.
China.....	Amoy..... May 25-June 1	700 deaths.
".....	Hongkong..... June 8-22.....	306 cases.
India.....	Bombay..... June 18-25.....	62 deaths.
".....	Calcutta..... June 15-22.....	22 deaths.
Japan.....	Yamanashi Ken. July 5.....	1 case.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending July 27, 1901:

DISEASES.	Week end'g July 20		Week end'g July 27	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	36	10	37	13
Scarlet fever.....	158	21	114	16
Cerebro-spinal meningitis.....	0	2	0	8
Measles.....	164	8	120	10
Diphtheria and croup.....	139	18	122	16
Small-pox.....	35	12	46	9
Tuberculosis.....	258	123	255	153

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending July 27, 1901:

CARPENTER, D. N., Passed Assistant Surgeon. Detached from the Naval Hospital, Chelsea, Massachusetts, and ordered to the *Franklin*.

FARENHOLT, A., Passed Assistant Surgeon. Detached from the *Oregon* and ordered home to await orders.

HUNTINGTON, E. O., Assistant Surgeon. Detached from the *Newark* and ordered home to await orders.

LEACH, P., Surgeon. Detached from the *Oregon* and ordered home to await orders.

RICHARDSON, R. R., Assistant Surgeon. Detached from the Naval Hospital, Newport, and ordered to the Naval Hospital, Chelsea, Massachusetts.

SMITH, G. T., Surgeon. Detached from the *Mayflower* and ordered home to await orders.

STOKES, C. F., Surgeon. Ordered to the *Oregon* immediately.

WHITING, J. R., Assistant Surgeon. His resignation accepted to take effect from August 3, 1901.

A Virchow Haus, similar to the Hoffmann Haus and the Langenbeck Haus, will probably be founded at Berlin on the occasion of the celebration of Virchow's eightieth birthday.

A Sanatorium for Tuberculous Children in Rome.—On the occasion of the birth of the daughter of the King of Italy, he donated 200,000 lire (\$40,000) toward a fund for the erection of a sanatorium for tuberculous children.

Dr. Rina Monti, a young Italian lady, who gained a university gold medal and who has published several scientific papers, has been appointed a lecturer in anatomy at the University of Pavia.

Information Wanted Concerning Joseph Dyas, who was last heard from at Dayton, Ohio, on June 22d. Any one who has seen him since this date will confer a favor on his family by communicating with the *New York Medical Journal*.

Medical Explorer Arrives in San Francisco.—Dr. A. W. Nieuwenhuis, a medical commissioner of the Dutch army, arrived in San Francisco on his way to Holland. He has been exploring the wilds of Borneo, and in travelling from the west to the east coast of that country he says he has done what no white man has ever done before.

Tuberculosis to be Notified in Jersey City.—The physicians of Jersey City have been notified that henceforth cases of tuberculosis must be included in their reports of contagious disease. This is taken to be the beginning of a movement in the direction of isolation of such cases.

The Study of Malaria in India.—The director general of the Indian Medical Service has directed the distribution among the medical officers and surgeons of copies of the work by Professor Angelo Celli on *Malaria According to New Researches*, which was translated into English by Dr. A. J. Eyre.

A Valuable Pathological Library for Cornell University.—It is stated that the library of the late Dr. Felix V. Birch-Hirschfeld, professor of pathology and pathological anatomy at the University of Leipzig and director of the Leipzig Pathological Institute, has been acquired by Cornell University. The library includes about 5,000 volumes and is one of the most valuable in existence in this particular field.

A Laboratory for the Marine-Hospital Service.—Surgeon-General Wyman, of the Marine-Hospital Service, has sent to James Knox Taylor, supervising architect of the treasury, a request that plans, estimates, and specifications be prepared for the erection of buildings for a laboratory for the marine-hospital service. Congress, by the act approved March 3, 1901, appropriated \$35,000 for the buildings.

A Thousand-dollar Reward Offered for Evidence of a Deformity Cured by Christian Science.—Dr. Oscar Carrabine, of Chicago, in a lecture given at Tremont Temple, on July 24th, for the purpose of exposing the methods of Christian Scientists, announced that he had been authorized by a Chicago physician, whose name he did not mention, to offer a reward of \$1,000 for any case of deformity healed by Christian Science treatment.

The Spitting Nuisance in Germany.—At the recent meeting of the German Society for Popular Hygiene the practice of spitting in public places was vigorously inveighed against and the unsanitary feature of the wearing of long trains by women was also made the subject of vigorous denunciation. Resolutions were finally adopted petitioning the government to prohibit spitting in public conveyances and urging women to do away with dress trains for street wear.

A Brazilian Bacteriologist Attacks the Yellow Fever Problem.—Dr. Felipe Caldas, the Brazilian bacteriologist who has prepared a yellow fever serum, has sailed for Cuba, accompanied by his assistant, Dr. Bellinzaghi. Dr. Caldas goes to Cuba to direct experiments with his serum with a view to stamping out the disease in the island. Santiago de las Vegas, where the fever is now prevalent, will be the first place visited. The yellow fever experts have with them 1,000 bottles of the serum, with which successful work has been done in Brazil.

Women are to be Admitted at the Rush Medical College, Chicago, after October 1st, for the first two years' work. This action is said to be due to the fact that the first two years of the medical work will be done hereafter at the University of Chicago, and the university insists that equal freedom be given to women and men. That women will be permitted to enter the last two years of the college work and receive a degree is said to be the next step which will be taken in the near future, or so soon as the women who now enter are ready for the two last years.

Ward 13 Abolished in the Binghamton State Hospital.—For medical reasons the State Hospital authorities have found it necessary to abolish ward 13 in the Binghamton State Hospital. It was found that this number had a depressing effect on many patients whose superstitions were increased by their mental infirmities. There is now no No. 13 in the hospital, the wards jumping from 12 to 14 for the benefit of the patients. It is the first time that the unlucky number has received official recognition by State authorities.

Mr. Carnegie's Gift to the Scotch Universities, of which so much has been said in the public press, is in the form of a trust, the funds donated being invested and the earnings applied by the executive committee of the trust in accordance with the provisions of the trust deed, which provides that "one half of the net annual income will be applied toward the improvement and expansion of the universities of Scotland in the faculties of science and medicine, also for improving and extending the opportunities for study and research, and for increasing the facilities for acquiring a knowledge of history, economics, and English literature."

Divided Examinations Authorized by the Board of Regents of the State of New York.—The board of regents of the University of the State of New York has instructed the board of medical examiners that hereafter medical students or graduates who wish to be registered may be examined, after two years of study at an approved medical school in hygiene, anatomy, physiology, and chemistry, leaving the remainder of the examination to be taken at the conclusion of the course of study. This change has long been desired and will leave the students free to devote more time to clinical work during the last two years of the course than has heretofore been possible.

Precautions against Contagion through Insects.—Surgeon-General Wyman, of the U. S. Marine-Hospital Service, has issued a general circular from Washington to medical officers of the service, calling special attention to the importance of insects as factors in conveying diseases. The circular says that there is no longer any doubt as to the relation of the mosquito to malarial diseases. Medical officers are directed to place mosquito nettings over the beds of communicable diseased patients. Hospitals are to be protected by fly screens at all openings, particular attention being paid to the kitchen and dining-room and to the protection of food. Dr. Wyman recommends sulphur fumigation as the best means to kill insects and germs in a large room.

Medical Excursions to Watering Places.—Some years ago arrangements were made by which a party of physicians visited the principal watering places in France, with the view to learning for themselves something as to the advantages offered by the various watering places. On these excursions special advantages are offered through the courtesy of the various spring owners, and lectures given by

competent teachers upon the different places visited, and the hydro-therapeutic values of the various springs. Special rates of fare are granted by the railways, a reduction of 50 per cent. being made in the price of tickets. Each tour generally lasts about ten or twelve days, the expedition this year beginning on September 1st and terminating on September 12th, the districts visited being those comprised in Dauphiny and Savoy. The scientific head of this trip will be Dr. Landouzy, professor at the Paris Faculty of Medicine. A similar excursion, covering the various health resorts and islands of the North Sea, has been arranged to start from Hamburg, Germany, during the last week of September for a trip of eleven days' duration. The subscription price for the French excursion is three hundred francs and for the German excursion five pounds sterling. Physicians who intend accompanying the excursion should notify the secretary some time in advance. The secretary of the German excursion is Dr. W. A. Gilbert, Baden Baden, and of the French, M. Carron de la Carrière, 2, Rue Lincoln, Paris.

The Canadian Medical Association.—The thirty-fourth annual meeting of the Canadian Medical Association will be held at Winnipeg, Manitoba, from the 28th to the 31st of August. Persons attending the meeting should purchase tickets from the local ticket agents to Winnipeg and secure a receipt therefor on a standard certificate blank. When registered at the meeting, this certificate should be left with the treasurer, and after having been signed, entitles the bearer to a ticket to his destination free of charge, if the route travelled is an all-rail route. The return ticket, however, will cost \$8.50 if the lake route has been covered. Persons who have gone by rail and desire to return by the lake route can secure a ticket by payment of \$4.25, which includes meals and berths on the lake. Tickets to points in Manitoba, the Pacific coast, and intermediate territory on the Canadian Pacific Railroad will be issued after the meeting at the rate of one fare for the round trip to delegates. The special rates are good going from August 20th to August 28th and returning to September 30th. Special rates, ranging from \$1 to \$3.50, have been granted by the hotels, details of which can be learned from Dr. James Patterson, of Winnipeg. The fee for membership is \$2, which should be paid to the treasurer, Dr. H. P. Small, of Ottawa, at the opening meeting. Saturday, August 31st, will be devoted to a trip through the finest wheat growing section of the province.

Following is a provisional list of papers promised for the meeting: The Address in Medicine, by Dr. J. R. Jones, of Winnipeg; The Address in Surgery, by Dr. O. M. Jones, of Victoria; The Address in Gynecology, by Dr. Thomas S. Cullen, of Johns Hopkins University, Baltimore; The Early Diagnosis and Treatment of Pulmonary Tuberculosis, by Dr. D. Gilbert Gordon, of Toronto; The Nose and Throat in General Practice, by Dr. John Hunter, of Toronto; Remarks on Some Interesting Diseases of the Eye, by Dr. G. H. Burnham, of Toronto; Orthopædic Treatment of Deformities and Disabilities Resulting from Paralysis, by Dr. B. E. McKenzie, of Toronto; A Practical Way of Distinguishing between Human and Animal Blood, by Dr. G.

Silverthorn, of Toronto; Infectious Pneumonia, by Dr. W. S. Muir, of Truro, N. S.; Sclerotic Ovaries, by Dr. A. L. Smith, of Montreal; Removal of a Large Tumor from the Os Uteri after Labor had Set In, by Dr. A. Armstrong, of Arn-prior; Tuberculosis in Milk, by Professor Russell, of the University of Wisconsin, Madison; The Present Outbreak of Small-pox in America, by Dr. H. M. Bracken, Health Officer of Minnesota; Hæmatology of the Blood, by Dr. L. H. Warner, of New York; Skin Diseases, Lantern Demonstration, and Rupture of Axillary Vein in Reducing an Old Dislocation of the Shoulder, by Dr. F. J. Shepherd, of Montreal; The Treatment of Consumption in Special Institutions, by Dr. A. J. Richer, of Montreal; Disposal of Tuberculous Sputum, by Dr. J. H. Elliot, of Gravenhurst; Chronic Ulceration of the Stomach Simulating Cancerous Disease and Relation of a Case of Gastro-enterostomy with Murphy Button, Recovery, by Dr. J. F. W. Ross, of Toronto; Report of Cases Treated with the Hot-air Bath, by Dr. W. H. Pepler, of Toronto; The Development of the Race, by Dr. J. N. Hutchison, of Winnipeg; Some Forms of Gastric Hyperacidity and their Treatment, by Dr. C. F. Martin, of Montreal; Syphilis as Seen by the Ophthalmic Surgeon, by Dr. F. Buller, of Montreal; On the Necessity of a Better Recognition and Isolation of Trachomatous Patients in Canada, by Dr. W. Gordon M. Byers, of Montreal; Epidemic Cerebro-spinal Meningitis, a History of some Cases, by Dr. James McKenty, of Gretna, Man.; Pulmonary Tuberculosis, its Treatment and Prevention, by Dr. A. P. Proctor, of Kamloops, B. C.; Mild Small-pox, by Dr. G. A. Kennedy, of Macleod, Alta; Hyperchlorhydria, by Dr. A. J. Macdonell, of Winnipeg; The Question of Medical Defence, by Dr. Russell Thomas, of Lennoxville, P. Q.; Surgical Treatment of Cancer, by Sir Wm. Hingston, of Montreal. Other papers, the titles of which have not yet been announced, to be presented by Dr. G. Chambers, of Toronto; Dr. D. J. Gibb Wishart, of Toronto; Dr. J. L. Bray, of Chatham, Ont.; Dr. C. J. Fagan, of Victoria, B. C., and Dr. F. T. Westbrook, of the University of Minnesota.

Further particulars regarding the meeting may be obtained from the general secretary, Dr. F. N. G. Starr, whose address is: Biological Building, Toronto.

Typhoid Fever.—An epidemic of this disease is reported from Pittsburgh, where for two weeks a dozen to twenty cases have been reported daily. Up to the 26th ult., 315 cases were recorded. Fortunately, few have resulted fatally.—Typhoid is also on the increase in Chicago, where the health officials claim to have traced it directly to the bathing beaches. There have been many deaths.

Alarmist Predictions as to the Spread of the Bubonic Plague in America.—Dr. Walter Kempster, of Milwaukee, who was sent abroad by the Harrison Administration to study the origin and spread of plagues and scourges, and Dr. Y. O. B. Wingale, secretary of the Wisconsin State Board of Health, sustain Dr. John N. Hurty, of Indian-

apolis, secretary of the Indiana State Board of Health, in his recent contention that the bubonic plague will sweep the American continent. Dr. Kempster says, among other things: "The country will undoubtedly be swept from one end to the other by this terrible scourge unless the most drastic, wide sweeping, and immediate measures are taken to stamp it out and prevent its spread. Already the disease is on both sides of the continent. It is prevalent in San Francisco, and many deaths have occurred. It is in New York, and it is at other points of this country. I refer more particularly to the Pacific coast. I do not refer to the suspicious cases at Jersey City. There is no doubt that the bubonic plague will come here—no doubt of it."

Small-pox.—In the U. S. Marine-Hospital Service reports for the week ending July 19th, Nebraska City, Neb., is charged with sixty-six cases and thirty-two deaths of small-pox. We are informed by the surgeon-general that this is the number which should have been charged to New York city instead of Nebraska City.—Besides the usual number of reported cases in New York, the steamship Nord Amerika, from Naples, brought in a small-pox patient to this city, as did the H. H. Meier, from Bremen.—The epidemic has also made its appearance in Middlesex county and at Harrison, N. J., and at Chester, Pa.—A number of cases recently developed at the Westchester County Almshouse, Eastview, N. Y.—Other points recently visited by the disease were Nashua, N. H.; Rutland, Vt.; Milwaukee, Wis.; Toronto and other places in Ontario, and at Cleveland, Ohio.—In the latter city vaccination for the prevention of small-pox has been stopped by order of Health Officer Friedrich. The direct reason is because four fatal cases of tetanus have occurred, and these fatalities, together with the fact that many people vaccinated suffered with very sore arms, led Dr. Friedrich to believe that the vaccine lymph used is impure. An investigation will at once be conducted in an endeavor to locate the source of the trouble.

Malarial Fever in New York.—The Board of Health has issued a statement to the physicians of New York advising them to warn their patients against malarial infection through the mosquito. The circular letter states that malarial fever is quite prevalent in some of the boroughs of the city and is likely to spread to the boroughs of Brooklyn and Manhattan. The following precautions are advised:

"First—Proper screening of the house to prevent the entrance of the mosquitoes (after careful search for and destruction of all those already present in the house), and screening of the bed at night. The chief danger of infection is at night, inasmuch as the anopheles bite mostly at this time.

"Second—The confinement and continuous screening of persons in malarial districts who are suffering from malarial fever, so that mosquitoes may not bite them and thus become infected.

"Third—The administration of quinine in full

doses to malarial patients to destroy the malarial organisms in the blood and persistence in the use of the remedy even for a few weeks after apparent recovery.

"Fourth—The removal of the breeding places of the mosquitoes through drainage, filling up of holes and surface pools, and emptying of tubs, pails, etc., which contain stagnant water. These mosquitoes particularly breed in surface rain pools and surface stagnant water where there are no fish; also, exceptionally in pails, tubs, barrels, and tanks of standing water, though they seem mostly to prefer natural accumulations.

"Fifth—In pools which cannot be drained or filled, the destruction of the mosquito larvæ by the use of petroleum thrown upon the surface, by the introduction of minnows and other small fish which eat the larvæ, or by both methods."

It is the desire of the Department of Health to obtain information as to the location of the cases of malarial fever so that the people may be instructed as to the danger of infection and the methods of avoiding it. A case of malarial infection in a house, whether the person is actively ill or the infection is latent, in a locality where the anopheles mosquitoes are present, is a constant source of danger not only to the inmates of the house, but to the immediate neighborhood, if proper precautions are not taken.

The Board of Health desires the cooperation of all physicians in its efforts to disseminate information in regard to the causation and prevention of malarial fever, and in its efforts to restrict the prevalence of this disease in New York city.

Dr. Milo B. Ward, a well-known surgeon of Kansas City, died at his home in that city on July 28th, at the age of fifty years. Dr. Ward had lived the greater portion of his life in the State of Kansas, and up to four years ago had resided at Topeka, whence he moved to Kansas City. He served as a surgeon through the Spanish War, with the rank of major. He was the professor of gynecology in the University Medical College, at Kansas City, and was a member of the State and various local medical societies and of the American Medical Association.

The Late Dr. Daniel W. Marston, of New York, who died lately at Niagara Falls, was the youngest son of the late Dr. E. P. Marston, of Monmouth, Me. He studied medicine at the Bowdoin Medical College and later at the Bellevue Medical College, New York City. He lectured for nearly three years at the Post Graduate College and has been connected with the Hospital for Cripples and with the Blackwell's Island Hospitals. He was visiting surgeon for the Randall's Island Hospital, the Daisy Fields Hospital and had recently received an appointment as assistant visiting surgeon of the Post Graduate Hospital. Although a young man at the time of his death, he had written several papers which attracted considerable attention, some of which have been published in the *New York Medical Journal*. He was an untiring and earnest worker, and in him the profession loses a young man of great promise.

Births, Marriages, and Deaths.

Born.

BILLINGS.—In New York, on Saturday, July 13th, to Dr. and Mrs. John S. Billings, Jr., a son.

Married.

DUKE—DAVIS.—In Green Hill, Maryland, on Monday, July 1st, Dr. James Dent Duke, of Baltimore, and Miss Anne Yates Davis.

EISELINE—BROWN.—In Manchester, N. Y., on Thursday, July 18th, Dr. Daniel A. Eiseline, of Shortsville, N. Y., and Miss Mabel E. Brown.

HOUGHTON—BOLTON.—In Sayville, L. I., on Thursday, July 25th, Dr. Henry Clarke Houghton, of New York, and Miss Katherine Bolton.

MIDDAUGH—WHEELOCK.—In Rochester, N. Y., on Tuesday, July 23d, Dr. John Middaugh, of Phelps, N. Y., and Miss Alice Maude Wheelock.

VORIS—HURLEY.—In Jerseyville, Illinois, on Thursday, July 25th, Dr. J. Victor Voris, of Paducah, Kentucky, and Mrs. Shelley Hurley.

Died.

BISHOP.—In Brantford, Ontario, on Wednesday, July 24th, Dr. Edwin R. Bishop, of Geneva, N. Y., in the forty-fourth year of his age.

CALDWELL.—In Marcus Hook, N. Y., on Sunday, July 21st, Dr. Joseph Russell Caldwell.

COOPER.—In San Francisco, on Sunday, July 21st, Dr. Charles E. Cooper.

CROSSWHITE.—In St. Louis, on Tuesday, July 23d, Dr. John R. Crosswhite, in the forty-eighth year of his age.

FERGUSON.—In Detroit, on Thursday, July 25th, Dr. Gilbert C. Ferguson, in the eighty-fifth year of his age.

LEMOINE.—In St. Louis, on Thursday, July 18th, Dr. Edwin S. Lemoine, in the sixty-fifth year of his age.

MACDONALD.—In Brookline, Massachusetts, on Sunday, July 21st, Dr. Donald W. Macdonald, in the forty-second year of his age.

MADDUX.—In Monticello, Georgia, on Monday, July 22d, Dr. W. D. Maddux, in the eighty-seventh year of his age.

MILLER.—In Chicago, on Sunday, July 28th, Dr. Adam Miller, in the ninety-first year of his age.

OSBORN.—In Homestead, Pennsylvania, on Tuesday, July 23d, Dr. John Osborn, in the forty-eighth year of his age.

PADDOCK.—In Pittsfield, Massachusetts, on Friday, July 26th, Dr. Frank K. Paddock, in the sixtieth year of his age.

PALEN.—In Ocean City, N. J., on Sunday, July 28th, Dr. Gilbert E. Palen, of Philadelphia in the seventieth year of his age.

RIDDELL.—In West Superior, Wisconsin, on Tuesday, July 16th, Dr. S. S. Riddell, of Chippewa Falls, Wisconsin, in the sixty-third year of his age.

ROSS.—In Wilkes Barre, Pennsylvania, on Monday, July 22d, Dr. I. B. Ross, in the seventy-sixth year of his age.

RUSSELL.—In Washington, on Friday, July 26th, Dr. Leonidas Russell, in the sixty-sixth year of his age.

SCHMIDT.—In Milwaukee, on Thursday, July 18th, Dr. George Schmidt, in the fifty-third year of his age.

SHAFFER.—In Newburgh, N. Y., on Sunday, July 28th, the Rev. James N. Shaffer, father of Dr. Newton M. Shaffer, in the ninetyeth year of his age.

SPERRY.—In Tallmadge, Ohio, on Tuesday, July 23d, Dr. W. C. Sperry, in the fifty-fourth year of his age.

WATSON.—In Newport, on Saturday, July 27th, Dr. William Argyle Watson, in the seventy-seventh year of his age.

WEST.—In Washington, on Wednesday, July 24th, Dr. George W. West, in the seventieth year of his age.

WOLFF.—In Philadelphia, on Sunday, July 21st, Dr. Lawrence L. Wolff.

YEMANS.—In Detroit, on Sunday, July 21st, Dr. Charles C. Yemans.

Pith of Current Literature.

Medical News, July 27, 1901.

An Improved Method of Treating High-seated Cancers of the Rectum. By Dr. Robert F. Weir.—The author considers the Kraske operation as being very unsatisfactory, troublesome, and devoid of surgical neatness and precision. The Maunsell operation proposes to open the abdomen above the pubis, separate the peritonæum from the bowel largely, and then to pass a loop of tape by a long mattress-needle from the opened pelvis through the rectum and out of the previously enlarged anus. By this tape the neoplasm is pulled down so that it appears at the anus everting the lower part of the rectum as it protrudes. The author's modification is as follows: After freely detaching the divided peritonæum so that the bowel and the entire contents of the sacral curve are liberated behind nearly to the tip of the coccyx and in front to the edge of the prostate, a couple of iodoform tapes, about an inch apart, are tied around the bowel some three inches from the anus. The intestine being cut through, the lower end of the rectum is seized by forceps and drawn out of the anus in an everted condition. A long forceps carried through the everted bowel clasps the lower end of the upper bowel and draws it out into the world. Suture of the edges (with knots inside the bowel) is then done and the replacement is easy. It is best to provide drainage from the circumintestinal space below by a tube introduced from just in front of the coccyx. Three illustrative cases follow.

A Case of Embolism of One of the Right Lenticulo-optic Arteries Complicating Pneumonia, with Autopsy. By Dr. Charles J. Aldrich.—This case is interesting mainly because of its rarity. The author, however, believes that, considering the great tendency on the part of the blood in pneumonia to develop fibrin, these cases are not so rare as is commonly supposed.

An Attempted Investigation of Some Christian Science "Cures." By Lawrence Irwell, M. A., B. C. L.—An absurdity like Christian Science is really a sort of masked madness—it is the safety valve which saves numbers of sufferers from the asylum. The author therefore believes that we should treat it with a certain amount of indulgence.

A Nasal Condition Affecting the Ocular Muscles. By Dr. Heber Nelson Hoople.—The thesis advanced by the author is that mere mechanical causes in a limited area of the nose—the reflex area of Mackenzie—can cause muscular asthenopia.

Criminals and Defectives; How Best to Reduce Their Numbers. By Dr. J. C. McCassey.—The author points out that it is more economical to put forth every effort to prevent the formation of bad habits in the young than to try to reform confirmed transgressors. Before the issuance of the marriage license, a certificate should be filed showing that the applicants are free from insanity, criminality, and other hereditary taints. For the cure of the social evil, the author proposes: Extension of manual education and industrial schools; improvement in motherhood; the discontinuance of the lease system; extension of the reformatory plan; adoption of

the intermediate sentence; improvement in jails; extension of the probation system for youths and adults, as in Massachusetts; work for prisoners—sending a portion of their earnings to their families. Physicians should be wardens of penitentiary and executive officers of reformatories.

Medical Record, July 27, 1901.

Inebriety. A Study of its Causes, Duration, Prophylaxis, and Management. By Dr. Charles L. Dana.—The author's opinion is that drinking is largely a matter of habit and environment. The victims of it have always some neuropathic or temperamental bias, of which excessive drinking is only the accidental expression. It would seem that the capacity for men to get drunk over a thousand times was rare, and that two thousand was the maximum limit in any ordinary inebriate experience. The agencies for preventing and lessening the injury done by alcohol consist in: (1) Teaching; (2) control of the sale; (3) regulation of marriages between alcoholics; (4) personal supervision of those who become inebriates. The ideal treatment is supervision of the case in an institution, insuring absolute abstinence from alcohol in all forms for at least one year. Further personal supervision and watchfulness are needed for two years. The next best thing a drinker can do is to take some kind of a "cure" under the care of his own physician. The treatment should be planned to last a year. The patient should stop drinking and, usually, smoking also, and should take for three weeks a mixture of nux vomica, capsicum, and cinchona.

R Tinct. nucis vomicæ. ̄i.
Tinct. capsici. ̄i.
Tinct. cinchonæ rubræ. ̄v.

M. Sig.: One teaspoonful three times a day, increased by twenty drops daily to half an ounce.

The maximum dose should be continued for a week, and then reduced as it was increased. Two weeks' rest should then be taken, before repeating the course, then a month's interval, and so on for a year. The patient *should be fed well and very often, and should avoid getting tired and hungry.*

Primary Resection of the Intestine for Gangrenous Hernia; Report of Two Cases of Successful Joining by Lateral Anastomosis with the Connel Suture. By Dr. Thomas H. Manley.—The crowning advantage, according to the author, of lateral joining or anastomosis, is the preservation of an abundant vascular supply to the wounded parts. It obviates the tendency to annular cicatricial contraction, which may follow a circular enterorrhaphy. Inequality in the calibre of the intestines to be joined offers no inconvenience. As the borders of the new portal are firmly held apart by the silk suture until solid healing is complete, ultimate stenosis is improbable. The difference in time, in closing three apertures or one, is so insignificant as to count for nothing. In comparison with the Czerny-Lembert, the Connell suture in lateral anastomosis can be applied in much less time.

The Use of Sulphate of Copper in Affections of the Cornea and in Affections of the Lid Other than Trachoma. By Dr. J. Herbert Claiborne.—The author advises the use of copper sulphate, in

the form of the solid stick, in all acute attacks of inflammation of the cornea, in which there is thickening with a succulent, velvety appearance of the upper lid, and in all recurrent attacks of superficial keratitis in which the same velvety appearance of the lid prevails. Also, it is advised in chronic conjunctivitis attended by thickening of the lid associated with blepharitis, and in chronic dacryocystitis attended by chronic conjunctivitis.

Needed Reforms in the Management of Youthful and Insane Criminals. By Dr. William Glassell Somerville.—The author is in favor of the indeterminate sentence, because the *convict* is less expensive, has more opportunity to reform, and is less dangerous to society, than the *ex-convict*.

Two Cases of Typhoid Fever, One Complicated with an Acute Nephritis and Lobar Pneumonia; the other with Malaria [Tertian] and Scarlet Fever, with a Description of the Icepack as Used in these Cases. By Dr. Lester Laurens Roos.

Routine Digital Examination for Cord about the Neck in the Expulsion Stage of All Head-first Labors. By Dr. Robert L. Dickinson.

Boston Medical and Surgical Journal, July 25, 1901.

Specialism in Medical Practice; Its Present Status and Its Tendencies. By Dr. F. H. Davenport.

The After-treatment of Operation on the Nasal Accessory Sinuses. By Dr. Walter A. Wells.—Persistence of suppuration after operation is generally due to: Syphilis or tuberculosis in the patient; incompleteness of the operation; presence of polyps or other obstructive conditions in the nose; an empyema in a neighboring sinus; inadequacy of the local treatment. The after-treatment requires that not merely the antiseptic applications to the sinus, but also the patient's general state of health, must be investigated, and a careful supervision constantly maintained over the condition of the nasal fossa. The latter must be kept free of secretions, and polyps and other obstructive conditions removed whenever found. Empyema in a neighboring sinus, whose ostium is in close relation with the sinus operated on, will maintain the suppuration in the latter unless cured. The frontal is frequently the cause of antrum disease, and the ethmoid the cause or the effect of disease of both the antrum and the frontal sinus. The after-treatment is a matter of extreme importance. The author asserts that the so-called dry treatment is insufficient and unscientific, because it does not provide for the removal of the products of suppuration. Frequent and thorough irrigations constitute the most rational method of treatment. Immediately after operation the sinus should be packed with iodoform gauze, which remains in place for from thirty-six to forty-eight hours. Subsequently the sinus is irrigated daily, and, later on, every other day.

Diphtheria as a Complication of Measles. By Dr. David Newton Blakely.—The existence of diphtheria or the possibility of its onset should be considered in every case of measles; for the congestion of the mucous membrane of the tonsils and air-passages renders it especially vulnerable and an unusually good field for the growth of the bacilli of diph-

theria. Nasal obstruction or laryngeal obstruction arising during an attack of measles almost certainly means diphtheria. If the initial fever of measles disappears, and there is later a sudden rise of temperature, or if the cough of measles becomes "brassy" in quality or paroxysmal in character, and is accompanied by an elevated temperature, the possibility of diphtheria must be considered. If the initial fever persists and aphonia develops, diphtheria is probably the cause. An early diagnosis and prompt treatment may lower the death-rate, but, at present, there is no combination of the acute infectious diseases in which the death-rate reaches so high a point as in that of measles and diphtheria.

Adhesive Plaster Strapping in Umbilical Hernia. By Dr. J. C. Hubbard.—According to the author, an umbilical hernia is ordinarily cured by adhesive plaster strapping. The younger the child the earlier is the cure to be expected. The danger of recurrence or failure is slight.

A Case of Nasal Deformity from a Median Furrow. Corrected by Subcutaneous Implantation of a Portion of the Sæptal Cartilage. By Dr. J. L. Goodale.

American Medicine, July 27, 1901.

On the Classification of Intoxications from a Pathologic Standpoint. By Dr. J. George Adami.—The author objects to the manner in which the term autointoxication is used, and he attempts to define clearly the conditions to which it is applicable. He urges that an autointoxication is an intoxication set up by the action of substances formed by or from the cells of the body; that is to say, either by the secretion of these cells or by the products of their disintegration. Such autointoxication is endogenous when the poison so formed acts without any preliminary passage out of the system; it is exogenous when it is due to reabsorption of the excretion.

Maternal Impressions Do Not Cause the Stigmata of Degeneration. By Dr. Charles E. Woodruff.—The theory that maternal impressions are the causes of foetal malformation is so old as to be well nigh ineradicable. The author believes that much practical good will come from every attack upon this absurd idea, for pregnancy is such an unhappy time at the best, that every little lightening of the burden is certainly desirable. The coincidences in which an impression has been followed by the birth of a deformity suggesting the cause of the mental shock can be wholly explained by the mathematical laws of probability, and offer nothing new or strange. The author analyzes a number of these "coincidences."

Two Cases of Emphysematous Gangrene, caused by Bacillus Aerogenes Capsulatus. By Dr. L. M. Loeb.—In the author's first case the issue was fatal. In the second case, the survival of the patient with a useful, though mutilated, extremity points, the author believes, to a further consideration of conservative measures. Often, perhaps, when the infection is not too deep, with free ventilation and repeated incisions, where there is a progressive involvement, the infection might gradually become limited and finally yield. How much the great mortality [fifty per cent.] has been due to insuffi-

cient opening of the parts cannot be said. Many more reports of cases must be had to determine the best way of combating this infection.

Cystadenoma of Pancreas; Extirpation. By Dr. Joseph Ransohoff.

Lithæmic or Recurrent Coryza. By Dr. B. K. Rachford.

The Early Stage of Extrauterine Pregnancy. By Dr. E. H. Trowbridge.

Inflammation of the Sigmoid and Colon. By Dr. R. D. Mason.

Journal of the American Medical Association, July 27, 1901.

Empyema of the Frontal Sinus. By Dr. E. Fletcher Ingalls.—See abstract under Section in Laryngology and Otology in our issue for June 29th, p. 1153.

Anomalies of the Frontal Sinus and Their Bearing upon Chronic Suppurative Sinusitis. By Dr. Redmond W. Payne.—See abstract of Section in Laryngology and Otology in our issue for June 29th, p. 1153.

Asthma as a Result of Nasal Conditions. By Dr. P. J. H. Farrell.—See abstract under Section of Laryngology and Otology, *New York Medical Journal*, June 29th, p. 1153.

An Unusual Anomaly of the Faucial Tonsil. By Dr. George L. Richards.—A case of an unusually long styloid process, penetrating the tonsil almost to its outer border.

The Effect which the So-called Catarrhal Diseases of the Nose and Throat may have upon the General Health. By Dr. Carolus M. Cobb.—The conclusions to which the author calls attention are: 1. Diseases of the nose and throat affect the general health through obstructed nasal respiration, or by extension of the diseases of bacterial origin. 2. The diseases of bacterial origin affect the general health: (a) by extension upon the surface membrane; (b) by the migration of bacteria to surrounding tissues or to distant parts of the body; (c) by the swallowing of the discharge; (d) by the absorption of toxines. 3. The migration of bacteria takes place through the lymph current, or through the blood. 4. Septic infection originating from disease of the nose and throat does not differ materially from infections from other sources. 5. Much of the indigestion from which these patients suffer is caused or made worse by the swallowing of the secretion. 6. A condition of chronic sepsis may be caused by a purulent collection in the nasal chambers or accessory sinuses.

Changes in the Facial Bones Due to Adenoids. By Dr. A. T. Mitchell.—The author asserts that mouth-breathers' superior and inferior maxillaries, palates, vomers, turbinates, ethmoid and sphenoid bones, show an alteration in development as compared with the normal, and that this is inevitably accompanied by prominence of the alveolar processes in front, and misplacement of the front teeth. Due significance should be attached to the recognition of evidence of previously existing adenoids in efforts to locate obscure sources of ear and throat

disturbances. The relative size of such evidences and that of the naso-pharyngeal area, as well as their location, are factors opposing the apparent significance.

The Diagnosis and Treatment of Mastoiditis. By Dr. Edward B. Dench.—See abstract under Section in Laryngology and Otology in our issue for June 29th, p. 1154.

The Preferable Method of Uretero-ureteral Anastomosis. By Dr. J. Wesley Bovee.—The author favors the "end-to-end" and the Poggi "end-to-end" plans, as being most applicable for the successful repair of any injury to the ureter, except in its very lowest part, involving a loss of its length not exceeding three inches.

Osmotic Pressure and its Relation to Uræmic Manifestations. A Contribution to the Pathogenesis of Uræmia and Kindred Affections. By Dr. Heinrich Stern.—See abstract under Section in the Practice of Medicine, in this issue of the *New York Medical Journal*, page 231.

The Fight Against Tuberculosis in the Light of the Experience Gained in Successful Combat of Other Infectious Diseases. By Dr. Robert Koch.

Resection of the Cæcum. By Dr. J. H. Stealy.

A Large Gall-stone. By Dr. A. L. Russell.

Philadelphia Medical Journal, July 27, 1901.

Atypical and Unusual Varieties of Appendicitis. By Dr. John B. Deaver.—Taking as *the* type, that form in which the appendix occupies the right iliac fossa, pointing toward or extending over the brim of the pelvis and overlying the psoas muscle, the author considers those types of appendicular inflammation in which the appendix varies from this position. He lays particular stress upon the importance of correctly distinguishing between a post-cæcal appendicular inflammation and a movable kidney, and he points out that the tenderness of a movable kidney is out of all proportion to the degree of muscular rigidity, and extends over a larger area than in a case of appendicular inflammation. Only in an early stage of the disease can an error in diagnosis between renal colic and appendicular inflammation occur, but it is well to remember that renal colic is usually ushered in by a distinct rigor, followed by an excruciating pain in the loin posteriorly, usually increased by pressure, and that there is no marked rigidity of the abdominal wall. The author, after considering these and other points, concludes that, after all, it is on the three cardinal symptoms of appendicular inflammation that we must rely most to make our diagnosis—pain, tenderness, rigidity.

Appendicitis with Thrombosis and Suppuration in the Right Iliac and Femoral Veins. By Dr. John Glendon Sheldon.

Gastro-intestinal Autointoxication Occurring with Forms of Mucous Colitis in Children. By Dr. Henry Koplik.

Treatment of Infantile Diarrhœa. By Dr. William H. Robey, Jr.—In the treatment of one hundred and seventy-two cases of diarrhœa, of which one hundred and sixty were diagnosticated as fermental, the small intestine was cleansed by

giving one grain of calomel in one-tenth-of-a-grain doses at half-hour intervals. The bowel was washed out every day, though twice daily would have been better, as long as the case required. In the author's experience this has seemed to allay the fever and the nervous irritability of the child, and he considers it the most rational treatment when there is any question of irritation from foreign bodies. As important as cleansing the bowel from toxic products is abstinence from food for twenty-four hours, nothing but sterile water being given. It is a good plan to advise mothers going into the country with their children to stop food for twenty-four hours at the very onset of a diarrhoea. Opium was used only where pain was a marked symptom, and then only when the stools were frequent.

Spastic Ileus. By Dr. Edward Quintard.

Report of Cases Examined for the National Jewish Hospital for Consumptives, at Denver, Colorado. By Dr. Saling Simon.

British Medical Journal, July 20, 1901.

A Clinical Lecture on Total Extirpation of the Prostate for Radical Cure of Enlargement of that Organ. By P. J. Freyer, M. A., M. D., M. Ch.—Four cases of complete removal of the prostate are reported, in which the operation was entirely successful, both in the immediate recovery of the patients, and in the entire disappearance of the unpleasant symptoms caused by the enlarged gland.

The Treatment of Stammering (and "Lalling"). By Hamilton Graham Langwill, M. D., F. R. C. P. E.—This article is a condensation of Professor Nyllus's book on Disorders of Speech by one of his pupils. "Lalling" is defined as baby-talk persisting for an unusually long time, indicating backward mental development.

On Œdematous and Erysipelatous Anthrax. By John Henry Bell, M. D.—The author states that this is a rare form of the disease; only two cases out of three hundred caused by external inoculation having been seen by Nicholai. The infection seems to enter through the natural openings of the skin and the inflammation is more diffuse than when it enters through an abrasion.

The local symptoms are extensive œdema, which may extend from scalp to pubes, with great swelling, but no pain. In slight cases there is no redness, vesication, or eschar, but there may be in severe cases. The general symptoms are of a negative character, the pulse and temperature being nearly normal. History of exposure, absence of pain, fever, and constitutional disturbance distinguish it from erysipelas. A positive diagnosis is made by finding the bacilli or injecting animals with the blood. The prognosis is bad. Of six cases reported by the author three died.

A Case of Multiple Malignant Pustules (Anthrax). By R. Lawford Knaggs, M. C., F. R. C. S.—A rare case is reported where four pustules appeared on the forearms of a groom who was cut on the thumb while assisting at the autopsy of a cow which died of anthrax. They were all excised and the patient recovered.

A Case of Anthrax with Extensive Meningeal Hæmorrhage. By Joseph C. Sturdy, L. R. C. P.

and S., Edin.—A wool sorter had a chill on March 5, 1901, with slight nausea. On the following day the temperature was 102° F., the pulse 110, and there were pains in the limbs. On March 7th the temperature was 99° F., the pulse 98, and the pains were relieved. On March 8th a lump appeared on the neck, three inches above the clavicle and one inch behind the outer border of the sternocleidomastoid muscle. It was about half an inch in diameter, and was raised above the skin. The edge was vesicular and of a grayish color. Being recognized as a malignant pustule, it was excised, the resulting wound being 2½ by 1¼ inches. The wound was swabbed with carbolic acid, some of which was also injected into the tissues. The following afternoon the patient became blind, complained of pain in the head, vomited and became unconscious; and at 11 o'clock died. The autopsy showed blood effused between the arachnoid and pia mater. Anthrax bacilli were found in the fluid from the pleural and peritoneal cavities.

Danger of Anthrax from the Manipulation of Horsehair and its Prevention. By Alexander Scott, M. D. Glasg.—The author reports a fatal case of anthrax occurring in a girl who worked in a cabinet-maker's shop, where the undoubted source of infection was the horsehair which she handled in making a mattress. He considers the danger from this source to be very great and recommends the following precautions: 1. All workers should wear overalls. 2. No one with a cut or abrasion should be allowed to work unless the broken surface can be absolutely protected. 3. All workers should wash frequently, especially before taking food. 4. All suspected cases should at once be reported to the manager. 5. The bales should be at once immersed in water and the raw material handled only in a moist state. 6. The hair should be boiled for thirty minutes and then subjected to steam. 7. All dust and residue should be burned.

Lancet, July 20, 1901.

A Clinical Lecture on the Pathology of Hysteria. By Thomas D. Savill, M. D. Lond. Delivered at the West End Hospital for Diseases of the Nervous System.—The author considers the two most striking and constant clinical features of hysterical disorders affecting the nervous system to be, first, the remarkable similarity to those produced by organic lesions; secondly, the suddenness with which they appear and disappear. This leads him to conclude that the same anatomical part of the nervous system affected in organic disease is the seat of some kind of damage, and that damage is probably due to sudden dilatation or contraction of the arterioles with exudation.

In all cases there must be a hysterical diathesis or condition of the nervous system consisting, in its *psychical* aspect, of a want of self-control and emotional instability; and in its *physical* aspect, of a tendency to the development of sensory, motor, visceral, or neurovascular disturbances.

Three physical peculiarities have been found to be very constantly associated with the hysterical diathesis: First, marked tendency to flushing; secondly, increase of the superficial and deep reflexes; thirdly, a paroxysmal character to all vital phenomena.

Under the Causes of Hysteria the author considers as predisposing causes, sex and heredity, the latter being direct and indirect in its influence.

The contributory exciting causes may be anything which lowers the bodily or mental strength, will power, or emotional stability; but he does not consider that celibacy and unsatisfied sexual desire or education and high social position are important factors. The direct exciting cause of a hysterical attack may be anything which produces emotional disturbance or instability, and the degree of emotional disturbance necessary varies inversely with the degree of predisposition.

Finally, he calls attention to the frequency of attacks produced by pressure in the inguinal region, both in males and females, which he considers due to the fact that the ilio hypogastric nerve is apparently the centripetal depressor of the abdominal sympathetic.

He concludes that the splanchnic area is the starting point of hysterical attacks, and that the abdominal sympathetic may be influenced (*a*) through the ilio-hypogastric, or some other nerve from a hysterogenic zone; (*b*) through the brain by some emotional influence; (*c*) through flatulent distention of the bowel irritation, etc.

Some Further Cases of Ethyl Chloride Narcosis. By W. J. McCardie, B. A., M. B., B. C. Cantab.—Twenty-six operations with this anæsthetic are reported; eight for removal of adenoids, either with or without amygdalotomy, one internal urethrotomy and sounding, one excision of the eye, one amputation of the finger, one circumcision, one iridectomy and the remainder for scraping of abscesses, sinuses, bursæ, etc.

In one case an erythematous rash appeared during the operation and lasted about ten minutes. One case, where internal urethrotomy was done, was followed by death an hour and a quarter after the operation was finished; but the patient had recovered consciousness and the pulse was good. In three cases of adenoids, the anæsthesia was not satisfactory. In all the others the operator was very much pleased and the patient expressed satisfaction.

Headache. By A. H. Copeman, M. A., M. D. Dub., M. R. C. S. Eng.—The author considers headache under the following heads: (1) Headache the result of gross lesion of the brain; (2) headache occurring at the onset of acute fevers, especially typhoid; (3) congestive headache; (4) anæmic headache; (5) nervous headache; (6) toxæmic headache; (7) sympathetic or reflex headache; and (8), migraine, or sick headache.

His experience has led him to place migraine in the toxæmic group and to refer the symptoms to profound poisoning of the brain by blood loaded with the toxic products of incomplete and faulty digestion.

The Prognosis and Treatment of Cases of Ascites Occurring in the Course of Alcoholic Cirrhosis of the Liver, with Special Reference to Treatment by Operation. By H. Campbell Thomson, M. D., M. R. C. P. Lond.—The author of this article states that ascites arising in the course of a case of alcoholic cirrhosis may be due either (*a*) directly to the cirrhosis, or (*b*) to some condition coexisting with the cirrhosis; that when the ascites

is directly dependent upon the cirrhosis it is almost always a fatal symptom; while, if only associated with it, it may often be temporarily relieved and not infrequently cured; that under these circumstances a laparotomy performed on cases of cirrhosis of the liver with ascites is only likely to be successful where the ascites is an associated condition with the cirrhosis. A number of post-mortem examinations showed that, not infrequently, a mistake had been made in supposing the ascites to be due to cirrhosis, and it was these cases in which the patients recovered without operation or after one tapping.

A more radical operation than tapping for the cure of cases of cirrhosis with ascites had been introduced by Morison and Rutherford, consisting in opening the abdomen and promoting adhesions between the omentum, the peritonæum, and the parietes; the idea being to establish a free collateral circulation, which should relieve the portal circulation, and so prevent the recurrence of the ascites.

A study of fourteen cases reported by various writers does not show any great advantage over tapping, and the author thinks that, since it is not devoid of danger, especially in view of the fact that many of these patients are not good subjects for anæsthetics, tapping should always be tried first.

Rare Form of Purpura Complicating Diphtheria. By Charles W. Buckley, M. D. Lond.—The author reports the case of a girl, ten years of age, who was admitted to the hospital suffering from diphtheria of four days' duration. The membrane covered the tonsils and uvula and the Klebs-Loeffler bacilli were found. A large dose of antitoxine was given. On the seventh day the throat was clean, when the patient began to vomit, and, on several occasions, there was blood in the vomit; one stool also contained blood. The next morning large purple papules appeared on the elbows and petechiæ on the buttocks. Vomiting ceased and pulse was better, but fresh petechiæ appeared on the elbows, knees, ears, and over the molar bones. Vesicles now appeared, which became bullæ filled with dark broken-down blood. Stiffness of the elbows was complained of. The tongue was dry and coated, the spleen not enlarged; there were no abdominal symptoms, but a trace of albumin was present in the urine. No change in the blood. Pain and tenderness, but no swelling of elbows and left hip followed. On the sixth day following the appearance of the first rash an erythematous rash with urticaria appeared. The petechial spots disappeared from the original sites and appeared in others. Some blood in the stools continued up to the eleventh day. On the twenty-first day the heart dullness, which had been slight, increased, and the first sound was weak, the second accentuated. After ten days more the heart became normal and the patient made a good recovery. At no time was the temperature above 100.4° F., and that occurred with an attack of amygdalitis forty days from the initial vomiting. The author considers this a case of Henoch's purpura, his opinion being based on the vomiting, intestinal hæmorrhage, and rheumatoid pains. As many other cases were injected with the same antitoxine, in which no similar symptoms appeared, he does not think that the antitoxine caused the rash.

Deciduous Dentition as a Factor in the Health of the Child. By W. H. Dolamore, L. R. C. P.

Land, M. R. C. S., L. D. S. Eng.—The author asserts that many serious conditions in children, such as caries of the jaw, enlarged glands, and possibly tuberculous infection, are due to decayed teeth, and urges greater care in keeping the teeth clean so soon as they appear, and the filling of a carious spot so soon as it is manifest.

Tuberculosis of the Chorioid. By George Carpenter, M. D. M. R. C. P. Lond.—A study of forty-nine cases showed that tuberculosis of the chorioid might be met with in the following forms: (1) Acute miliary tuberculosis and tuberculous meningitis; (2) chronic tuberculosis, medical and surgical; (3) obsolescent tuberculosis.

Notes on Some Surgical Cases Treated in the General Hospital at Springfontein. By S. F. Lougheed, M. D.

Lichen from a Histological Point of View. By Morgan Dockrell, M. D.

Infantile Scurvy. By Edmund Cautley, M. D. Cantab.—Four cases of scurvy are reported, in two of which the diet had been sterilized milk, and in the others patent foods. In one case of sterilized milk the diet had been continued for eight months and the other over a year. The author maintains that the boiling of milk for infants is essential except under most favorable circumstances, that the nutritive change caused by boiling is very slight and can be easily remedied; that the failure to bring up children on such diet is not due to the boiling of the milk, but to error in feeding, or the amount given.

On X-Rays in the Treatment of Lupus and Rodent Ulcer. By James Startin, M. R. C. S.—The author reports two cases of rodent ulcer, two of lupus, and one of psoriasis, cured by the application of the X-rays.

Gazette hebdomadaire de médecine et de chirurgie, June 23, 1901.

Treatment of Intestinal Obstruction.—M. G. Maurange says that, if possible, an accurate diagnosis of the variety of obstruction must be made. Purgatives and forcible washings must be prescribed. Opium is given by mouth and belladonna is simultaneously administered for the purposes of calming the pain and of reducing peristaltic movements. Electricity is sometimes efficacious in overcoming the occlusion. If medical means do not suffice, operative measures (which the author details) must be resorted to. In chronic obstruction, copious lavage of the intestine and massage are the main elements of treatment.

Indépendance médicale, June 26, 1901.

Sycosis and Its Treatment.—M. Balzer says that the ætiology of sycosis is still unknown. It attacks mainly the debilitated and anæmic. When it appears in a patient suffering from rhinitis, nasal treatment must be first instituted. Sometimes a cure of the nasal condition will result in a cure of the sycosis without the necessity of sacrificing the moustache. Oil of cade may be used locally. In old cases, Hebra's mixture of equal parts of litharge and vaseline is useful. Sublimate lotions may prove efficacious, also, if the skin is not too sensitive for

their use. Proper tonic medication must also be employed.

July 3, 1901.

Factors of Gravity in Syphilis.—M. G. Marcon concludes that the first element of gravity in syphilis lies in the source; if this is malignant, the disease will be so, and *vice versa*. Appropriate treatment attenuates the virus of syphilis in mother and child.

Presse médicale, June 29 and July 3, 1901.

Primary Cancer of the Large Bronchi.—M. P. Merklen and M. J. Girard report such a case with autopsy. The growth was papillary. The disease is rare. It begins with dyspnoea and bloody expectoration; then follow crises of suffocation. Signs of compression in the mediastinum (such as dysphagia), and the signs of pulmonary disease appear. Bronchitis and absence of the entrance of air into some of the bronchi, are noted. Secondary deposits may sometimes be found. Pleurisy is often a complicating element. Death usually occurs from suffocation.

Diagnosis of Injury to Sinuses of the Dura Mater.—M. Georges Luys says that corna first appears with stertorous respiration. A more or less general hemiplegia is noted. The pulse is small, compressible, rapid, often without any apparent inhibitory influence. The corneal reflex on the same side as the lesion is frequently abolished and there is pupillary dilatation. Carphology, vomiting, and urinary and fecal incontinence are present. A diagnosis must be made between cerebral apoplexy, in which the absence of injury is a determining factor; cerebral compression, in which there are intervals of freedom from the most marked symptoms; cerebral concussion, in which the distinction is often difficult; meningocephalitis, in which the history and the rise of temperature will help to a conclusion; and a cerebral contusion, which can not be distinguished from an injury to the sinus, both lesions often coexisting.

Atypical Course of an Epidemic of Bubonic Plague. By M. Robert Jacques and M. J. Constantin Gauthier.

Münchener medicinische Wochenschrift, June 25, 1901.

Twenty-seven Intracranial Resections of the Trigemmus. By Professor Fedor Krause.—(Continued article.)

Fat Embolism Following Rupture of the Liver.—Dr. H. Engel reports the case of a man, forty-four years of age, who slipped and wrenched himself severely. The next morning he suffered from dyspnoea and increasing pain in the chest. He died the same day with cyanosis and increasing weakness of the heart. The autopsy disclosed a rupture of the right lobe of the liver with a fat embolism in an advanced tuberculous lung. Microscopically, the liver in the neighborhood of the rupture was devoid of fat, but fat droplets were found as the sections went further into the hepatic tissue.

The Influence of Alcohol and Fruit in the Production of Uric Acid. By Dr. J. Weiss.

A New Apparatus for Simplifying Inhalations.
By Dr. A. Bulling.

Comparison of Different Systems of Inhalation.
By Dr. R. Emmerich.

Is there an Isolated Cricothyroid Paralysis?
—Dr. W. Lublinski thinks that this is an entity and says that he has seen four cases. In three of them, diphtheria was the exciting cause. In one of the cases, a paralysis of the corresponding thyro-arytenoid muscle rapidly supervened, and the author thinks that the easy onset of this complication is the reason why pure cricothyroid paralyses are so rarely seen.

The Treatment of Ulcers of the Leg.—Dr. Walbaum recommends the following method as speedy and trustworthy: After cleaning the ulcers, a dressing of aluminum acetate is applied for two or three days, until the secretion is somewhat checked. A compress of spirit of camphor is then applied; over this, rubber tissue, and this is covered with cotton and a bandage. The rubber tissue must not project to the edges of the compress, in order that ventilation may be fostered.

Gazzetta degli Ospedali e delle Cliniche, June 9, 1901.

Contribution to the Study of Traumatic Lesions of the Peripheral Nervous System. By Dr. Paolo Fiori.—A case of injury to the external iliac fossa in a young man, aged eighteen years, who accidentally fell upon his gun; the fall being followed by the discharge of the firearm at very close range. The first symptoms of nerve-injury were pain in the ankle and in the first phalanx of the great toe, as well as in the first and second phalanges of the last two toes. The foot assumed an equino-varus position. The bullet had penetrated the glutei toward the perinæum, and fragments of it were removed. The symptoms of nerve-injury became worse, and there were paræsthesiæ from the knee downward. The external surface of the leg and the dorsal surface of the toes were completely anæsthetic; the remainder of the leg and foot continued to show normal sensibility. The flexors, abductors, and external rotators of the foot, and the extensors of the toes, became paralyzed and, later, neuralgic pains in the antero-external region of the leg supervened. The vasomotor and trophic changes were slight. The symptoms indicated injury to the external popliteal nerve, but the direction of the wound was such that the sciatic must have been injured above its bifurcation. The symptoms gradually receded and function was finally reestablished.

Prophylaxis in Malaria as Related to Military Hygiene. By Dr. G. Delogu.—The two sources of danger are the subject of malarial disease and the mosquito. The former may be cured, the latter should be destroyed. The author recommends isolation of the malarial members of a garrison or camp in hospitals in which provision is made against the entrance of insects. He also advises the use of long gloves reaching over the sleeves, in order to protect the hands of marching soldiers from mosquitoes. A horse-hair mask should be worn over the face, similar coverings should be used to protect the tops of tents in camps located in malarial districts, and the latrines in camps where malaria is present should be

kept covered with screens. In barracks, precautions should be observed as regards entrance of mosquitoes through the windows, and the barracks should be removed, if necessary, from the suburbs to the centres of cities. A topographic chart of malaria should be prepared for each locality. At night, tents should be kept closed and the sleepers should be completely covered. Manœuvres should not be held at times when malaria prevails; the best months are the end of April and May.

Roussky Archiv Patologiyi, Klinicheskoy Meditsiny i Bakteriologiyi, March, 1901 (Russian Archives of Pathology, Clinical Medicine, and Bacteriology).

Primary Epithelioma of the Renal Calices and Metaplasia of the Epithelium of the Calices, Pelves, and Ureters. By Dr. P. Kischensky.—Epithelioma of the calices, pelves, and ureters is very rare. In this case there was, in addition, a tendency to horny changes and petrification in the tumor, and the mucous membrane of the urinary tract, from the calices down to the bladder, was considerably changed. There was corneification of the upper layers, and in the region of the pelves in places there were papillary growths.

Iron in the Liver of Healthy Persons. By Dr. P. Bielfeld.—In the researches published concerning the presence of iron in the liver in health there are strongly marked contradictions. These depend upon the methods of looking for the iron in the experiments conducted by the various investigators. Most of them determine not only the amount of iron in the liver, but also that in the hæmoglobin of the blood which had remained in the blood-vessels of the organ. The author studied the amount of iron in the hepatic cells proper, after isolating them by a method devised by Alexander Schmidt's pupils and described by Krueger. He found that the amount of iron in the hepatic cells of healthy individuals was very variable. The average amount in pure dry hepatic cells is 0.169 per cent. In healthy women the amount of iron in the liver cells is slightly less than in healthy men. In old age the amount of iron in the liver seems to be increased. This amount seems to be least at the age of from twenty to twenty-five years.

A Case of Pseudoleucæmia of the Skin. By Dr. Kirkoroff.—The author describes the histological features in a rare case of pseudoleucæmia of the skin.

Morphological Notes on the Pathogenesis of New Growths. By Dr. I. G. Sovtchenko.—An article of purely technical interest to the specialist in pathology.

Alterations in the Cardiac Ganglia, the Heart Muscle, the Kidneys, and the Liver in Digitalis Poisoning. By Dr. N. Kloptovski.—As the result of a series of experiments on dogs in which he had produced acute and chronic digitalis poisoning, the author came to the following conclusions: The alterations in the cardiac ganglia (in the interauricular septum) depend on the dose of digitalis. The larger this dose, the more pronounced the changes. They consist of a vacuoli-

zation and rarefaction of the protoplasm of the nerve cells, which produce a shrinking of the cell body. At the same time there is a chromatolysis of Nissl's corpuscles, as well as a collection of fat droplets in the protoplasm, and a shrinking of the nucleus. If the doses have been large and the intoxication is prolonged, some nerve cells in the ganglion are scarcely recognizable, so altered is their structure. The circumcellular spaces are widened. In the acute cases (two to six hours) of severe poisoning the cell bodies are, on the contrary, swollen and enlarged, so that the cells are packed close together. In the heart muscle the changes are not so marked. One finds only a very pronounced hyperæmia, and in the very severe cases a beginning of fragmentation in the myocardium and a disappearance of fibrillation in the majority of the fibrils. In the liver and kidneys there are only parenchymatous and fatty degeneration and marked pigmentation.

A Contribution to the Study of the Tumors of the Corpora Quadrigemina and some Suggestions as to their Differentiation from Tumors of the Cerebellum. By Dr. V. Nissen.

Vratch, June 2 (June 14, New Style), 1901.

On the Question of Tuberculosis of the Lymph Nodes. By Dr. B. K. Finkelstein.—A study of 456 cases of tuberculosis of the lymph nodes which occurred in the Obouchoff Hospital from 1891 to 1900 is the basis for the following conclusions: The presence of tuberculous glands is a serious matter, and should receive the prompt and earnest attention of the physician; for the existence of a few glandular swellings often precedes very serious tuberculous disease. General treatment is sufficient in the early stages, but when the glands coalesce, reach a large size, and disintegrate, only operative treatment can give good results. Heat is the best local method of treatment. The injection of tuberculin, arsenic, zinc chloride, and nitrate of silver but hasten disintegration without favoring absorption. In excising the gland, all the infected material is to be removed so far as possible, the vein having been previously exposed. General treatment is needful in order to prevent recurrence. Broad and liberal reforms in sanitation and in the social conditions of the people are necessary in order to assist our efforts in combating the disease.

Psychotherapy in Children. By Dr. R. A. Peters.—The author gives a series of notes on cases treated with hypnotism in children. It is important, in order to be successful in this form of treatment, to select the cases suited for hypnotism, and not to neglect other means of treatment at the same time. Electricity, gymnastics, and hydrotherapy are especially suited for combination with hypnotism. Hypnotism is less frequently used in children than in adults, because the former mistrust the physician, and regard him not as a healer, but as a torturer who gives bitter medicines and causes pain. The physician must, therefore, first gain the child's confidence, then he may begin to suggest improvement and cessation of pain, etc. Children are more difficult to hypnotize than adults because, in order to be hypnotized, the subject must be able and willing to concentrate his thoughts, and must possess a cer-

tain amount of facility for analyzing his own psychic states. In addition, he should know, in general, what hypnosis is, and should believe in the "magnetic" power of the hypnotizer. Therefore, the younger the child and the nearer to the type of idiots or mentally weak children, the more difficult it is to hypnotize him. During the hypnotic *séances* the suggestions must be given in terms fully comprehensible to the child. The author has employed hypnosis in children from eight to fourteen years of age. The majority of these patients suffered from hysteria. Their ailments included, for the most part, affections of the motor sphere—paralyses, ankyloses, tremors and convulsions, hystero-epilepsy, chorea, hysterical aphasia, etc. He has used two forms of hypnosis in these children; the first form is similar in all respects to that used in adults, and was used in hysterical girls between twelve and fourteen years of age. The other type of hypnosis attained in children resembles more closely ordinary sleep than the hypnosis of adults, and is not followed by any disagreeable symptoms, such as headache and weariness on awakening. Both healthy and sick children are susceptible to it, while the "heavier" variety is only applicable to hysterical children. The lighter form is obtained by verbal suggestions rather than by sensory impressions alone, and probably corresponds to the "light hypnosis" of Bernheim. The light form could not be transformed into lethargy or catalepsy, and the children would awake from it only when bidden to do so, not, as in the other form, upon blowing into the face of the hypnotized child.

Brandt's Method of Treatment in Diseases of Women, and Some of its Peculiarities. By Dr. D. D. Sandberg-Debele.—In speaking of the effects of Thure Brandt's method of gynæcologic massage, the authoress states that this mode of treatment is followed by twofold effects: First, a remarkable improvement in the subjective symptoms, an increase of appetite, and the disappearance of a series of reflex symptoms, such as headache; and, secondly, by an arrest of uterine hæmorrhage. These effects were obtained in many instances *after one or two sittings*. The results are too constant to be attributed to mental suggestion. The authoress says that she did not fail to arrest uterine hæmorrhages in a single case in which Brandt's treatment was used, except in the cases of bleeding in cancer, and in the cases of profuse menstruation. Brandt's method consists of two procedures; namely, of local massage, and of a series of Swedish gymnastic movements. The authoress believes that it is the latter that are most concerned in the hæmostatic action of the treatment. She employed massage locally even during the menstrual periods, without any untoward effects. In the presence of inflammatory affections of the tubes and ovaries local massage is contraindicated, and careful diagnosis is necessary in all cases in order to exclude salpingitis or oophoritis.

The Economics of the Birth-rate, Disease-rate, and Death-rate. By Dr. P. A. Govorkoff.—The author cites a series of statistical data and recommends the care of children in summer by the State, so as to prevent the great mortality among them during that season of the year.

Proceedings of Societies.

AMERICAN MEDICAL ASSOCIATION.

Fifty-second Annual Meeting, Held in St. Paul. on Tuesday, Wednesday, Thursday, and Friday, June 4, 5, 6, and 7, 1901.

Section in the Practice of Medicine.

(Concluded from page 188.)

Osmotic Pressure and Its Relation to Uræmic Manifestations. By Dr. Heinrich Stern, of New York.—The author believed that we were looking in the wrong direction when we tried to fasten the origin of uræmia and kindred affections upon a purely physiologico-chemical basis. Most of the effete products *per se* were but slightly toxic. Potassium seemed to exert the greatest poisonous qualities. Urine, injected into the veins for experimental purposes, had shown that uræmia was not the consequence of one, but of the retention of all, of those substances which normally entered into the composition of the urine. In the urine we did not encounter any other factors but those that were prevalent in the normal state. The only difference was the quantity. Uræmia was, therefore, rather a physical than a chemical anomaly.

Referring to osmotic pressure in the body fluids, he stated that all organic matter was saturated with water; that the cells of the body were more or less permeable for water. If the contents of the organism were soluble salts and remained unaltered in water, so that for a certain period neither salts nor water was introduced or eliminated, all the watery constituents of the organism would become one homogeneous liquid, and the same osmotic pressure would prevail over the entire system. The molecules of a number of compounds, when dissolved, were divided up and dissociated into "ions." The higher the dilution the more perfect the dissociation, as a rule. There was no vital process in which diffusion, or osmosis, did not participate. Conditions for the evolvment of osmotic pressure always existed in the organism, for whenever two solutions came in contact by means of a semi-permeable wall, osmotic tension was displayed. When the excretory activity of the kidney was materially interfered with, the products of catabolism were retained in the blood. Ultimately all the fluids of the body exhibited a similar degree of concentration, which was accompanied by a series of manifestations, coordinate and successive, which had been grouped together under the term "uræmia." This was really a mechanical intoxication, not one of chemical origin, but one due to an abnormal increase in osmotic tension of the blood-plasma and the fluids of the body.

Circulatory Disturbances Accompanying Cirrhoses, with Inosculation of the Portal Branches with Systemic Veins.—This was the title of a paper by Dr. Charles G. Stockton, of Buffalo, who said that some practical conclusions could be drawn from the data given. The first of these, to which it would seem unnecessary to call attention but that it appeared to have been somewhat overlooked, was that the normal blood pressure in the portal vein was

low; that when it was suddenly raised, it was apt to be followed by symptoms of toxæmia, and that these symptoms might be promptly relieved by purgation. A second important conclusion was that when the vascular changes and the raised portal blood pressure that permitted the passage of the portal blood into the systemic vein were brought about gradually, the subject was better able to resist the toxæmia, becoming, as it were, immunized to the offending portal blood; hence symptoms were less striking, and with proper care as to diet and purgatives might be practically overcome.

Cirrhoses of the Liver Due to Metallic Poisons. By Dr. Victor C. Vaughan, of Ann Arbor, Mich.—He said that lead and copper were the substances which should be considered so far as their effect upon the liver were concerned, and particularly upon the changes in the connective tissue of the liver. Alcohol was one of the most important factors in the production of the cirrhoses of Laennec. Lead and copper generally, if not always, produced changes in the liver cells which were characterized by a fatty degeneration or fatty deposit in the liver cells. There had been considerable discussion as to whether the first changes took place in the hepatic cells or in the connective tissue. But, so far as the metallic poisons were concerned, he thought that the changes in the liver cells were prior in time to the changes in the connective tissue. Certainly they were recognizable earlier than the other changes. He had seen a number of cases of cirrhoses of the liver due to lead poisoning. It was not often that we saw cases in the early stages of liver changes at autopsy; therefore we must rely on animal experimentation in our endeavor to trace the relationship of these changes. In a number of cases of metallic poisoning there occurred subsequently an overgrowth in the connective tissue in the liver.

Treatment of Cirrhoses of the Liver.—Dr. John H. Musser, of Philadelphia, spoke on this subject. He divided these cases of cirrhoses of the liver into (1) those in which no symptoms occurred during life, the cirrhoses having been found at autopsy, the patient dying from other causes; (2) those cases that were not suspected until such an accident as obstruction; and (4), on the other hand, of biliary hæmorrhage made it apparent—*i. e.*, latent cirrhoses of the liver; (3) cases with the symptoms of portal obstruction. The lines of treatment were largely dietetic and hygienic, great care being taken to see that the functions of the gastro-intestinal tract were kept in action and the renal secretions, as well as the action of the skin, properly regulated. He spoke a word of caution in regard to the presence of hæmorrhoids. He had seen two or three deaths follow the operative treatment of hæmorrhoids and, at autopsy, cirrhosis of the liver was manifest for the first time. In all cases of hæmorrhoidal disease, a thorough knowledge of the state of the liver should be obtained before any operative intervention was advised.

The treatment of ascites occurring in cirrhoses was to-day particularly interesting because of the recent attempts to cure this condition by operation. The speaker was accustomed to use mild purgation and calomel from time to time; he also used calomel in a dose of one-fortieth of a grain, every three hours, as a diuretic. He also relied upon the old-

fashioned pill of digitalis, squills, and calomel. He had considerable confidence in the use of the oil of copaiba. In any case of ascites he resorted to tapping early and frequently. The question of permanent drainage was then considered, and he referred to a case that was operated upon by Dr. Frazer; the abdomen was opened, the peritonæum was scarified, and the omentum attached. This was done twelve months ago, and the patient was cured, there having been no recurrence.

Cirrheses with Pigmentation. By Dr. Thomas D. Fletcher, of Baltimore.—The association of pigmentation of the skin and tissues with a form of hypertrophic cirrheses of the liver rather than with the atrophic form was emphasized, and the author discussed at length the pigmentation associated with hypertrophic cirrheses of the liver, which occurred in the disease described by von Recklinghausen as "hæmochromatosis." He also dwelt upon the source, chemical composition, and distribution of the pigment. He endeavored to show that diabetic cirrheses with bronzing of the skin, *diabète bronzé*, was probably identical with von Recklinghausen's hæmochromatosis. So far as he was aware, but four cases of cirrhosis of the liver with general pigmentation (hæmochromatosis) had been reported from this country.

Rheumatic Stimulants was the title of a paper by Dr. James J. Walsh, of New York, in which he stated that there were three terms in medicine that had an indefinite signification—rheumatism, gout, and catarrh; and curiously enough these terms were descriptive of the same idea. Acute rheumatic arthritis we had come to realize as being an acute infectious disease of micro-organismal origin. Its very similarity to gonorrhœal rheumatism pointed strongly to the microbic origin of the disease. He referred to a series of joint symptoms that occurred in connection with certain toxæmias. Observations were made pointing to the fact that there might be serious involvement of joint structures without there necessarily being any microbic metastasis. Painful affections around a joint pointed to two facts: (1) The nervous mechanism supplying joints, owing to its use being greater than that of most of the other groups of nerves, made it extremely sensitive to disturbances of the circulation; (2) tissues in the neighborhood of joints being much used and subjected to injury, were liable to take on chronic inflammatory conditions. In a series of cases occurring in the service of Dr. Katzenbach, at the New York Polyclinic, certain observations were made. These cases presented painful symptoms which were usually referred to the neighborhood of joints and which had been diagnosed as rheumatism. Where the patient was not able to give a straight history of acute rheumatism with red swollen joints, fever, and sweating, the case was at once assumed not to be rheumatic in character, and very seldom was it necessary to retract this assumption. Among forty cases, fifteen had so-called rheumatic symptoms of the lower limbs due to flat-foot, and this proportion, a little more than one third, represented very nearly the ratio in which flat-foot symptoms were mistaken for rheumatism. Very often the symptoms were worse on rainy days or in damp weather, probably from the fact that on damp, muddy days these patients were apt to wear old

shoes which did not furnish good support to the arch of the foot. Again, the nerves were much more sensitive when there was dampness. In speaking of occupation-neuroses, Dr. Walsh said that there was no occupation which involved a frequent repetition of muscular movements but might produce such a condition. For instance, so simple an action as sweeping, if done as a regular occupation and constantly performed with a broom in the same hand, would, in individuals who were run down, give rise to painful feelings, either in the shoulder, if the broom was grasped too high up to enable the person to take advantage of the proper leverage in making the sweep, or in the leg, if the body was constantly supported on one leg during the process of sweeping. The brachyalgia that occurred in connection with frequent and badly directed use of the small muscles of the forearm was well known, occurring in telegraphers, in writers, in penmen, in typewriters, in piano players, etc.; as a result of a sort of sympathy with the lower arm, the upper arm and shoulder often suffered from a decided ache and it was surprising how often this ache was treated for rheumatism.

A Case of Acromegaly Presenting Certain Features of Unusual Interest was presented by Dr. Charles Lyman Greene, of St. Paul, Minn. The young man was twenty-five years of age and had had no fixed occupation, but for some years prior to the development of the disease had spent the winter months on the ice, a point of some importance, inasmuch as the history of many of these cases strongly suggested the influence of long exposure to cold and dampness as a predisposing or exciting cause. The family history was negative in result. Syphilis was denied. Five years ago he noticed a rapid enlargement of the hands and feet, and the members of his family noticed a change in his physiognomy. The enlargement of the hands and feet steadily continued and progressed quite rapidly up to the time that he presented himself, three years ago, when the hands and feet were found to be of enormous size. The wrists and ankles were free from inflammation, but were quite bulky, thick, and in strong contrast with the forearms and legs. He complained of languor and weakness, but had had none of the severer vertical pains so common in acromegaly nor did he complain of pain in the lumbar region or limbs. The special senses and the nervous system were not disturbed. The skin was nearly normal and lacked the harshness of myxedema. The appearance of the face was especially interesting, the skin being thickened and hypertrophied, though not rough. The upper and lower eyelids were thickened, and the ears appeared clumsy and tumid, as also did the nose. The nasal arch was prominent; the malar bones projected and the lower jaw was apparently enlarged, both from the angle to the symphysis and vertically. The enlargement of the upper jaw had no doubt masked the changes in the lower jaw, depriving the case of one of the so-called typical signs of the disease. The tongue was large, the larynx was enlarged and its cartilages appeared to be the seat of hypertrophy. The skiagraph demonstrated the remarkable enlargement of the bones. The feet presented the same typical characteristics as the hands. There was no marked enlargement of the great toes. The

hands and feet were not the seat of pain, nor were their movements as much restricted. A feature of special importance was the marked increase in the bulk of the overlying tissues, which presented the appearance and sensation of a hard œdema exactly like that of myxœdema. The treatment had been solely by thyroid extract, the result being an immediate and marked amelioration of the disease.

The Election of Officers resulted as follows: Chairman, Dr. Frank A. Jones, of Memphis, Tenn.; secretary, Dr. Robert B. Preble, of Chicago.

Section in Nervous and Mental Diseases.

(Concluded from page 185.)

Nervous Manifestations of Syphilis of the Brain.—Dr. Hugh T. Patrick, of Chicago, read a paper on this subject, in which he enumerated the various popular fallacies regarding cerebral syphilis, and described the most characteristic and important traits of the disease.

The Psychoses in Cerebral Syphilis.—Dr. Richard Dewey, of Wauwatosa, Wis., read a paper on this subject. He said that in connection with it several questions arose which must be taken into consideration. One was the evidence of syphilis; another, the very frequent existence in these cases of causes other than syphilis which had their share in determining the mental state, such as alcoholism, senile changes, arterial disease, kidney and heart disease, and tumors of non-specific origin. The speaker gave the following statistics as the result of his personal observations: Among 1,200 cases of all forms of nervous and mental disease he found forty-five cases of well-substantiated constitutional syphilis. There were doubtless many more, which were rejected because the history of syphilis was not positive. Of the forty-five cases in which there was an undoubted syphilitic history, seventeen were diagnosed as paresis; twelve as cases of syphilitic brain disease with symptoms of an organic lesion; seven were cases of psychosis with marked delusional characteristics and without symptoms of brain syphilis; four were cases of hypochondriacal melancholia, and two were cases of tabes with emotional symptoms. In addition to the above, there was one case each of dementia (slight), melancholia, and dementia paralytica of the senile type.

Discussion.—Dr. C. B. Burr, of Michigan, said there were two interesting varieties of cerebral syphilis accompanied by marked disturbances of the mental operations. There was one in which the motor symptoms predominated, another in which the symptoms were altogether psychical. In the one the symptoms were clinically difficult to distinguish from those of paretic dementia. However, there were liable to be expansive delusions, remissions were more frequent, and the disease was of longer duration. Both varieties were characterized by reduction, this being their most conspicuous quality. In the second variety there was a psychical reduction manifested in dementia, the symptom of loss of memory being the most prominent. There was also hebetude and the patient was dull and unresponsive.

Suggestions for Lessening the Frequency of Relapse after Treatment of Morphinism.—Dr. A. J. Pressey, of Cleveland, spoke in favor of the gradual reduction of the amount of morphine taken, but the

reduction must be so effected that the patient would feel better during the entire course of the treatment than he felt while he was taking the drug *ad libitum*. The quantity of morphine taken by those addicted to this habit was usually largely in excess of what was required to make them comfortable. It could, therefore, usually be reduced immediately by at least one half. From that time on, Dr. Pressey administered the drug four times daily, reducing the dose very slightly each day until it was as small as one twentieth of a grain, and even smaller in some cases. The morphine should never be discontinued entirely while the dose was still so large that its withdrawal would be felt by the patient. No set rules could be laid down to govern all cases. Each case must be treated according to the indications. In addition to a gradual reduction of the morphine, the patient should be given nerve tonics. Static electricity was also very beneficial.

Discussion.—Dr. T. D. Crothers, of Hartford, said that the method of reduction in a case of morphinism, whether rapid or slow, could only be decided by the status of the individual case. The speaker said that he had seen cases where a rapid reduction of the drug had proved entirely satisfactory. After a patient who had been accustomed to take from ten to twenty grains daily was reduced to one grain, the drug could usually be withdrawn entirely without causing much discomfort, or some other alkaloid substituted if necessary. The greatest difficulty in the treatment of these patients, Dr. Crothers said, was to overcome the fascination of the hypodermic needle.

Dr. John Punton, of Kansas City, said that the majority of persons who were slaves to morphine were usually suffering from malnutrition, and were greatly reduced in flesh as the result of the habit. On this account attention to the nutrition of the patient was just as important as the withdrawal of the drug.

Injuries, Feigned and Real, with their Differentiation and Medico-legal Aspect.—Dr. Lambert Ott, of Philadelphia, divided injuries into two classes: 1. Those with visible signs and symptoms. 2. Those with invisible symptoms. The speaker referred to the frequency with which corporations were mulcted for heavy damages. With the increased number of accidents incident to modern methods of transportation this abuse had grown to such an extent that many of the larger corporations even paid unjust claims rather than submit the question of liability and damages to a prejudiced jury. The speaker referred to the frequency with which a verdict in these cases was the result of testimony given by biased or mercenary men. He spoke of the opprobrium which now rested on medical and expert testimony, and concluded his paper with a plea for the more thorough and scientific examination of injured persons, so as to discover whether the symptoms of which they complained were real or feigned.

Discussion.—Dr. Leo M. Crafts, of Minneapolis, said he could not agree with the reader of the paper as to the common occurrence of malingering by persons who had been injured, and the frequency with which corporations were mulcted. The statement that the plaintiff was more likely to be influenced by a moneyed consideration than the other party certainly did not obtain in the West.

Dr. Richard Dewey said that even a patient who

was perfectly honest might complain of certain symptoms which were not genuine. This had been observed in cases where there was no question of damages or suspicion of fraud.

Dr. J. G. Biller said that several times in the course of his professional career he had been imposed upon by persons who asserted that they were suffering from certain symptoms as the result of injuries received, and who immediately recovered when their claim for damages was paid.

The Treatment of Neurasthenia. By Dr. J. G. Biller, of Cherokee, Iowa.—The speaker said that as the nervous system controlled the organs in the body, and as these in turn affected the nervous system, it was no easy task to tell whether the neurasthenia was the result of disturbed bodily function or of a disturbance in the nervous system itself. The first requirement, in the treatment of a case of neurasthenia, was to make a thorough examination. Even if we accomplished nothing else by this, it would at least aid us in gaining the confidence of the patient, which was, perhaps, the most important element in bringing about a cure. Proper feeding was another important element of the treatment, and one that was often neglected. A plain, nourishing diet was preferable to the prepared or concentrated foods. On the other hand, some of these patients were suffering from over-feeding or improper feeding. In addition to regulating the diet, we should see that these patients got plenty of sleep. Sulphonal in small doses might be necessary to induce sleep; if so, the drug should be dispensed by the physician himself, and the patient should be kept in ignorance of its nature. A change of scene might prove beneficial in some cases, but not infrequently it did harm. As regarded drugs, they should be sparingly used. We should not depend on the so-called tonics. The best remedies were those that assisted the digestion and increased the activity of the liver. Small doses of calomel at intervals often proved beneficial.

The Psychoses of Chorea.—Dr. Harold N. Moyer, of Chicago, read a paper with this title. The following are his conclusions: 1. A well-marked alteration of the character and mentality can be noted in the majority of cases of chorea, usually preceding by some weeks the onset of the choreic movements. 2. Distinct hallucinatory phenomena are present in a considerable number of cases, which are not, however, of sufficient severity to merit being called a distinct psychosis. 3. The mental disturbance in chorea usually comes on after the choreic movements, but it may precede them. 4. The type is usually maniacal, though it may be melancholic, or present the character of acute delirium. 5. Mental disturbances are commoner in older children; they are rarely observed before the twelfth year. 6. Chorea which are accompanied by mental disturbance later in life are almost always accompanied by organic changes in the central nervous system. 7. The prognosis is favorable where the mental disease complicates a simple acute chorea of Sydenham.

The Cases of Paralysis of the Serratus Magnus and the Trapezius were reported by Dr. Augustus A. Eshner, of Philadelphia.

Mirror Writing and Inverted Vision.—Dr. Albert B. Hale and Dr. Sydney Kuh, of Chicago, presented

a paper upon this subject, which was read by Dr. Kuh. They discussed the optics of the retinal image and the various theories that had been advanced in explanation of mirror writing and inverted image. The authors, in the main, agreed with the theory that the phenomena were the result of a disturbance in the coordination of the eye-muscles. While this was the most important factor, it was not the only one. If any one of the factors that aided us in forming a mental picture of an object was disturbed, a faulty image must of course result.

Fear as an Element of Nervous Diseases and Its Treatment. By Dr. John Puntton, of Kansas City.—The speaker stated that morbid fear was a common and potent element of nervous disease. In the treatment of this factor, we must take cognizance of both the mind and body of the patient. First, we must endeavor to gain the confidence and full control of the patient, and study the cause of his morbid fear. Isolation was essential, preferably away from home, but the isolation in one locality must not be too prolonged, otherwise the patient would become too well acquainted with his new surroundings. We should endeavor to restore to the will its normal control of the emotions and intellect, and teach the patient to become more self-reliant. If the general health was impaired, proper medication was indicated. In addition to this, the judicious use of baths, massage, and electricity in its various forms, would prove beneficial.

Ten Cases of Multiple Neuritis were reported by Dr. W. A. Jones, of Minneapolis, which came under his observation in the city of Minneapolis between the 15th of February and the 15th of March of the present year. Six of the ten cases occurred during one week. Two of them proved fatal. Some of the cases corresponded with the usual description of multiple neuritis, while others closely simulated Landry's paralysis. The influenza bacillus was regarded as the ætiological factor.

A Case of Localized Amnesia, with Remarks Thereon. By Dr. Edward E. Mayer, of Pittsburgh.—The case reported was that of a young man who was born in Pennsylvania in 1860. In 1884, he was on a railway train which was wrecked. He felt himself hurled through the air and then his mind became a blank. He had no recollection or knowledge of anything that occurred during the five years following the accident, and no one could be found who could give any information about him. Twelve years ago, that was in 1889, he first came to Pittsburgh and met his present wife, and two years later married her. He was never able to give her any information regarding his previous life, although he had not forgotten his name. Nine years ago, shortly before the birth of the eldest of his four children, he wandered away one Sunday afternoon and did not return until Monday evening. Upon his return home, he could offer no explanation for his absence. As he was a total abstainer, it was regarded as very peculiar. About a year later he again disappeared for several days, and during his absence he wrote a postal card to his wife, telling her that the memory of his mother had suddenly returned to him, and that he had gone to pay her a visit. He returned home a day or two later. The man's occupation, before he met with the railway accident, was that of a carpenter; subsequently to his marriage he was

employed at different times as a farmer, sawyer, and painter. About this time he complained of symptoms which were regarded by his physician as evidences of an hepatic abscess. In February, 1901, while suffering intensely from abdominal pain, he fell to the floor and remained unconscious for several hours. When he regained consciousness the memory of the last seventeen years of his life was apparently entirely obliterated. His mind had reverted to the time previous to the accident. He insisted that he was twenty-four years old, and had neither wife nor children. The surroundings among which he had lived for the past twelve years were apparently strange to him, and it required much persuasion to induce him to believe the story of the true state of affairs. From that time on, all his symptoms of hepatic abscess disappeared. He tried to resume his work as a carpenter, but had forgotten all about it and was obliged to begin as an apprentice. On March 8th of the present year he disappeared for twelve hours, and upon his return home he stated that he had walked about thirty miles in the country. The following day his wife gave him \$25 with which to buy some groceries. He failed to return home, and no trace or word has been received from him since.

Dementia Following Inebriety.—Dr. T. D. Crothers, of Hartford, read a paper on this subject, in which he dwelt strongly upon the dangers of steady moderate indulgence in alcoholic stimulants. He stated that steady drinking, even without intoxication, was injurious, and the so-called "moderate drinker" was certain to suffer both physically and mentally from the practice. He said that the evidences of dementia were more often apparent in the moderate drinker than in the man who indulged occasionally to the point of intoxication and then sobered up and regained his mental and physical balance. The life of the moderate drinker became more and more automatic. He had less spontaneity, less originality. He could not adapt himself to new conditions with the necessary energy and judgment. His digestion became impaired, and this resulted in defective nutrition. He suffered from a spirit of unrest, there was a constant craving for excitement and change. There might be a craze for powerful drugs, which was a form of dementia; sometimes there was a craze for traveling or for gambling and many forms of immorality.

The Importance of Heredity as a Cause of Insanity. By Dr. Arthur McGugan, of Kalamazoo.—The reader said that, according to his observations, 95 per cent. of the insane had a family history of impaired mental or physical health. In only a small percentage of cases was insanity due to physical or mental stress apart from hereditary weakness.

A Case of Persistent Brachial Neuralgia was reported by Dr. Leo M. Crafts, of Minneapolis. It resulted from a hypodermic injection in the wrist. He also reported a case of *incipient lateral sclerosis, with recovery.*

Election of Officers.—The following officers were elected for the ensuing year: Chairman, Dr. J. T. Eskridge, of Colorado; secretary, Dr. F. Savary Pearce, of Philadelphia; members of the house of delegates, the retiring chairman, Dr. H. A. Tomlinson, of Minnesota, and Dr. Harold N. Moyer, of Illinois.

Letters to the Editor.

HEROINE IN THE MORPHINE HABIT.

WILKES BARRE, PA., July 23, 1901.

To the Editor of the New York Medical Journal:

SIR: Having read Dr. Lee's letter in last week's issue in regard to morphinomania of long standing, I have taken the liberty of sending you a detailed account of a plan for treating such cases which suggested itself to me as plausible, and which has for the past year proved itself to be of great value in such cases as the doctor mentions.

After having gone through the regular category of treatments with a particularly bad lot of morphinomaniacs, in my practice, and having had the usual run of failures and relapses incident to almost all bad drug habits, I looked around for something better and, as I had been using it as an anodyne and sedative, in something the same manner as I would morphine, on account of its non-depressing effects, I decided to use the new morphine derivative heroine as a substitute for the regular alkaloid.

In my plan of procedure, if my patient was in the habit of taking twelve grains of morphine per diem, he was allowed about two grains of heroine hydrochloride as a substitute. The patient's bowels were made to move at least once daily, and he was placed on ascending doses of strychnine and cannabis indica, beginning with a thirtieth of a grain of strychnine and increasing the dose up to tolerance, which was usually great, some patients taking a grain a day with perfect ease, and in some cases, where the morphine was being withdrawn rapidly, the tolerance was remarkable.

The first cases upon which I tried this form of treatment averaged about from six to eight years' acquaintance with the drug, and I must say that the results were most gratifying in cases that had resisted my other efforts. In almost all the cases treated in this way the heroine seemed to take the place of the morphine without causing the patient any suffering and without causing a craving for more than was allowed him, which is remarkable, as most drug-users have a tendency to increase the dose of any drug they may be taking. In administering the heroine hydrochloride I used the hypodermic method wherever the patient was in the habit of using a syringe, and in cases where the drug had been taken by the mouth, in one form or another, I crushed the hypodermic tablets up and had the patient take this with a little sugar of milk.

That heroine will take the place of morphine without its disagreeable qualities I am convinced, as I have repeatedly quieted morphinomaniacs whose cravings were awful, with a few injections of it which did not nearly represent the amount of morphine craved for. There seems to be no craving for the heroine awakened by its continued use, as the subsequent gradual withdrawal after its substitution for the morphine has been attended with no particular craving, and only in one case of twenty-three years' standing have I seen any tendency to increase the dose of the substituted drug, and that patient increased everything he could get his hands on.

The general tonic treatment is also of great moment, and should be pushed vigorously as the

drug is withdrawn. The physician should also watch each case carefully and should take the patient's statements as being absolutely unreliable, as all drug fiends are liars and will take great pleasure in misleading the physician as to their condition, even when they appear to be earnestly trying to help the doctor rid them of the habit.

The patient's mind should be kept as hopeful a condition as possible, and he should be cheered and supported morally by his physician, as there is not a more miserable creature under the sun or one who merits more the commiseration and compassion of his fellow-men than that slave of slaves, the morphomaniac.

MAURICE B. AHLBORN, M. D.

Book Notices.

Public Water Supplies. Requirements, Resources, and the Construction of Works. By F. E. TURNEAURE, C. E., Professor of Bridge and Sanitary Engineering, University of Wisconsin; and H. L. RUSSELL, Ph. D., Professor of Bacteriology, University of Wisconsin. With a Chapter on Pumping Machinery by D. W. MEAD, C. E., M. Am. Soc. C. E., etc. First Edition. First Thousand. New York: John Wiley & Sons. London: Chapman & Hall, 1901. Pp. xiv-746.

It is a pity that this volume should contain the following in its preface: "The present volume . . . has been written with special reference to use in his (the author's) class-room," for the work before us fully warrants classing it among the better manuals treating of this subject, and it is from this standpoint that it is here noticed. The introduction contains a very interesting historical sketch of water supplies from the earliest times to the present day, accompanied by some very good photographs of the Roman and Spanish aqueducts.

Part I deals with the quantity of water required, sources of supply, and the quality of water supplies. Under these heads we find the derivation and source of waters and their discussion, also the chemical, physical, bacteriological, and microscopical examinations of water supplies. The authors call attention to the fact of the futility of judging waters by comparing the results obtained with fixed standards. This is impossible, since waters from different sources will naturally vary, even when pure. The bacteriological examination of waters before and after filtration is most important, and this, in combination with the chemical analysis, will determine the true value of a potable water.

The remainder of the volume is taken up with a careful discussion of works for the collection, purification, and distribution of water. The book is well arranged, a special feature being the bibliography on each subject at the end of the chapter, so that further knowledge can be easily secured. The arrangement of the volume and the illustrations are admirable, a good index completes the work, and the press work is most commendable. The work can be recommended as a complete treatise on its subject.

Malaria according to the New Researches. By Professor ANGELO CELLI, Director of the Institute of Hygiene, University of Rome. Translated from the Second Italian Edition by JOHN JOSEPH EYRE, M. R. C. P., L. R. C. S. Ire., D. P. H. Cambridge, with an Introduction by Dr. PATRICK MANSON, Medical Adviser to the Colonial Office, with Maps and Illustrations. London, New York, and Bombay: Longmans, Green & Company, 1900.

Within five months of the first edition of Celli's book in Italian, a second one appeared in that language, of which this is the first English translation. We have in our tongue a number of monographs on malaria, but, with a single exception, there is none which can compare in richness of thought and material with this book of Celli's.

We have here a complete exposition of the whole subject of malaria. The author's studies of the disease as it manifests itself in Rome are widely known and have been the fundamental basis for much of the work of others. An introduction by Dr. Manson is followed by a history of malaria. The economic aspect of malarial disease is then considered, with special reference to the losses it entails on labor. The mosquito theory is next discussed and thoroughly proved, and the biology and morphology of the causative agents are gone into. The causes of predisposition to malarial disease, with reference to place, alimentation, housing, clothing, and work, are fully discussed. The second part of the book is devoted to the means of prophylaxis, not only chemical and clinical, but philanthropic as well. A bibliography of Roman malaria concludes the work.

In thus briefly sketching the outlines of this remarkable book, we have not even faintly indicated the intense interest which every page arouses. The breadth of view, the local color, the philosophy of disease, the humane spirit which pervades it, are all rare in medical books. We purposely avoid mention of some of these phases of Professor Celli's book, for it will be widely read, and its readers can themselves judge of these characteristics. It is needless to add that its scientific character is unexcelled.

The English translation is excellently done, and the bookmaking and illustrations correspond to the dignity of the text.

Studies in Human and Comparative Pathology. By WOODS HUTCHINSON, A. M., M. D., Professor of Comparative Pathology and Embryology in the University of Buffalo, etc. Edited by EDWARD BLAKE, M. D. London: Henry J. Glaiser, 1901. Pp. x-340.

Dr. Hutchinson's book opens with a chapter on the cell. He regards the cell bodies as forming a republic with all the machinery of legislative, executive, and administrative functions. While he carries his metaphor rather far, perhaps, he nevertheless is convincing and interesting. It is easy to follow his argument in this and in the succeeding chapters. According to him, the later in point of embryonic development an organ is, the more susceptible is it to disease, especially to the diseases which are ordinarily regarded as malignant. The arguments are strengthened by statistical and biological data from clinical and veterinary sources, and while they may not be universally accepted in the manner in which

the author lays them down, there is good scientific basis for his reasoning.

The author takes up in order the digestive tube, the lungs, the heart and vessels, the skin, and the kidneys. Tumors and tuberculosis are considered in the closing chapters.

A wide knowledge of biology and of comparative pathology mark the author's work, and a great deal of toil must have been bestowed upon the book. Works of this character, with their evolutionary teaching, have a distinct value as scientific productions even if their dicta do not meet the approval of the entire scientific world. This one has more to recommend it; it is interesting and it is well written.

A Treatise on Orthopædic Surgery. By ROYAL WHITMAN, M. D., Instructor in Orthopædic Surgery and Chief of the Orthopædic Department of the Vanderbilt Clinic in the College of Physicians and Surgeons of Columbia University, etc. Illustrated with 447 Engravings. Philadelphia and New York: Lea Brothers & Company, 1901. Pp. xii-17 to 650.

To those who are familiar with the excellence of Dr. Whitman's work as teacher, clinician, and investigator the appearance of this volume is an event of unusual interest. An examination of the text shows a broad and original presentation of the subject matter, enriched by the ample material of the Hospital for the Ruptured and Crippled, which has never before been so fully turned to account. While recent foreign and American literature is freely drawn upon, as was necessary in a department showing such vigorous growth, the reader may well feel gratified at the omission of much unimportant or obsolete matter, which has often been included in orthopædic works.

The clinical aspects of deformities and crippling affections are presented with clearness and cogency, and the methods of treatment advised are based upon the pathological and mechanical conditions present. Operative and mechanical means are freely considered according to the indications, and it is shown that the neglect of either must be to the detriment of the patient. The chapters on coxa vara, congenital hip luxation, and flat-foot are of special interest from the excellent work of the author in those fields, and those on Potts's disease and infantile paralysis, on account of new methods of treatment, which are still being worked out. If minute pathology and the description of the rarer affections are only given in outline, fuller treatment would be beyond the scope of the present volume.

This work will inevitably be compared with the excellent treatises of Bradford and Lovett and those of Lüning and Schulthess, and it is high praise to say, as we must, that it will not suffer in the comparison. The book is not only moderate, sound, and practical, but it is distinctly a credit to American medicine, and could only have been written by a surgeon of wide experience, fair and logical mind, and unusual gifts of observation, analysis, and expression.

The History of Medicine in the United States. A Collection of Facts and Documents relating to the History of Medical Science in this Country, from

the Earliest English Colonization to the Year 1800. With a Supplemental Chapter on the Discovery of Anæsthesia. By FRANCIS RANDOLPH PACKARD, M. D. Illustrated. Philadelphia and London: J. B. Lippincott Company, 1901. Pp. 5 to 542.

Naturally, this work is a compilation of scattered facts, and not a narrative, but it is one of the quaintest and most interesting collections conceivable. Briefly stated, the work comprises the facts that are known and recorded of medical practice in the English colonies in America and the medicine of the Revolutionary period, but this scarcely is adequate to describe the work, which also treats of such matters as the first hospitals in this country, the first medical schools, and the record of early epidemics. A very excellent collection of illustrations adds greatly to the interest.

It is the sort of work that the thoughtful and educated man of medicine will enjoy greatly; indeed, all physicians who have souls above compends, pocket editions, and works "specially prepared for the busy practitioner," should read this work.

Physical Diagnosis in Obstetrics. A Guide in Ante-partum, Partum, and Post-partum Examinations for the Use of Physicians and Undergraduates. By EDWARD A. AYERS, M. D., Professor of Obstetrics in the New York Polyclinic, etc. With Illustrations. Pp. viii-276. New York: E. B. Treat & Company, 1900. [Price, \$2.]

The author has already published, in serial form, the contents of the present volume in the obstetrical journal of which he is the editor, so that the work cannot be regarded as new. He goes minutely into the examination of the pregnant, parturient, and puerperal woman, and it is in the wealth of detail offered that the greatest obstacle to reviewing the book presents itself. It may safely be assumed that the methods described by Dr. Ayers are followed by all modern obstetricians in similar or modified form; and yet his book has a special value in teaching the general practitioner and the student the technics of the obstetric means of diagnosis as they are practised to-day. While in a few points obstetricians differ even in these methods, it is in manner and not in substance; so one may say with accuracy that Dr. Ayers's book is scientific, modern, and thoroughly practical and sensible. We should like to know what "partum" means. Why could not the author have said *intra-partum*?

The Prevention of Valvular Disease of the Heart. A Proposal to Check Rheumatic Endocarditis in its Early Stage and thus Prevent the Development of Permanent Organic Disease of the Valves. By RICHARD CATON, M. D., F. R. C. P., Emeritus Professor of Physiology, University College, Liverpool, etc. With Six Illustrations. London: C. J. Clay & Sons, 1900. Pp. x-92.

In this monograph, the author gives the clinical results obtained by him in the arrest of cardiac valvular disease. An early diagnosis is the first essential. Absolute rest must be enjoined upon the patient, counter-irritation is employed in the hope of stimulating the vasomotor and trophic centres, and

the iodides, especially sodium iodide, are administered. From an abstract of eighty-six cases given, the author seems to be able to control the development of valvular disease, if not entirely to eliminate it. There are chapters on pathology and diagnosis, and they are excellent reading. The book is at once practical and scientific.

Principles of Surgery. By N. SENN, M. D., Ph. D., LL. D., Professor of Surgery in Rush Medical College, etc. Third Edition, thoroughly Revised. With 230 Wood Engravings, Half-tones, and Colored Illustrations. Philadelphia and Chicago: F. A. Davis Company, 1901. Pp. xiv-699. [Price, \$4.50.]

The third edition of this treatise strikingly reflects the diligence with which the author has pursued the innovations in theoretical surgery, essential to a new edition and so vital to the advance of the practical art of surgery. Page after page abounds in the newer facts, linked in each instance with the originator's name. This chronological method, coupled with the lucid arrangement of facts, imparts to this work a philosophical character and raises it beyond the level of the average treatise replete merely with stereotyped phrases.

Bacteriology, the order of the day, rightly pervades every paragraph, and its practical import is manifested in the changes made in the chapters on peritonitis and tetanus, and the introduction of a new chapter on blastomycetes. The chapter on degeneration has received thorough revision. Finally, by the acquisition of a number of necessary X-ray pictures and newer illustrations, the book has grown equal to the demand that is likely to be made of it by the thoughtful student and progressive practitioner.

A Reference Handbook of the Medical Sciences, embracing the Entire Range of Scientific and Practical Medicine and Allied Science. By Various Writers. A New Edition, completely Revised and Rewritten. Edited by ALBERT H. BUCK, M. D., New York. Volume II. Illustrated by Numerous Chromolithographs and 765 Half-tone and Wood Engravings. New York: William Wood & Company, 1901. Pp. v-1 to 838.

So far as an adequate review of this most elaborate work goes, one might quite as properly attempt a review of the whole range of medicine, for, in all seriousness, all that is vital in the latter is given consideration—it may be brief, but it is seldom inadequate—in the *Handbook*. We can frankly, then, tell our readers of the scope, and from time to time point out its features and articles of merit, but critical reviewing in such as case is an absurdity.

The second volume covers the ground from *Bla.* to *Chl.* This statement is not, perhaps, graphic, but when one appreciates the fact that nothing medical is neglected, and that this volume comprises 838 pages, he will certainly be able to get an idea of the exhaustive nature of the work.

Among the most noticeable of the articles is that upon the brain. Its distinction depends upon quantity as well as quality, for 321 pages are devoted to it. The topics are unusually well handled, and the very excellent illustrations greatly add to the value

of the text. Another ably written and well illustrated article is that on carcinoma.

The two volumes of the work that have come to our notice have much impressed us, and we are quite prepared to accept the completed and finished work as a monumental example of medical publication.

A System of Practical Therapeutics. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc. Second Edition, Revised and largely Rewritten. With Illustrations. Philadelphia and New York: Lea Brothers & Company, 1901. Pp. 3 to 856.

About ten years ago the first edition of this work was published, and it was accorded a very favorable reception. To the three original volumes, however, there was added a fourth and supplementary volume, and this within a few years. Therapeutic progress, as we all know well, is and for some time past has been rapid, and this fourth volume of the *Practical Therapeutics* could not therefore take the place of a revision. For this reason the present edition appeals to us most strongly, and indeed he would be a carping critic who would not find it acceptable.

From the article on general therapeutics (by the veteran and master, Dr. Horatio C. Wood) to the end, the work presents modern therapeutics as it should be presented. The work has our warmest admiration and approval.

New Inventions.

THE NEW ELECTRO-URETHROSCOPE AS DEvised BY

HERBERT J. LIDDLE, M. D.,

ASSISTANT IN THE DEPARTMENT OF GENITO-URINARY SURGERY,
NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL, AND MEMBER OF THE MEDICAL SOCIETY OF THE COUNTY OF
NEW YORK.

In the figure, *a* shows the instrument intact, ready for introduction into the urethra. This instrument consists of the regular Oberlander's endoscopic tube, marked *g* in the cut, with the additional points. It has a small tunnel, which lies on the floor of the tube and terminates in a beak, projecting a little less than a quarter of an inch from the urethral opening of the tube; the beak is marked *h* in the cut. This tunnel is just large enough to permit of the introduction of a light-carrier and its lamp, marked *c* in the cut. The lamp fits in the beak, which has a little window, allowing the rays from the lamp to fall upon the urethra.

The light-carrier is attached to a handle which has two posts at its lower extremity for the purpose of attaching conducting cables leading to the battery; the handle and its posts are marked *d* and *f* in the cut. On the front and rear surfaces of the handle is a push-button arranged so that the light may be turned on or off, after it is turned on at the rheostat of the battery. This is for the convenience of the surgeon, who need only press the button of the front surface to turn the light on and press the button of

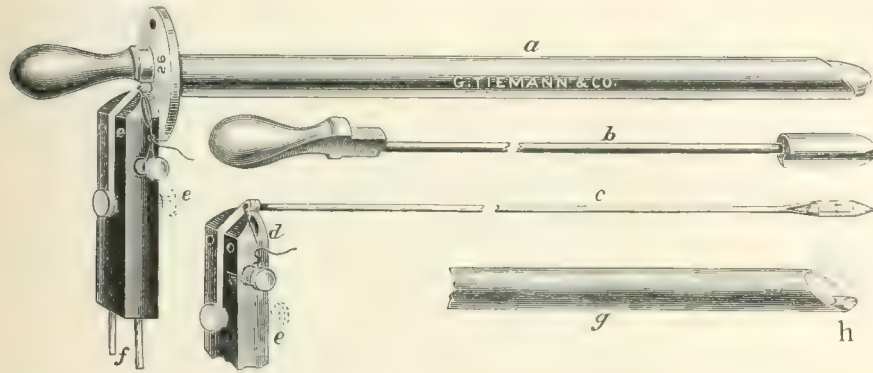
the rear surface to turn the light off, as shown in the cut at *e*.

The cut marked *b* shows the obturator so grooved at its olivary extremity and handle as to permit of its introduction into the tube.

The instrument is made by George Tiemann & Co., New York, in three sizes, Nos. 26, 28, and 30 French, and the light carrier can be used in a tube of either size.

The following are the advantages of this instrument over other urethroscopes of recent date:

1. The light-carrier and its lamp do not bob up and down in the urethroscope when one is making



an examination of the urethra, because they are held in place by the tunnel.

2. There is no danger of getting the application entangled with the light-carrier or lamp, which is very annoying to the operator as well as injurious to the patient, inasmuch as the cotton, on application, is apt to be pulled off and fall into the urethra.

3. There is more direct illumination of the urethra, owing to the light being nearer the extremity of the tube.

4. The tube, obturator, and light-carrier can all be introduced into the urethra at the same time, as shown in cut *a*.

5. The degree of heat imparted to the urethra from the lamp is reduced to a minimum.

68 WEST THIRTY-SEVENTH STREET.

Miscellany.

Two Clear Cases of Syphilis without a Chancre.

—Dr. L. Jullien, surgeon, to the St.-Lazare, Paris (*Medical Press*, July 3d), reports the following interesting case, remarkable for the sidelights it gives on various points touching the inoculability of syphilis. Dr. Jullien says:

On June 9, 1899, a surgeon and his assistant operated on a woman for a præsternal tuberculous tumor. After excising the tumor and scraping the base, they proceeded to insert the sutures. The needle did not work very well, and the surgeon, in endeavoring to withdraw it from the edges of the incision, ran it deeply into the end of his index finger. The needle being flat, with sharp edges, made a rather extensive wound, which bled freely. His assistant, in repeating the manœuvre, did exactly the same thing and wounded himself in the same place. On June 17th, on changing the dressings for the first time they no-

ticed a slight ulceration with bright red edges at the orifices of entry and exit of each suture. These appearances suggested the idea of syphilis, of which nothing in the patient's history had previously transpired. On the following day she developed a generalized roseola, and on examining the genital organs they forthwith discovered a syphiloma in the region of the fourchette, undergoing cicatrization. The inguinal glands were enlarged.

On July 5th, twenty-six days after the inoculation, the surgeon was suddenly seized with fever, shivering, and a general feeling of discomfort, and kept his bed for twenty-four hours with a tempera-

ture of 39° C. (102.2° F.). At the same time the site of the puncture became painful, the end of the finger became swollen, and the scar of the puncture displayed a tendency to reopen with some trifling superficial ulceration. On the thirtieth day a roseolar eruption made its appearance. On July 16th the scrotum became covered with moist papules, and two days later plaques formed on the tongue. He then began to complain of arthralgia, which,

throughout the month of July, rendered the loins and wrists painful. On the 26th we noted palmar papules, since which time the disease has followed its implacable course, though in a mild form.

The assistant displayed no sign of infection until the thirtieth day, but on July 9th he, too, was seized with fever. Nothing abnormal was at any time noticed at the site of inoculation, the scar whereof remained intact, and the roseola did not appear until the thirty-third day. The attack followed the usual course. Dr. Jullien lays special emphasis on these conclusions:

1. The blood of a syphilitic subject is infective, a fact with which Pellizzari had already acquainted us, but we did not know for certain the epoch at which it became infective. The present observations prove that the infectivity exists prior to the occurrence of the secondary symptoms, since the surgeon and his assistant were inoculated nine days before these made their appearance in the patient. Assuming an average period to have elapsed between the primary lesion and the secondary symptoms, the patient must have had her chancre some thirty days before.

2. In these two cases the inoculation accidentally took place into the blood itself, and the evolution of the disease skipped the stages which usually give time for a focus of infection to develop at the point of inoculation, giving rise to a syphiloma, thus impregnating the lymphatic system, which is always the first to suffer. Here the lymphatic period is done away with, the organism is taken by assault, without being enabled to avail itself of the glandular barriers, which are swept aside from the onset. As a matter of fact our *confrères* sought in vain for evidence of glandular enlargement in the areas corresponding to their wounds. The glands only became perceptible at the period of efflorescence, concomitantly with the mucous manifestations, whence

the early supervention of the constitutional manifestations.

Dr. Jullien adds that this mode of invasion of syphilis, which was theoretically studied by Professor Oltramare, of Geneva, and was clinically demonstrated by Verchère, of Paris, who only succeeded in obtaining the recognition of his cases with considerable difficulty, has never, to his knowledge, received such conclusive confirmation, and insists on the far-reaching importance of these observations, both from the purely practical and scientific points of view.

Medical Onomatology.—The Post Graduate for July says that a university professor of Greek, Dr. Henrich Zimmerer, the author of a work on Syria and Asia Minor, has engaged Dr. Achilles Rose to be one of the philological editors of the sixth edition of the medical lexicon, Roth's *Klinische Terminologie*. The editor-in-chief is Professor Vierordt, of the University of Tübingen. Professor Zimmerer has charge of the philological portion. Dr. Rose in this work obtains an opportunity to introduce living Greek into our scientific medical literature. The importance of this language for medical lexicography has not been recognized outside of Greece, and we have some of the most atrocious terms in consequence of the ignorance of the word-makers as to the proper origin of many words. Since Dr. Rose's notable paper was read at the Academy of Medicine some years ago, a great advance has been made in a work which certainly will accomplish a good deal for correct philology.

Prickly Heat.—Mr. Frederick Pearse, F.R.C.S. (*Journal of Tropical Medicine*, July 1st), returns to the charge on this subject (See *New York Medical Journal*, Vol. lxx, 1899, pp. 173 and 639; also June 1, 1901, p. 968). He says:

"In a former communication to you on the above subject I fear that I must have expressed myself very clumsily, as several of your correspondents have misunderstood me. I look upon the rash of prickly heat as an acute seborrhœa. It is identical in character with the rash commonly seen 'at home,' and called a form of seborrhœa, which occurs in some persons, especially if they wear flannel, and which is usually caused by continued perspiration of slight degree with infrequently changed underclothes. An irritating secretion, made up of all forms of exudation from the skin undergoing decomposition and crowded with germs, is doubtless the direct cause of this so-called seborrhœa, and of the so-called 'flannel' rash, with which I hold it to be identical. Prickly heat is exactly the same sort of thing, but modified by the conditions which excite it. Intertrigo, however, is quite a different disease, although excited by irritating secretions. The term seborrhœa is, of course, a bad one, because the disease is not merely an increased discharge of sebum. There is an increased sebaceous secretion, but with the seborrhœa of home and the 'flannel rash' and prickly heat, there are other conditions. I quite agree with Major Moore that prickly heat is an irritation of the skin produced by the constant bath of perspiration, so far as that description carries. It never occurs without free and long-continued perspiration, although many persons who sweat profusely never suffer from it. My contention is that the disease is dependent upon the disturbed function

of the sebaceous glands. It only occurs where these glands exist, and it occurs most frequently where these glands are not usually called upon for much work. The parts of the body covered with fine downy hairs are chiefly affected—not those parts provided with coarse hairs. Certain individuals are more subject to it than others. I should say that rheumatic and gouty constitutions were pre-eminently liable to it. Old residents in the tropics seldom suffer to the extent that comparatively newcomers do. Athletic exercises and training in England do not excite the so-called seborrhœa unless associated with dirty habits, and I have not found that active exercise in India intensifies prickly heat. Probably the custom of frequent bathing, which removes irritating secretions, may be the explanation of this. At any rate, the sedentary are equally the subjects of it as the active, if not more frequently so. It is not necessarily associated with clothing (because it is very common on the backs of the hands and the face), although I admit that clothing, especially flannel, is very liable to determine it. It is not surprising that anything which excites the blood to the skin and induces perspiration should accentuate the symptoms of prickly heat, even on the basis of its seborrhœic character. Does not the warmth of bed excite itching in scabies, in which neither the sweat glands nor the sebaceous glands are affected? To attribute to me the opinion that soap can produce an acute seborrhœa is hardly fair. I do consider that soap is injurious to the skin by removing its natural grease, and that its use is especially to be deprecated in the tropics where perspiration is particularly free, but that is quite a different matter to saying soap can produce an acute seborrhœa. In the heated atmosphere of the tropics, and under the influence of excessive and long-continued perspiration, the sebaceous glands are called upon for more work. A greasy skin may be more liable to comedones and acne spots, but it will not be so liable to sudamina.

"I am very satisfied to find that my recommendation for oiling the skin has proved successful. Major Moore and I are practically at one so far as treatment is concerned. He prefers cocoanut oil—I prefer lanoline in almond oil. I find the addition of menthol to the mixture relieves the intense irritation most satisfactorily. The explanation of the disease must necessarily remain a matter of opinion. I still think that prickly heat is a form of acute seborrhœa. Whether any bacterial or fungous growth is the proximate cause I have not been able to determine. There are many reasons why we should expect this, especially the fact that profuse and even prolonged perspiration is alone not sufficient to produce it."

A Very Serious Case.—The *Canadian Journal of Medicine and Surgery* for July is responsible for the following: "Late one evening a doctor received a note from a couple of fellow-practitioners, saying: 'Pray, step across to the club; we are one short for a rubber.' 'Emily, dear,' he then said to his wife, 'I am called away again. It appears to be a very serious case, for there are two doctors already in attendance.'"

[But the doctor was evidently in error. What was wanted was clearly a medical rubber.]

Original Communications.

CLEFT PALATE AND ITS ASSOCIATION WITH HARE-LIP.*

By JOHN H. BRANTH, M. D.,

NEW YORK.

To have a proper understanding of the congenital deformities of the mouth and lips it is necessary to study the different phases of development of the parts in early foetal life. The common oral and nasal cavity is formed below by the growth of the mandibular arches from either side, which later form the lower jaw and the lower lip, also the floor of the mouth. The large cavity above this is then divided

the same source are derived the cheeks, the lateral parts of the upper lip, and the upper maxillary bone. The frontal process gives origin to the external nose, the ethmoid, the vomer, the median portion of the upper lip, and the intermaxillary bone (Treves).

The intermaxillary bone is that triangular piece which is attached to the vomer and forms the deformity in complete double hare-lip with cleft palate (Dalton, Fig. III), and which, in the normal jaw, forms the middle part of the superior maxilla, in which the incisor teeth are inserted. This intermaxillary bone is, again, composed of different sections, called by Albrecht gnathia. In the above-named deformity these gnathia may be misplaced and give rise also to either defective, or at least

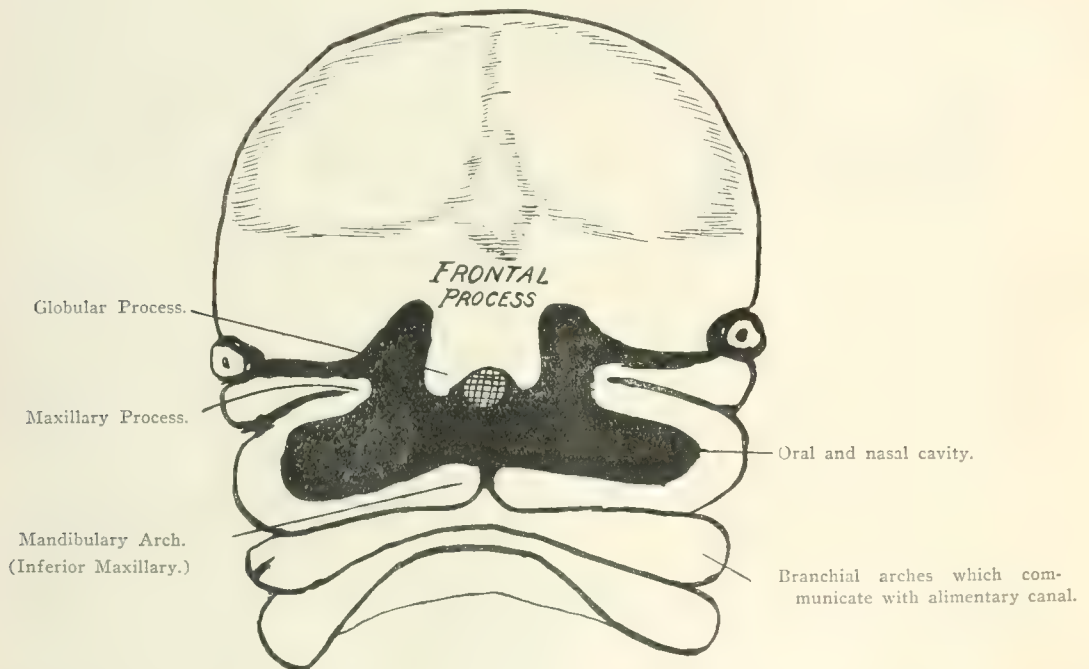


FIG. 1.—Head and neck of embryo at about the third week of foetal life.

into the oral and nasal cavities by the hard palate, which is a horizontal outgrowth from the maxillary process, as shown in Figs. I and II.

The nasal cavity is again divided by the perpendicular plate of the ethmoid, growing downward, and by the vomer, from the fronto-nasal process. A failure of the proper union between these different parts explains the occurrence of the different kinds and degrees of deformity in cleft palate and hare-lip. Albrecht's researches fully established the essential facts of development. He says: "From the buccal aspect of the maxillary process of either side springs the palatal process, which passes inward to blend with its fellow of the opposite side to form the soft palate and the whole of the hard palate, except the intermaxillary portion." From

irregular, teeth in this part. Many times one or both lateral incisors are missing.

These facts demonstrate that the central part of the upper lip and that part of the hard palate which carries the incisors are developed from different centres than those forming the outer part of the upper lip and the rest of the palate; and that the union of the lip and alveolar process takes place not in the median line, but to either side of it. They also explain why hare-lip does not occur in the median line, and also how it is that, in complete cleft palate and *double* hare-lip, the intermaxillary bone is either without any connection with the laterally situated ridge of the maxilla and hard palate or connected only on one side, leaving the other side a *single* hare-lip. The union of the component parts of the palate, intermaxillary bone, and upper lip commences from before backward, and is not completed

*Read at the meeting of the Medical Society of the County of New York on April 22, 1901.

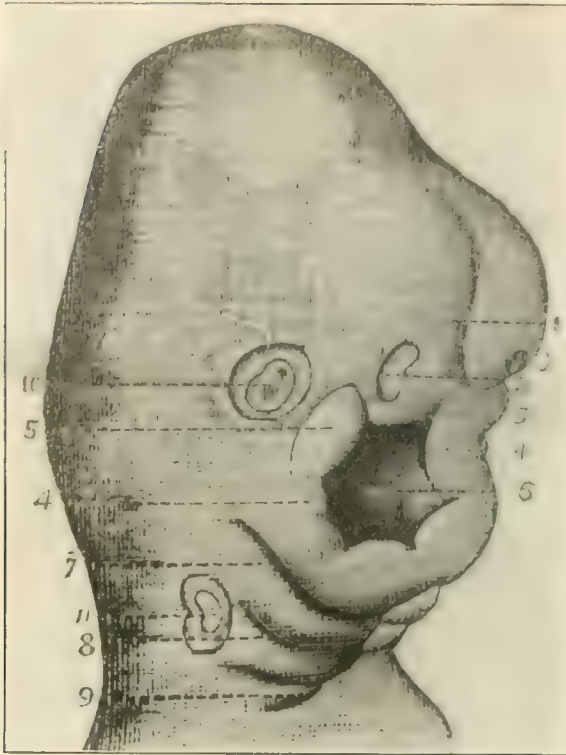


FIG. II. Face of an embryo at twenty-fifth to twenty-eighth day. Magnified about 50 times. 1. Frontal prominence. 2, 3. Right and left olfactory fossæ. 4. Inferior maxillary tubercles, united in the middle line. 5. Superior maxillary tubercles. 6. Mouth. 7. Second pharyngeal arch. 8. Third. 9. Fourth. 10. Primitive ocular vesicle. 11. Primitive auditory vesicle. (After Gray's *Anatomy*.)

until the tenth week of foetal life. In the lower jaw the mandibular processes unite in the median line.

PATHOLOGY.

In the congenital form (I will not speak of the acquired form, as this would lead me into the field of traumatism, systemic infection, etc.), Nature does not complete her work as originally intended. The

parts are misplaced, to say the least. Some authorities maintain that the want of meat diet and insufficient phosphates of lime on the part of the mother, act as a cause; still many other factors deserve consideration. H. E. Dennett, D. D. S., of Boston, states that "all flesh-eating animals take as much of the smaller bones with the flesh they eat, as they can break with their teeth sufficiently fine to swallow, and all have good dental organs," of course referring to the following generation.

Several years ago the lions in the Zoological Gardens of London were fed upon flesh containing bones too large for mastication. The young born while this method of feeding was pursued, it was observed, had cleft palates and lived but a short time. The lions were then fed upon smaller animals, whose bones they could break easily, and the young born afterward had perfectly formed palates. At the "Zoo" in Dublin, also, cleft palate (ninety-nine per cent.) occurred in the young of lions fed on meat with large bones. Dr. J. Ewing Mears reports the same condition as having been observed in the offspring of the lions in the Philadelphia "Zoo." However, neither of these arguments can severely apply to the human being, for in this the foetus will get its calcium salts in sufficiency by drawing upon the mother's tissues (if there is not a sufficiency by ingestion) to supply the demands of the foetus. So far, at least, no author has been able to gain similar data for the human species.

It is safe to assert that the same causes which produce rickets in children have also some effect in producing cleft of the hard palate. The younger brother of this patient, Birdie P. here, had bowlegs and learned to walk late. Heredity has been mentioned by some authors. Lawson Tait also believed in this, and says that in certain localities it is quite endemic, and that it sometimes misses as much as



FIG. III.—A case of complete double hare-lip with cleft palate.



FIG. IV. Photographs showing different parts of the Hickey case of double hare-lip with cleft palate. 1 to 6 were taken before operating. 7 after first operation. Intermaxillary section now in normal position; the component parts of the palate are brought into normal relations, the incisor teeth have vertical direction and a simple double hare-lip remains.

8.—Cap and aluminum splint used in dressing for resection of the intermaxillary section; also used for hare-lip operation.

9.—Single hare-lip remaining after second operation.

10.—After final operation, with scab still showing.

11.—Patient in present condition. There is no defect in speech and the scars can only be partially traced by a close search. The scars lie in the lines of the infra-nasal columns, which, like the scrotal raph, or the abdominal raph, show the remains of the early foetal condition.

12.—Aluminum splint.

three generations. It appears to me, however, that in many of these cases the heredity can easily be explained by the manner of living, feeding, and drinking. Intermarriage may be an element. In all the cases the writer has seen, the patient was of bright mental condition; the bodily condition depended largely on the feeding of the patient, a matter of almost persistent occupation to the mother or the nurse. In the majority of cases, where I was able to get a frank statement from the mother, it was learned that alcoholic intoxication existed in one or both parents during the sexual act followed by con-

syphilis, less often from tuberculosis and traumatism.

VARIETIES OF THE DEFORMITY.

Hare-lip and cleft palate may be divided into six classes according to Rose:

1. The median (intermaxillary). This is so rarely met with that its occurrence has been denied; it comes from failure of the endognathion. Most frequently it involves only the lip, more rarely there is entire absence of the intermaxillary bone and a complete cleft of the palate, hard and soft. This would



FIG. V. Cushing child, showing cleft palate and double hare-lip. 1, 2 and 3 before operation. 4, 5 and 6 show patient after first operation, the intermaxillary section being in the normal position, the component parts of the palate are brought into normal relations, incisor teeth have vertical direction and now simply double hare-lip remains.

ception. Dr. Alexander Lambert, in a Discussion on Alcohol as Food at the New York Academy of Medicine, on March 7, 1901, quoted statistics to show the enormous number of defective and diseased children among the progeny of alcoholic parents. Beecher said: "If a man is born right at first, he does not need to be born again, and to be born right, one must begin at the grandfather." Hare-lip in the negro is very rare indeed. The relation of double to single hare-lip is as 1 to 10. Web-toes have been noticed in congenital cleft palate. Acquired defects of hard and soft palate arise from

be a condition of *central cleft*.

2. Ordinary hare-lip (intermaxillary), either unilateral or bilateral, is the usual form. Here there has been a failure of union between the central and outer portion of the upper lip.

3. Facial cleft (intermaxillary). The cleft arises from the upper lip, skirts around the ala of the nose, and reaches to the inner canthus of the eye. It usually involves only the soft parts and not the bone. (See Figs. I and II.)

4. Buccal cleft (maxillomandibular), or macrosomia. In this deformity there has been a failure of

union of the portion of the cheek developed from the maxillary process with that from the mandibular arch (an opening just anterior to the ear).

5. Mandibular cleft, or median fissure of the lower lip, is explained by the failure of the mandibular arch of either side to unite. It is very rare.

6. Cleft palate. The uvula alone may be involved, or the cleft may extend partly or fully through the hard palate. Normally, union takes place from before backward so that incomplete cleft always involves the posterior portion of the palate. Now, when the cleft is complete (often called Wolf's jaw—*Wolfsrachen*), or, rather, when there is no union of the parts forming the roof and anterior wall of the mouth, and the upper lip is also divided, there is a double hare-lip, the intermaxilla being attached to the vomer and carrying the central portion of the lip. Or there may be a single hare-lip, usually on the left side, and then the intermaxillary bone is attached to the right side of the hard palate, projecting more or less in front. Here the vomer is usually attached to the right side of the hard palate, though it may hang entirely free, and may even extend to the back of the pharynx, dividing that cavity into two.

In children with this deformity who have reached the age of five or six years, there are generally found adenoid vegetations, hypertrophy of the tonsils, a great thickening of the mucous membranes over the turbinated bones, and, above all, a great enlargement of the tongue from early youth. A foetid odor is exhaled from the diseased surfaces. These abnormal conditions should be corrected so far as possible before attempting operation on the parts. In all cases where the defect reaches through the entire lip, whether associated with cleft palate or not, the nostril of the affected side is widened and flattened, and this is likely to be increased as time goes on by the action of the stump of the orbicularis oris muscle.

In cleft palate with single hare-lip, the bones being in a soft and flexible condition at birth, the outer (maxillary) portion of the alveolar process is soon drawn outward and out of the level of the natural alveolar arch, by the action on it of the stump of the orbicularis oris muscle, the same cause, indeed, which flattens the nostril of the affected side. In operating in such a case, I fractured the superior maxilla and turned the fractured part sufficiently to bring it into the line of the normal alveolar arch.

In either single or double hare-lip, approximation of the parts is usually opposed by reflections of mucous membrane, which are attached to the upper jaw and prevent the separated portions of the lip from being brought together. In double hare-lip with cleft palate at birth, usually the intermaxillary portion is not far from its normal position, but very soon an exaggerated growth in length of the vomer

will project the lip and os incisivum forward, under the tip of the nose, and, later, when the incisor teeth develop from this projected part of the alveolar process, it may seem that the teeth grow from the tip of the nose, while the bit of lip points horizontally forward. (See Fig. IV, Hickey baby, showing six different aspects of deformity on both sides; also Fig. V, Cushing child.)

Many children with marked cleft die soon after birth. Mr. Tait says that half such patients die within a few days after birth from starvation. I have seen a child which had not the slightest trace of a palate (not complicated with hare-lip), live two weeks, the nourishment being a few drops of mother's milk poured well back into the throat. It died from starvation. Of course, children with cleft palate cannot nurse from the breast, as they cannot suck. They must be fed with a spoon on mother's milk or a substitute. The little patient can best be fed by being laid on the lap of the nurse, the head extended, dropping well down; this position offers the food smaller chances to enter the larynx, and enables the pharynx to receive the food and contract upon it and convey it to the stomach. The nursing and care of such a patient require almost the entire time of the nurse. Various shields to close the gap for nursing have been suggested; Mason's combined nipple and shield is one of them, but, I believe, none of them have been satisfactory.

Those children with cleft palate *who have begun to talk* have a disagreeable nasal and barking tone, and then this usually persists to some degree throughout life, though it may be improved after a successful operation or the adjustment of an obturator. The strenuous efforts of the child to articulate with the defective organ will form a habit of distortion of the muscles of the face, spasmodic in character—even the arms and hands may participate in these movements.

OPERATION.

Operative measures offer the only relief for these deformities. No one should attempt these measures on a patient with acute syphilitic symptoms, or where a mercurial course has debilitated the constitution, or where a crisis of the blood exists, and a union by primary intention is thus made impossible or doubtful. Many still think cleft palate to be an incurable deformity. But, if it can be demonstrated that remedial surgery is practicable, feasible, then that surgeon is in error who thinks that his *whole* duty is done by operating for the hare-lip only, so as to make the appearance of the little patient presentable, for this is a makeshift that hardly outlasts the earliest childhood; and then advising an obturator for later years, when faulty habits of speech have fastened on the patient for life.

Even with a normal mouth, can one shake off the dialect acquired in early youth? The Chinese child does not learn to speak *R*, as this sound does not exist in the Chinese language, and, as a rule, Chinamen will say *Amelican* for American, though living many years with us.

It is maintained here that the results in surgery of the palate are more promising than many other operations, and they are, perhaps, more highly appreciated.

On the subject of the age for operation, a great diversity of opinion exists. No one can doubt that the operation is a severe one for the patient, hence it may be wise to select a time when there is sufficient vital resistance, and when quick healing looks probable.

Where the intermaxilla is projected forward, the writer prefers to wait until the central incisors are cut, as they afford a secure anchorage for the stitches which are to unite the intermaxilla with the lateral portions of maxilla; yet, for reasons already explained, the operation should not be deferred, except for special cause, to more than two years of age.

Repeated failures to close a wide cleft are common, but after the failure to close, the stitches having torn through, the edges will become thicker and stronger; also, from the subsequent inflammation, the circulation of the parts will take up new life, and the persistent operator will gain by crowding the new and old palatine tissue toward the median line by a gauze pledget, and the next effort will achieve more, perhaps success. Yet it has been the writer's experience that, in a large majority of operations, at least one or more stitches will hold, and a bridge will unite the two sides. This patient (Birdie P.) has had his palate built up in this persistent manner. If you look at this plaster cast which was taken of this

patient's mouth *after* the first operation (no cast having been taken earlier), you will see the extent of the cleft at *that* time. A small bridge at the

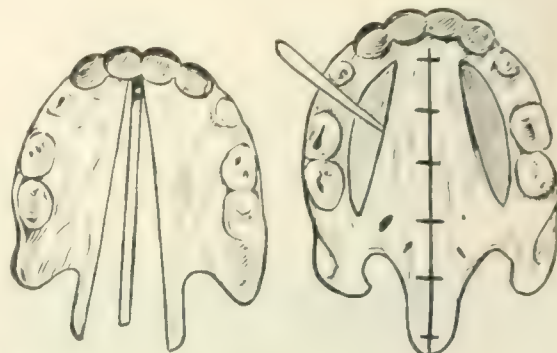


FIG. VI.

anterior aspect was all that was gained in the first operation; but, in addition, the borders of the cleft became thicker and more vascular, and in the next operation more was gained. Two perforations finally remained, a small one, which latter was closed by the actual cautery, and the larger one, less than one eighth of an inch in diameter, the closing of which is deferred until after the reading of this paper. Now, before any operation, this boy could not make himself understood, his effort at speech resembled a bark more than a human voice, and his face underwent spasmodic contortions during these attempts. This was only a few years ago. Now, he speaks quite plainly and his speech will improve more with time; his facial spasms have left him.

However, one should not promise too much; still the attempt should be made to relieve these unfortunate children. One must remember, too, that some cases are stubborn, and all cases require courage and perseverance in the surgeon.

The subject of cleft palate has occupied the minds of many of the great surgeons on both sides of the water; Billroth, Lawson Tait, Francis Mason, T. Smith, Goodwillie, David Prince, Fergusson, Lewis A. Sayre, Dieffenbach, Langenbeck, Graefe, Agnew, Pancoast, Liston, and Polloch are among them.

The administration of anæsthetics in very young children for operations in the mouth invites special danger from the fact that blood and debris enter the larynx so easily, and if these should reach the pulmonary region, septic bronchopneumonia is then a frequent complication, which latter may carry off the patient though the operation in itself may be a successful one. The anæsthesia is at first surgical, and then, alternating with the knife, the anæsthetic is given in small doses, to maintain a semi-consciousness, when pain is not perceptible, so that an occasional reflex cry or cough will clear the larynx. This procedure lengthens the time for operation

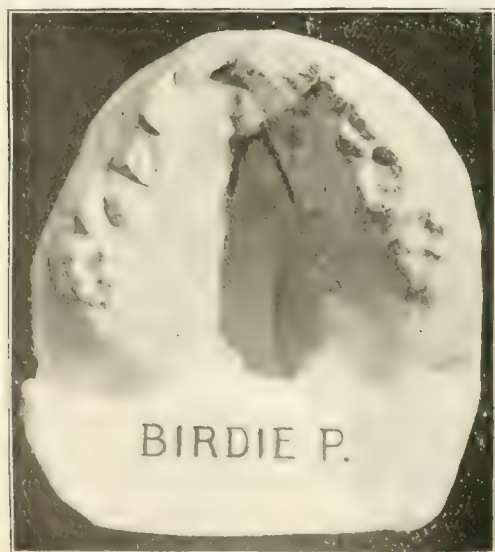


FIG. VII. Plaster cast of the palate of Birdie P.

considerably. Ether is probably to be preferred for these reasons.

Hæmorrhage is usually easily controlled. The writer has found that a strong salt solution, say four heaping tablespoonfuls or even more, to a quart of hot water, sterilized, effectively controls hæmorrhage. If, by accident, which should be strenuously avoided, the anterior or posterior palatine artery is opened, a small peg of wood has succeeded in plugging the opening. Sloughing of the bridge of mucoperiosteum may follow this accident.

To counteract the excessive secretion of saliva, which is a very troublesome incumbrance, it is well to dose the patient in advance with belladonna or atropine, which will also tone the heart muscle for the long operative measure.

Some surgeons, among them Dr. McKernon, of this city, suggest tracheotomy (as for excision of the tongue, etc.) and subsequent anæsthesia through this avenue, and then plugging the pharynx with gauze. This prevents débris from entering the air passage and subsequent pulmonary complications. The operation is very much shortened, the wounds can be kept aseptic, and repair should be rapid. Dr. McKernon employs rectal feeding for the time of this repair. One would think, however, that the operation of tracheotomy added to surgical shock, and that the respiratory function carried on through the long anæsthetizing tube demanded extra muscular energy, which energy a young patient, and especially one whose nourishment is so very much handicapped by the deformity, is less able to furnish than an older patient, where the ribs and intercostal muscles are better developed.

To Mason Warren, of Boston, the profession is indebted for his method of uranoplasty, as published in 1843. Fergusson, in 1873, made, with a brad-awl, a line of punctures inside of the alveolar process, detached this strip of bone, but not the whole thickness of the palatine ridge, and drew the parts together by suture, having, of course, pared the edges of the cleft. Garretson, of Philadelphia, by means of a horseshoe tourniquet, forced by external pressure the cleft sides together, after paring the edges; a similar procedure is that of Brophy, who uses silver wire over leaden shields, and, by twisting the wires, brings the pared edges together.

Dr. Alexander Ferguson, of Chicago, has evolved a new and very ingenious plan. He cuts along the borders of the cleft, but not quite through, then turns each strip in a half circle on the axis, and so brings the two cut surfaces together by suture. He now detaches the bridge of mucoperiosteum from the alveolar aspect and slides this to the median line, drawing it by suture. This appears to be an ideal operation for a cleft of smaller width.

Fillebrown dissects lateral flaps from the alveolar

process toward the middle and turns them over to unite by suture in the middle line, so covering the cleft in the hard palate. The soft palate is then united by bringing together directly the pared edges with a suture.

Where the intermaxillary bone is projected forward, as in the Cushing child, the Dalton child, and the Hickey child, it gives trouble to get this section into proper position. To accomplish this, F. Blondin removed an inverted V-shaped piece of the vomer and bent the intermaxilla into position; this gives the teeth a backward direction from the short radius. Several authors mention that necrosis of the remaining vomer followed. The cutting out of this V is not easy and takes much time. The writer splits the buccal covering of the vomer and detaches with the periosteotome the mucoperiosteum; then, with a forceps, the vomer is seized and disarticulated. This is an easy and rapid procedure; the whole intermaxillary section is now easily transplanted into the anterior part of the cleft, a complete alveolar arch is formed, and all parts are in a normal position, even as to the direction of the incisor teeth. The new suture surfaces are now pared and stitched. The empty periosteal sack of the vomer will grow a new vomer, which fits well into the remaining space. No great tension on any part is necessary to hold the parts in the new relations, *which are the normal ones before the tenth week of fetal life*. The pared edges offer a very large surface and will make a firm union. To hold the intermaxillary section in place, the writer passes a double catgut through its middle between the central incisor teeth, gives the double strand a half turn, which locks them like two links of a chain, and then each half of the double suture is stitched through the lateral alveolar process, and tied; this prevents all lateral strain on the intermaxilla and allows no motion whatever. Of course, a close fit of all the parts is of great moment; and a good eye-measure is of the greatest value here as well as in the lip operation.

The writer uses no thumb forceps on periosteal flaps in cleft-palate surgery, as the pressure of the forceps-jaws bruises the tissues. It has been noticed that the periosteum showed partial sloughs, like a bite from a pie, where the forceps had been applied; a small volsella forceps or small tenaculum does not produce such a lesion, and serves as well as, or better than, a forceps.

The projected intermaxilla has been amputated and the lateral lips joined in the median line by many surgeons. This child, Tilly E., soon after birth was operated on in this manner by Dr. Senn, of Chicago. When I saw her, some four years ago, she had a wide cleft and could speak very well, considering the defect, as she acquired the knack of

placing her tongue against the cleft and issuing the words from beneath and beside the tongue. An operation, not successful, to unite the palate, has been done by a surgeon of this city.

The intermaxilla, being in a faulty position, should not be amputated but brought to its proper place, which is easily accomplished by the writer's method of removal of the entire vomer.

Slip knots are used in the palatine sutures; in the other sutures reef knots are used. The tension of the stitches should be moderate. In the soft palate lateral punctures will moderate tension.

Position for Operation.—A sandbag is put under the neck, and the head is turned on the side toward the light. Rose lets the head hang down from the edge of the operating table.

Contrary to what is found in literature, the writer advises the palate operation as the *first* step. The large opening or openings of single or double hare-lip give more access for light and instrumental manipulation. The lip operation is the *last* step, and from four to six weeks at least should elapse before the second, or last, step is undertaken. After a successful uranoplasty, regurgitation of food through the nostrils will not occur.

Hare-lip Operation.—Many plans have been suggested by different authors. From lack of time the writer will illustrate a few of the best in his hands. The same law, to sacrifice as little as possible, holds good here as in palate operations. A simple notch, where the floor of the nostril is *not* involved, can be remedied by a simple inverted V-incision above the vermilion border; the inner V is pulled down and the lateral angles are brought together by stitches; the now lower portion *must* be pendent to allow for cicatricial contraction, or the result will be a small notch. In all the literature available, the speaker has not found a description of this plan, and a number of surgeons have confessed to me that they are unacquainted with it. (See Fig. VIII, 1.)

Where the labial fissures extend into the nostril, which was the case in the Cushing, the Dalton, and the Hickey children, and which exists in complete cleft (No. 6 of Rose's division), we have left, after the successful palate operation, either a single or a double hare-lip, respectively. It is here the problem to build a floor for the anterior nostril. This is best achieved by Colles's (of Dublin) so-called æsthetic operation; nothing of the tissues is sacrificed. The cuts are so made as to join the fibres of the orbicularis oris muscle firmly, and, by the writer's modification, *without angles*, the incisions will fall in the line of the infranasal columns, which are in fœtal life the lines of union. Cicatrices here will look like normal facial lines, and in later life cannot be defined as surgical scars. (See Fig. VIII, 2.)

The speaker has made in the Hickey child the fol-

lowing incisions, first, on the intermaxillary portion in a curve, then on the lateral portion in a curve, keeping close to the vermilion border; then, the maxillary lip is detached from underlying bone, to

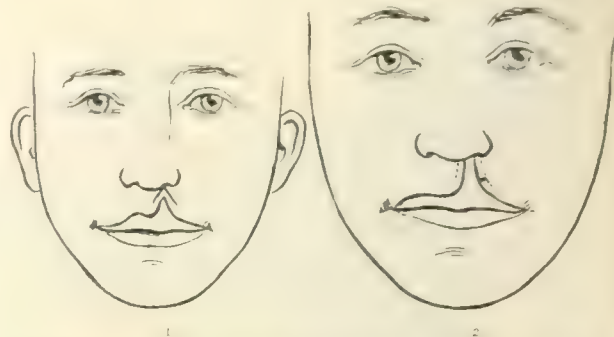


FIG. VIII. The 1 illustrates operation for a simple notch. The 2 illustrates the operation in complete hare-lip where the labial fissures extend into the nostrils.

allow that part to be drawn toward the median line; next, the knife is inserted into maxillary portion, cutting through the vermilion border, at a point *where the upper piece will just fit into the floor space of the nostril*; these parts are then stitched together; the two pendent flaps are brought downward. Now remains a condition similar to the notch operation described before; the lateral angles are drawn together by a few deep sutures, and the skin as well as the mucous membrane is brought together by small superficial sutures. The writer uses chromicized catgut for *all* sutures. The pendant, as in the notch operation, is also here necessary to make a straight lip. By avoiding the angle of the Colles's incision, the scar will not have the serpentine direction from the nostril downward and inward, but will bring the scar *just where the infranasal column is situated*.

Hare-lip pins should be relegated to the past. They are even less applicable here than in other parts of the body. Where the writer has to deal with a projected intermaxilla, and in all hare-lip operations, this splint of aluminum of his own design is used for dressing. A close-fitting cap covers the head, and plaster and splint are applied over the face and cap. (The aluminum splint is shown in Fig. IV, 12, and the cap with the splint in place in Fig. IV, 8.)

The new zinc oxide adhesive plaster is advised for a binder to keep the splint and parts at rest until healed. Asepsis and antisepsis is observed as far as possible.

In all these operations, results depend largely on good eye-measure, clean, accurate incisions, accurately fitting flaps, and closely fitting sutures. The surgeon should be ambidextrous.

A few days after each operation the patient should be taken into the fresh air. Liquid food should be administered. The hands should be secured to pre-

vent the patient from meddling with the itching wounded region.

In efforts at speech special study is required. The words, simple ones, should be spoken slowly, and not many in succession.

183 WEST EIGHTY-SEVENTH STREET.

ACUTE LOBAR PNEUMONIA; A PATHOLOGICAL AND CLINICAL STUDY OF 120 CONSECUTIVE CASES SUBJECTED TO POST-MORTEM EXAMINATION.

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In the following paper I propose to give an analysis of the records of 120 cases of acute lobar, or croupous, pneumonia in which I made and recorded the post-mortem examinations. The paper will be mainly pathological in its bearings, though not entirely so, as I have examined the clinical summaries of all the cases so far as these were available to me. At present my personal observations have only to do with the facts revealed on post-mortem examination; the clinical facts which are here analyzed were supplied to me by my colleagues under whose care the cases were during life. Although acute lobar pneumonia is one of the most familiar diseases with which the practical physician is called upon to deal, the facts revealed in the post-mortem room are always of interest and frequently of great importance, as conducing to that accuracy of diagnosis and prognosis upon which all rational treatment of the disease is based. From this point of view I think the record of the personally observed facts contained in this paper may not be without interest to the readers of the *New York Medical Journal*. I hope also that the paper may not be without value as a contribution to the already voluminous literature of acute lobar pneumonia.

For the purposes of this analysis I have, with the assistance of my house-physicians, exhaustively tabulated the information contained in all the post-mortem records of cases of acute croupous pneumonia occurring between November, 1889, and November, 1895, the period during which I acted as pathologist to the Glasgow Royal Infirmary. The cases tabulated were consecutive and in no sense selected, except in so far that only cases presenting the typical morbid appearances of acute lobar or croupous pneumonia in any of its stages were in-

cluded in the scrutiny of facts. Bronchopneumonia, or lobular pneumonia, is not included in the present inquiry. The results of this study of 120 cases of acute pneumonia I shall endeavor to formulate in a series of abbreviated tables and commentaries.

SEX.

Of the 120 cases, 94 occurred in males and 26 in females. It is unnecessary to dwell upon these figures, especially as the question of sex will also be considered in dealing with that of age. The numbers are small, but they indicate a greater prevalence of the disease in the male sex.

AGE.

The age was ascertained in 112 out of the 120 cases, and the following table shows the numbers of males and females in whom the age was ascertained:

Age, known,	Males,	88	Females,	24
unknown,	"	6	"	2
		94		26

The lowest age recorded in the series was 12 and the highest 80 years. As in only six cases was the age below 20, it can at once be seen that the present series of cases gives no information as to the prevalence and characters of croupous pneumonia in children. Tables I and II give the details of the age incidence in 88 males and 24 females, in terms of the exact age and of quinquennial periods:

TABLE I.
SHOWING AGES OF 88 MALES WHO DIED OF ACUTE LOBAR PNEUMONIA.

Age in Years.	Number of Cases.	Number in quinquennial periods.	Age in Years.	Number of Cases.	Number in quinquennial periods.
12	1		46	1	
16	1		47	2	
17	1	6	48	2	9
18	1		49	2	
19	2		50	2	
23	1	2	51	3	
25	1		52	4	
26	2		53	2	14
27	3	9	54	2	
29	4		55	3	
31	1		56	1	
32	1	6	57	1	5
34	1		59	1	
35	3		60	2	
36	2		61	2	
37	2		62	1	6
38	4	14	63	2	
39	3		65	1	
40	3				
41	1		66	1	2
42	4		68	1	
43	5	15			
44	3		Total, 88		88
45	2				

TABLE II.
SHOWING AGES OF 24 FEMALES WHO DIED OF ACUTE LOBAR
PNEUMONIA.

Age In Years	Number of Cases	Number of Deaths	Age In Years	Number of Cases	Number In each Class
20	2	2	50	1	1
26	2	2	52	2	2
32	1	1	50	1	1
34	2	3	(6)	1	2
37	1	1	65	1	1
38	2	3	68	1	1
41	1		70	1	2
42	2				
44	1	5	80	1	1
45	1				
Total, 24					24

These tables are interesting as showing that, in the present series of consecutive cases of acute lobar pneumonia subjected to post-mortem examination over a continuous period of six years, the greatest fatality occurred between the ages of 35 and 55. In the males 23, and in the females 7, deaths occurred up to the age of 35 years; 52 males and 11 females died between 36 and 55; in the males 13, and in the females 6, deaths occurred after the age of 55. The figures also show that at these three different age periods the mortality is much the same in males and in females. On the whole, however, the mortality in males between 36 and 55 is greater than in females; comparing the two sets of figures the number of female deaths should be 14 instead of 11 if an exact proportion had been maintained. In the earlier and later periods the death rate is slightly greater in the females than in the males; to maintain an exact proportion the number of female deaths in these periods should only have been 6.2 and 3.5, instead of 7 and 6 as seen in the tables.

This examination of sex and age shows that males are more liable to acute lobar pneumonia than females, and that in the middle period of life the mortality is greater in the male sex.

OCCUPATION.

Of the 120 cases the occupation was recorded in 108—viz., in 86 males and 22 females. Tables III and IV show the details of the occupations of the males and females respectively, and the classification of the occupations into indoor, outdoor, and combined indoor and outdoor occupations.

A scrutiny of these tables gives us some interesting information. While they show us that acute lobar pneumonia is in no sense an occupation disease, *i. e.*, it may attack all classes of workers, they also show that the disease is very decidedly more prone to attack those whose work exposes them to the vicissitudes of the weather. Thus we find that

in the case of 86 males exactly 50 per cent. were engaged in work which could be classed as outdoor, and if to this we add those whose labor was partly outdoor, we get nearly 75 per cent. who were ex-

TABLE III.
SHOWING OCCUPATIONS OF 108 PATIENTS WHO DIED OF ACUTE
LOBAR PNEUMONIA.

MALES—86 CASES.					
Baker, - - -	2	Fireman, - - -	1	Potter, - - -	1
Blacksmith, -	1	French-polisher, -	1	Quarryman, -	1
Boilermaker, -	1	Fruiterer, - - -	1	Railway porter, -	2
Brassfinisher, -	2	Glasscutter, - -	1	Sailmaker, - - -	1
Bricklayer, - -	1	Hawker, - - -	1	Sailor, - - -	1
Canvasser, - -	1	Horseshoer, - -	1	Sawyer, - - -	1
Carrier, - - -	1	Ironworker, - -	1	Schoolboy, - - -	1
Chemical-worker	2	Joiner, - - -	1	Shipwright, - -	1
Clerk, - - -	2	Laborer, - - -	10	Shoemaker, - - -	1
Coachman, - -	1	Lapidary, - - -	1	Slater, - - -	1
Contractor, - -	1	Mechanic, - - -	3	Tailor, - - -	1
Carrier, - - -	1	Miner, - - -	5	Traveler, - - -	1
Dealer, - - -	1	Mirror-finisher, -	1	Van driver, - -	4
Dock laborer, -	1	Moulder, - - -	2	Warehouseman, -	1
Draper, - - -	2	Packer, - - -	1		
Dyer, - - -	2	Painter, - - -	1		
Engineer, - - -	2	Plasterer, - - -	1		
Engraver, - - -	1	Plumber, - - -	1		
				Total, - - -	86

FEMALES—22 CASES.					
Dealer, - - -	1	Housewife, - - -	14	Washerwoman, -	3
Dressmaker, -	1	Millworker, - -	1	Weaver, - - -	2
				Total, - - -	22

TABLE IV.
SHOWING OCCUPATIONS OF MALE PATIENTS, CLASSIFIED AS IN-
DOOR, OUTDOOR, AND COMBINED INDOOR AND OUTDOOR,
AND ALSO NUMBER OF PATIENTS IN EACH CLASS.

Indoor—17.	Outdoor—17.	Combined—16.
Baker, - - - 2	Bricklayer, - - 1	Blacksmith, - - 1
Brassfinisher, - 2	Canvasser, - - 1	Boilermaker, - - 1
Clerk, - - - 2	Carrier, - - - 1	Chemical-worker 2
Draper, - - - 2	Coachman, - - 1	Carrier, - - - 1
Dyer, - - - 2	Contractor, - - 1	Dealer, - - - 1
Engraver, - - 1	Dock laborer, 1	Engineer, - - 2
French-polisher, 1	Hawker, - - 1	Fireman, - - 1
Fruiterer, - - 1	Laborer, - - 10	Horseshoer, - - 1
Glasscutter, - 1	Miner, - - - 5	Ironworker, - - 1
Lapidary, - - 1	Quarryman, - 1	Joiner, - - - 1
Mirror-finisher, 1	Railway porter, 2	Mechanic, - - 3
Potter, - - - 1	Sailor, - - - 1	Moulder, - - 2
Sailmaker, - - 1	Sawyer, - - - 1	Plumber, - - - 1
Schoolboy, - - 1	Shipwright, - 1	Packer, - - - 1
Shoemaker, - 1	Slater, - - - 1	Painter, - - - 1
Sailor, - - - 1	Traveler, - - 1	Plasterer, - - 1
Warehouseman, 1	Van driver, - - 4	—
—	—	21
22	43	

posed to the influence of the weather. If we examine the table showing the occupation of the females attacked, we find that none of them were engaged in work which could be described as outdoor. While, therefore, it must be admitted that exposure is a frequent factor in the aetiology of acute lobar pneumonia, it is at the same time clearly evident that exposure is not the only, or even the

most important, element in the causation of the disease.

SEASON.

The season of the year is naturally regarded as an important ætiological factor in the case of acute lobar pneumonia, and table V gives the number of cases subjected to post-mortem examination in each month of the six years over which the present inquiry extends.

TABLE V.
SHOWING THE NUMBER OF CASES OCCURRING IN EACH MONTH
FROM NOVEMBER, 1889, TO NOVEMBER, 1895.

	1889	1890	1891	1892	1893	1894	1895	Total.
January, -		4	1	2	1	6	2	16
February, -			2	1	1		2	6
March, -		2	2	4	4	2	4	18
April, - -			2		2	1	4	9
May, - -		3	3	3	2		2	13
June, - -		1	3	1	4	2	3	14
July, - -			3	1		2		6
August, -		1	1		1		1	4
September,		2	1					3
October, -				1	3	2		6
November,	1		4	1	1			7
December,	4	3	3	3	4	1		18
	5	16	25	17	23	16	18	120

This table shows that over the period of six years with which this paper deals, the greatest number of cases occurred in the months of January, March, and December, and that the months of May and June come next as regards the frequency of pneumonia. Pneumonia, as judged by these post-mortem records, is not a disease which by any means confines itself to the winter months, but occurs at all periods of the year. The months of August and September are those in which in the present series the fewest cases occurred, viz., 4 and 3 respectively for the whole period of six years. Acute lobar pneumonia may occur at any period of the year. The influence of season, like that of occupation, is an important, but evidently not the specific, or determining, factor in the causation of the disease.

SITE OF THE LESION IN THE LUNGS AND LOBES OF THE LUNGS.

The records were carefully scrutinized with the object of ascertaining the frequency with which the local lesion of acute lobar pneumonia manifested itself in one or other lung, and in the different lobes

of the lungs. Tables VI and VII show at a glance the results of this part of the inquiry:

TABLE VI.
SHOWING THE LUNG AFFECTED IN 120 CASES.

	Cases.
Right lung alone involved, - - - -	62
Left lung alone involved, - - - -	42
Both lungs involved, - - - -	16
Total - - - - -	120

TABLE VII.
SHOWING LOBE OR LOBES AFFECTED IN 120 CASES.

	Affected. Times.
Right lung (62 cases).	
Upper lobe, - - - - -	14
Middle lobe, - - - - -	3
Lower lobe, - - - - -	18
Upper and middle lobes, - - - - -	3
Middle and lower lobes, - - - - -	6
Upper and lower lobes, - - - - -	4
All the lobes, - - - - -	14
Left lung (42 cases).	
Upper lobe, - - - - -	11
Lower lobe, - - - - -	23
Both lobes, - - - - -	8
Both lungs (16 cases.)	
Right lung.	
Upper lobe, - - - - -	6
Middle lobe, - - - - -	1
Lower lobe, - - - - -	6
All the lobes, - - - - -	3
Left lung.	
Upper lobe, - - - - -	1
Lower lobe, - - - - -	14
Both lobes, - - - - -	1

Perhaps the most striking feature revealed in these tables is the fact that in the present series of 120 cases the right lung alone was involved in more than half of the cases, exactly about 51 per cent., and the left lung alone in a little over one third of the cases, or about 33 per cent. These figures correspond very closely with the results obtained in 144 consecutive post-mortem examinations at the Middlesex Hospital (*Pneumonia*, Sturges & Coupland, 1890, p. 86) and in 100 cases recorded by Osler (*Canadian Medical and Surgical Journal*, May, 1885). As regards the lobe affected, the table shows that the lesion was situated in one lobe in 69 cases, in two or more lobes of the same lung in 35 cases, in both lungs in 16 cases. These figures, again, correspond very closely with those already quoted.

STAGE OF THE PNEUMONIA.

In post-mortem examination of cases of pneumonia it is generally possible to record the precise stage of the pneumonic process, a condition which clinically it is frequently impossible to determine with exactitude. In all my records except one, a definite statement as to this point is contained in the report, and Table VIII gives the result of this part of the present inquiry:

TABLE VIII.

SHOWING THE STAGE OF THE PNEUMONIA AT THE TIME OF DEATH.

Splenization, - - - - -	1 case.
Splenization and red hepatization, - - -	1 "
Red hepatization, - - - - -	23 cases.
Red and gray hepatization, - - - - -	16 "
Gray hepatization, - - - - -	61 "
Purulent infiltration, - - - - -	8 "
Abscess, - - - - -	2 "
Gangrene, - - - - -	6 "
Resolution, - - - - -	1 case.
Not stated, - - - - -	1 "
Total, - - - - -	120 cases.

It is thus seen that in rather more than 50 per cent. of the present series of cases gray hepatization was the condition found at the post-mortem examination, and if we add the 16 cases in which red and gray hepatization were found together the percentage is considerably increased. It is also interesting to note that death may occur during the very earliest stage of the pneumonic process.

THE DAY OF DEATH.

From an examination of the clinical records which were accessible to me it was possible to fix the day of death with tolerable accuracy in 74 of the 120 cases at present under review. The details are given in Table IX:

TABLE IX.

SHOWING DAY OF DEATH IN 74 CASES.

3rd day of disease, - - - - -	1 case.
4th " " - - - - -	6 cases.
5th " " - - - - -	7 "
6th " " - - - - -	7 "
7th " " - - - - -	14 "
8th " " - - - - -	9 "
9th " " - - - - -	8 "
10th " " - - - - -	9 "
11th " " - - - - -	4 "
12th " " - - - - -	4 "
13th " " - - - - -	0 "
14th " " - - - - -	2 "
15th " " - - - - -	0 "
16th " " - - - - -	0 "
17th " " - - - - -	0 "
18th " " - - - - -	1 case
19th " " - - - - -	2 cases
Total, - - - - -	74 "

In the greatest number of cases the patients died on the seventh day, which is generally accepted as the most frequent day for the crisis in pneumonia.

DAY OF DEATH AND STAGE OF DISEASE.

Table X shows the stage of the pneumonic process at the time of death in the 74 cases in which it was possible from the clinical records to fix with accuracy the day of death. In one or two cases the result of this inquiry is not such as would *prima facie* be expected, but after giving the table I think such cases may be reasonably accounted for:

TABLE X.

SHOWING THE STAGE OF THE PNEUMONIA AT THE TIME OF DEATH IN 74 CASES.

Stage of Disease	Day of Death	Number of Cases.
<i>Splenization, - - -</i>	9th day	1 case.
<i>Red hepatization, - - -</i>	3rd "	1 "
	4th "	2 cases.
	5th "	4 "
	7th "	3 "
	8th "	1 case.
	10th "	2 cases.
<i>Gray hepatization, - - -</i>	14th "	1 case.
	4th "	4 cases.
	5th "	3 "
	6th "	6 "
	7th "	10 "
	8th "	5 "
	9th "	3 "
	10th "	5 "
	11th "	2 "
	12th "	2 "
<i>Red and gray hepatization, - - -</i>	6th "	1 case.
	7th "	1 "
	8th "	2 cases.
	9th "	2 "
	10th "	2 "
	11th "	1 case.
	12th "	2 cases.
<i>Purulent infiltration, -</i>	8th "	1 case.
	9th "	2 cases.
	11th "	1 case.
	19th "	1 "
<i>Abscess, - - - - -</i>	14th "	1 "
	16th "	1 "
<i>Resolution, - - - - -</i>	18th "	1 "
Total, - - - - -		74 cases.

On the whole, it may be admitted that this table shows a remarkably close agreement between the clinical history and the anatomical development of the disease. Red hepatization alone is rare after the seventh day of the disease, the greatest number of cases occurring before this day, viz., three on the seventh day and seven before it. Four cases of red hepatization are noted as having been present after the seventh day, but this is probably to be explained by the difficulty often experienced of fixing the precise duration of the disease. On referring to the detailed records of the four cases of late red hepatization, I find that the case in which this stage was present on the eighth day was associated with acute pericarditis and acute pleurisy with effusion on the left side, and that the pneumonia was probably of later development than these accompanying conditions. As regards the two cases with red hepatization present on the tenth day, one had commenced as an acute bronchitis complicating chronic Bright's disease, and the other had supervened in the course of an attack of erysipelas of the leg. (In this case the opinion based on the naked-eye appearance of the lung was verified by microscopical examination.) The case of red hepatization noted as being present on the fourteenth day had occurred as a complication in the course of acute capillary bronchitis. It may, therefore, be admitted that these four cases do not

seriously disturb the general belief that red hepatization is essentially an early phenomenon. Grey hepatization was not noted as having occurred before the fourth day of the disease, and by far the largest number of cases were found on and after the seventh day, viz., twenty-seven cases, as compared with thirteen before this day. Purulent infiltration is seen to be a decidedly late phenomenon, no case having occurred before the eighth day of illness. Abscess is a later development still. The one case of splenization in the series is noted as having been present on the ninth day of illness; on referring to the details of the case it is found that the pneumonia had complicated an acute bronchitis. In the case (a man, aged fifty-nine years), in which a resolved pneumonia was found, death occurred on the eighteenth day of illness from phlegmasia dolens with extensive thrombosis of the femoral veins as a complication of the original disease.

OTHER LESIONS OF THE LUNGS.

In every case in which the presence of pulmonary lesions, other than those characteristic of acute lobar pneumonia, was recorded in the account of the post-mortem examination, a note of such lesions was entered in a column of the detailed analytical table necessary for the writing of this paper, and I propose now very shortly in tabular form (XI) to show how frequently such lesions were noted:

TABLE XI.

TABLE SHOWING FREQUENCY OF OTHER LESIONS IN THE LUNGS.

Acute pleurisy, on same side only - - -	28 times.
" on opposite side only - - -	3 "
" on both sides - - -	17 "
Pleural adhesions (fibrous), on same side -	6 "
" " on opposite side -	0 "
Empyema - - - - -	Once.
Hypostatic congestion and œdema, on same side - - - - -	4 "
Hypostatic congestion and œdema, on opposite side - - - - -	15 "
Acute bronchial and tracheal catarrh - - -	6 "
Chronic bronchitis and emphysema - - -	26 "
Bronchiectasis - - - - -	Once.
Tuberculosis (recent) - - - - -	4 "
Healed tuberculosis, on same side - - -	7 "
" " on opposite side - - -	5 "
" " on both sides - - -	Once.
Anthracosis - - - - -	4 "
Opposite lung stated to be healthy - - -	27 "

This table is not without interest as showing that acute lobar pneumonia is very frequently associated with other morbid conditions of the lungs. As regards the presence of pleurisy, it must be remembered that there is always more or less inflammatory change in the pleura covering the affected portion of the lung. The figures demonstrate, however, that not infrequently acute pleurisy is present on the opposite side from the pneumonia. On examining the cases of double pleurisy to find whether they were also associated with double pneumonia, I find that in no less than nine of these cases the pleurisy de-

scribed in the report was double and the pneumonia single. If these nine cases are added then to the three in which the pleurisy was on the opposite side from the pneumonia, we have twelve cases in our 120 where the acute fibrinous pleurisy, frequently associated with fluid, could not be accounted for by direct extension from a pneumonic lesion in the lung of the same side. I think that this is one pathological observation which might be advanced in favor of the view that acute lobar pneumonia is more likely to be a general or constitutional disease than a local affection of the lung itself. The frequency with which the presence of healed tuberculosis was recorded either in the same or the opposite lung is another point of great interest in this part of our inquiry: the condition was noted thirteen times in all. It is certainly of interest for the physician to bear in mind the possibility of the presence of chronic lesions in the lungs in dealing with cases of acute lobar pneumonia, as their presence cannot fail to have an important bearing upon both prognosis and treatment. Table XI shows that in fatal cases old fibrous pleural adhesions, chronic bronchitis and emphysema, and old tuberculous scars are very frequent.

CONDITION OF THE HEART.

The state of the heart is a matter of the greatest importance to the physician in dealing with cases of acute lobar pneumonia, and in Table XII I give the information which our 120 cases yielded on this important point:

TABLE XII.
SHOWING FREQUENCY OF ASSOCIATED CARDIAC LESIONS.

1. Normal, - - - - -	43 times.
2. Dilatation of right side, - - - - -	37 "
3. General hypertrophy and dilatation, -	15 "
4. Simple hypertrophy of left ventricle, -	3 "
5. Fatty degeneration or infiltration, -	8 "
6. Fibrous transformation, - - - - -	2 "
7. Aortic valve disease, - - - - -	14 "
8. Aortic and mitral valve disease, - -	2 "
9. Mitral valve disease, - - - - -	4 "
10. Pericarditis, - - - - -	13 "
11. Adherent pericardium, - - - - -	Once.

It is certainly noteworthy that in no less than 43 cases the condition of the heart at the post-mortem examination could be described as normal. The dilated and engorged condition of the chambers of the right side comes next in frequency, having been described 37 times in the reports. Aortic valve disease occurred 16 times, general hypertrophy and dilatation 15 times, and pericarditis 13 times. The influence of a chronic lesion of the heart, either myocardial or endocardial, on the progress of a pneumonia, is too well known and dreaded to require further remark in this place.

WEIGHT OF THE HEART.

The weight of the organ was recorded in 62 of the 120 cases. The average weight in these 62 cases

was just under 13 ounces, the maximum weight being 25 ounces, occurring once, and the minimum 7, occurring once. Weights of 20 ounces or over were recorded five times in all, and weights of 9 ounces and under six times in all. It would thus seem that acute pneumonia is not infrequently associated with enlargement of the heart, and anything like confirmed general hypertrophy of the organ must add gravely to the prognosis.

ACUTE PERICARDITIS.

Pericarditis was observed in 13 cases, and must always be regarded as a grave complication of the original disease. In some cases, no doubt, acute pericarditis occurring in the course of acute lobar pneumonia must be attributed to direct extension of the inflammatory process to the pericardial membrane, and that being so one would naturally expect that this complication would be most frequently associated with a left-sided pneumonia. With regard to the present series of cases, this proves not to be the case, as Table XIII shows:

TABLE XIII.

SHOWING RELATION OF ACUTE PERICARDITIS TO THE LUNG AND LOBE AFFECTED AND TO THE STAGE OF THE DISEASE.

<i>Right Lung (8 cases).</i>	
<i>Lobe affected,</i>	{ Upper lobe, - - - - - 3 cases.
	{ Middle, - - - - - 1 case.
	{ Lower, - - - - - 1 "
	{ Middle and lower, - - - 2 cases.
	{ All lobes, - - - - - 1 case.
8 cases.	
<i>Stage,</i>	{ Red hepatization, - - - 4 cases.
	{ Gray hepatization, - - - 4 "
8 "	
<i>Left Lung (3 cases).</i>	
<i>Lobe affected,</i>	{ Upper lobe, - - - - - 1 case.
	{ Lower, - - - - - 1 "
	{ Both lobes, - - - - - 1 "
3 cases.	
<i>Stage,</i>	{ Gray hepatization, - - - 2 cases.
	{ Purulent infiltration, - - 1 case.
3 cases.	
<i>Both Lungs (2 cases).</i>	
<i>Stage,</i>	{ Gray and red hepatization, 1 case.
	{ Purulent infiltration, - - 1 "
2 cases.	

CONDITION OF THE OTHER ORGANS.

It is impossible within the limits of a paper like the present to enumerate the various conditions which were met with in all the other organs in our investigation of cases of acute lobar pneumonia. The state of the spleen, the liver, the kidneys, and the brain may be shortly adverted to. As regards the brain, however, it must be stated that this organ was not very frequently examined.

The Spleen.—Cloudy swelling of the spleen, with enlargement and softness of the organ, was de-

scribed 58 times, or in nearly 50 per cent. of the cases. The weight of the organ was ascertained and recorded 30 times, the average weight being found to be $7\frac{3}{4}$ ounces, indicating a considerable enlargement of the organ. The maximum weight was 15 ounces, the minimum 4 ounces, each occurring once. This very constant enlargement of the spleen is not without significance, and may be regarded as another anatomical evidence of the constitutional nature of the disease. The spleen was described as healthy in 15 cases.

The Liver.—The liver was the seat of cloudy swelling in 27, and of fatty infiltration in 20 cases; the parenchyma of the organ being thus affected in 47 cases. In 15 cases the organ was described as healthy.

The Kidneys.—The condition of the kidneys is certainly a most important factor in the natural history of acute lobar pneumonia. Table XIV gives at a glance the condition in 62 cases in which a record was kept:

TABLE XIV.

Kidneys, healthy, - - - - -	16 cases.
Cloudy swelling, - - - - -	24 "
Tubular nephritis, - - - - -	9 "
Interstitial nephritis, - - - - -	12 "
Calculus, - - - - -	1 case.
62 cases.	

The occurrence of acute lobar pneumonia in the course of chronic Bright's disease is well known, and in our present series of cases we find that this association was noted to have been present at least 21 times.

The Brain.—Unfortunately the head was only examined 12 times, with the following results:

TABLE XV.

Brain healthy, - - - - -	5 cases.
Cerebral softening, - - - - -	2 "
Fracture of skull, - - - - -	1 case.
Acute meningitis, - - - - -	4 cases.
12 cases.	

It is interesting to note that in this relatively small number of head examinations acute meningitis was discovered four times, as it is well known, both clinically and pathologically, to be a common complication of acute lobar pneumonia.

It is unnecessary further to discuss the condition of the organs in general in the present series of cases, except just to add that acute peritonitis was described three times, marked atheroma of the aorta seven times, and aneurysm of the aorta twice.

THE NATURE OF ACUTE LOBAR PNEUMONIA.

Acute lobar pneumonia, both from the clinical and the pathological point of view, may be classified as primary and secondary. By primary pneumonia we mean that variety of the disease which begins

acutely in the midst of ordinary health and runs the characteristic clinical course. As secondary pneumonia, we class those cases in which the pulmonary lesion may be looked upon as the direct result, either of some old-standing primary lesion elsewhere, or of septic absorption or insufflation. As regards the actual structural change in the pulmonary tissue, the condition, both macroscopically and microscopically, may be practically the same in each form, and I do not believe that a study of the morbid anatomy of the lung alone would enable us to make the distinction. Neither do I think it possible at present by the ordinary bacteriological methods to differentiate the primary and secondary forms of the disease, for the same germs, as Weichselbaum has, I think, conclusively shown, may be found in each. As regards the 120 cases which have now been analyzed, I have no bacteriological observations to submit which would be of service in the elucidation of this point, although in several of the cases bacteriological investigations were carried out, chiefly for class and demonstration purposes. Any views I may therefore have to express on this aspect of the nature of pneumonia must be based on purely clinical and anatomical grounds.

On examining the records I find that there are only 18 cases in all, of which it could be affirmed that they were truly examples of acute secondary lobar pneumonia: Nine were septic cases, secondary to wounds or to erysipelas; eight were insufflation pneumonias, secondary to cancerous disease of the gullet or trachea; and one was secondary to opium poisoning. Of course, as may be seen in the tables, there were 21 cases which were associated with Bright's disease, and these might be regarded by some as raising the total number of secondary cases to 39, but I think the lobar pneumonia intercurrent in the course of Bright's disease may fairly enough be classed as primary pneumonia. If this is admitted, then, of our 120 cases, 102 may legitimately be regarded as examples of acute primary lobar pneumonia.

As regards the nature of secondary pneumonia little need be said. It may be looked upon as a purely local inflammation of the lung dependent upon the action of definite morbid agents, and in no sense differing from similar inflammations similarly produced in other regions of the body. Although I have said that morbid anatomy is not capable of absolutely differentiating secondary from primary pneumonia by the naked-eye appearances of the inflamed lung alone, yet I must modify this statement in so far as to admit that to the eye of a trained pathologist there is something about the appearance of an insufflation or a septic pneumonia which might in itself raise a suspicion as to its true nature. The inflammatory lesion has, on the whole, a somewhat

coarse character, with here and there areas suggestive of localized pus-formation, which is different from the homogeneous and uniform appearance of the red or grey hepatization of a primary lobar pneumonia. But even the skilled pathologist might not care to base his diagnosis on the naked-eye appearances alone without taking into consideration the information to be obtained from a careful investigation of the other features of the case.

It is not so easy, however, to be so sure of the true nature of primary acute lobar pneumonia. Whether the disease is to be regarded as a local affection of the lung or as a general constitutional disorder of the nature of a specific fever, is a problem not quite easy of solution. It is not my intention to enter upon an academic discussion of all the aspects of this difficult problem, which embraces the consideration of many points not included in the present investigation. My object is simply to inquire what light the 102 cases of primary acute lobar pneumonia dealt with in this paper throw upon this question. On the whole, I think that the facts demonstrated in this analysis support the view, now very generally accepted by physicians and pathologists, that primary acute lobar pneumonia is a general febrile disease, with a local lesion usually, but perhaps not quite invariably, in the lung. It may be urged that the results of the present inquiry do not carry us very far toward this solution of the problem, particularly with regard to that part of it which suggests that the local pulmonary lesion may, though I admit very rarely, be absent altogether, yet I think they do carry us a little way. The analysis shows us that no age or occupation is exempt from the disease, although no doubt, as regards occupation, a greater prevalence may be admitted in occupations which are to be classed as outdoor occupations. Such facts may perhaps be regarded as pointing to a general rather than a local disease, although it must at the same time be admitted that too great weight must not be attributed to them if we also take into account the greater influence of outdoor work and the distinctly greater prevalence of the disease in the male sex.

The facts brought out with regard to the prevalence of acute lobar pneumonia at different seasons of the year are distinctly in favor of the view that the disease is general and not local. The figures in Table V suggest that the incidence of the disease is subject to epidemic influences, and the circumstance that, in a series of observations extending over six years, nearly as many cases occurred in May and June as in December and January is certainly indicative of a general, rather than a local, disease. Were the disease simply a local inflammation of the lung, we should expect a very much greater prevalence in the cold months of winter and early spring;

in round numbers, however, we find that about 60 per cent. of the cases occurred in the winter months from October to March, and about 41 per cent. in the summer months from April to September inclusive. Such a difference, however, indicates something more than the mere effect of cold as producing a local pulmonary inflammation: the fact that 41 per cent. of the cases occurred during the summer months suggests, not only epidemic influences, but also a general rather than a local morbid process.

The facts as to the morbid anatomy of acute lobar pneumonia, in so far as they have been elicited in the foregoing analysis, may also, I think, be taken as pointing in the same direction. The somewhat remarkable variation of the site of the lesion in the lung in different cases, and the fact that all the lobes of a lung may be affected in some cases and both lungs in others, are circumstances not without significance. Were the disease in its origin a purely local affection it might be expected to begin with more or less constancy in a particular area of the lung; for example, in the apex or in the base. This, however, as a reference to Table VII shows, is by no means the case, although no doubt the lesion is more frequent in the right lung and in the lower lobe (Tables VI and VII). Further, the frequent association of lobar pneumonia with pleurisy of the opposite side and with pericarditis, may be taken as indicative of a general, rather than a local, disease. The facts brought out with reference to the associated pericarditis are interesting in this regard. We have seen that in our cases pericarditis was most frequent in right-sided pneumonias, in three of them the lesion being situated in the upper lobe, a circumstance which points to general infection rather than to mere local extension. The association of lobar pneumonia with acute peritonitis points to the same thing, particularly if, as sometimes happens, all the great serous cavities are more or less involved.

The condition of the other organs, as demonstrated in the course of this analysis, is such as is usually met with in the specific fevers. We have seen that cloudy swelling of the liver, kidneys, and spleen respectively are very frequent associated conditions. The constancy with which enlargement of the spleen is met with is perhaps worthy of special mention in this regard. My friend Dr. David M'Crorie, assistant physician and bacteriologist to the Glasgow Royal Infirmary, informs me that in a very large number of examinations he has never failed to obtain the pneumococcus in cultures from the spleen in cases of acute lobar pneumonia. On the whole, then, I think it may be admitted that the facts as regards morbid anatomy brought together in this paper support the view that acute lobar pneumonia is a general and not a local disease.

One of the strongest clinical arguments in favor

of this view as to the nature of acute lobar pneumonia is the constancy with which the crisis of the disease occurs on the seventh or eighth day. A reference to the table showing the day of death in 74 of my cases makes it clear that by far the greatest number of patients die on and after the seventh day of the disease. The actual figures are these: On the sixth day and before it 21 died; from the seventh to the eleventh day inclusive 48 died. These figures confirm the clinical argument based on the constancy of the critical day in pneumonia, and form a fitting conclusion to the foregoing remarks, in which I have endeavored to give expression to my opinion, based on six years' observation and study in the post-mortem room (supplemented as regards my personal experience, by six additional years of clinical study in the wards), that acute lobar pneumonia is a general febrile disease.

SUGGESTIONS FOR A STUDY OF FATS IN THEIR RELATION TO PHYSIOLOGICAL CHEMISTRY, THERAPEUTICS AND TOXICOLOGY.

By JOHN REID, M. A., M. D., AND C. M.,

REDFIELD, SURREY, ENGLAND.

Fats have been so familiarly spoken of by the profession and the laity, that it seems to be a trivial subject to write on. The very familiarity has bred contempt.

It is well known that many alkaloids and metals are soluble in fat and oil, but it is not so well known how this subject affects the scientific work of the profession. If an alkaloid, arsenic, or various other principles insoluble in water, or with difficulty soluble in water, are passed by the urine, they may be separated from that fluid by acidulating it and shaking up with oleic acid. The oleic acid being skimmed off, will part with the dissolved body, when it is dissolved in benzene—provided the body is not soluble in benzene. I have tried several bodies—arsenic, cocaine, other alkaloids, and coal-tar amines. The peculiarity is the yielding of the bodies to oil, or fatty acid, and this peculiarity may account for the frequency with which, in medico-legal cases, arsenic and other poisons are not found in the liver. There is a neglect of supernatant fat, which probably contains all, or at least the greater part, of the poison. There are the cases of arsenic in fat puddings with no poisonous effects—the fast are not absorbed in sufficient quantities and the arsenic passes off by the feces. The vast accumulations of fats in various diseases, and locally, may be due to similar principles, insoluble in water, detaining the fats. There is also the fatty pellicle in urine in cantharidin poisoning, and there are many cases of poisoning in

which the fat is removed from the system. In what cases it is stored and in what removed—two opposite conditions—ought to be scientifically examined. There may be a good clue to the action of drugs on the nervous system, and on that part of the nervous system where fat is ever present. The mode of action may thus be studied. The elective affinity of certain drugs can be explained on the same principle.

Iodide of potassium has been used as an eliminator of poisons, and cod-liver oil has been used merely to add fat to an exhausted system. It may well be asked whether the oil is only a fattener, or whether it also serves to eliminate poisonous principles. The use of fat as a vehicle, as a menstruum, in the economy has been neglected, and its elective affinity has been either unknown or ignored. These two functions appear to me to be highly important to the economy, and to open up a subject well deserving careful study. The use of oleaginous matters in some cases might replace that of iodide of potassium. To sum up: (1) In urinary analysis—oleic acid is useful and speedy in dissolving various principles; (2) in analyzing organs—they may be partly analyzed by acidulating and extracting with supernatant oleic acid, or the fat should be skimmed off and treated with benzene, so as to make complete analysis; (3) fat may be used to eliminate poisons from the body; (4) the elective affinity of drugs may be partly due to their fat affinity; (5) the whole subject of fat in its relation to the economy is worthy of careful study.

THE HOME TREATMENT OF TUBERCULOSIS.

By IRWIN H. HANCE, M. D.,

LAKEWOOD, N. J.

The home treatment of tuberculosis consists of the care of the tuberculous patient in some nearby country place, where the environment is changed but the climatic conditions remain the same. The scientific application of all approved methods used in treating this disease, modified so as to suit the patient and his surroundings, forms a basis to work upon. In a few words, it is a praiseworthy effort to extend to the masses what is now granted to those few who are treated in or out of sanatoria at our various health resorts. For those of us who have treated patients in health resorts, all the rules and regulations are well known, but for the enlightenment of those who, I hope, will carry out this home treatment, let me briefly mention all the points of treatment.

The fundamental needs of the patient are threefold: Fresh air; good food; rest. The first two are needed first, last, and all the time; the third, in the

beginning all the time, and then coupled with exercise under the direction and orders of the physician.

Fresh air is required every day and every night, the more the better. For winter, the patient's bedroom should face the south and west, and should have windows on both sides, so that one or more can always be open, except while bathing or dressing; there should be an open fireplace in the room. For summer, an easterly exposure with windows on the south as well, is to be preferred. If the patient is bedridden, the foregoing arrangement permits of the easiest solution of the question of fresh air without draughts both by day and night. For winter, select a house with a southerly exposure, which has the piazza so placed that the patients gets the largest amount of sunshine and the greatest protection from the prevailing winds of the district. For summer, tent-life night and day is the ideal one.

From the very beginning the physician should instruct and order what the temperature of the sleeping room should be; how the windows and blinds should be arranged, for night particularly; how much time the patient should be out of doors; and his aim should be so to educate and acclimate his patient little by little that he can be out of doors every day, rain or shine, for from four to twelve hours a day.

In overcoming the erroneous views of family and friends and the idiosyncracies of the patient, the attainment of the desired end as regards fresh air requires more tact and is surrounded with more difficulties than any other part of the treatment, and at the same time is more fruitful of good results.

Food: Often to begin with a patient has no appetite; food is obnoxious and repulsive. When such is the case, prescribe absolute rest, concentrated liquid food every two hours until 8 p. m. and once during the night, and evacuate the bowels daily; by this means you frequently restore naturally a poor appetite and you are always doing the patient good. Over-feeding is the principle to act upon in all cases, whether feverish or not, whether incipient or advanced, and keep it up until the patient is up to or above his usual weight. If the patient is capable of eating three good meals a day, give some easily digested food between each two meals and at bedtime. For fuller details the author refers the patient to Dr. Gardiner's book, *The Care of the Consumptive*, in which are to be found many other useful and valuable hints.

Food alone improves nutrition—this state produces increased powers of resistance. This is Nature's sole means of checking the excursions of the disease, diminishing its power for evil, and finally producing a condition of arrest which neither medicines nor serums have as yet been capable of doing.

Rest should be absolute in all febrile cases, and in

all cases at the commencement of treatment for a period of from one to four weeks. The exercise should be under the control of the physician, and its effect upon the patient should be watched carefully in regard to temperature, heart's action, chills, slight suspicions of blood in sputum, loss of or stationary weight, and a state of distinct over-fatigue. Most of us know how often hæmorrhagic cases have proved fatal by rowing too much and riding on horseback too hard. The writer can recall many fatalities in cases of arrested disease where too stiff a walk or climb has started the patient on the downward course. Remember that the bad effects of over-exercise are cumulative and that the physician needs to be very cautious in allowing any great increase in the exercise to begin with.

These are the essentials in the treatment of tuberculosis everywhere; medicines play a secondary part and are directed only to the symptomatic treatment of the disease.

There is one thing which has not received the attention it demands, viz: the care of the skin. First, as regards clothing, the patient should be warm and never feel chilly from being out of doors. The mistake is made of wearing too heavy underclothing and chamois protectors, etc. The best principle is to dress warmly enough for indoors and then have very heavy and warm outside wraps, which can be easily put on and taken off. The clothing should never be such as to produce sweating when a patient is quiescent as the writer has frequently observed to be the case.

Secondly, bathing; a phthisical patient's heart action is never strong and his capillary circulation is always bad when first applying for treatment. Both these conditions can be improved by the proper use of water, and the bettering of the capillary circulation is an outward indication of an improvement in the general circulation. The writer is convinced that the pale, dry—sometimes slightly cyanotic—skin of the tuberculous invalid can be speedily and greatly improved by the use of water; the improvement is chiefly due to a betterment of the general nervous system, and the patient is thereby benefited in a twofold manner. When proper hydropathic appliances are not at hand, the two measures about to be described are fruitful of great good. Standing in hot water (104° F.) up to the ankles, the patient, if unaccustomed to bathing, sponges the whole body with water at 85° F., daily lowering the temperature until the cold water as it flows from the faucet is used. Vigorous rubbing with a coarse towel completes the bath. To begin with, the bath may be taken at night, but afterward it is better given in the morning. After this form of bath has been used for several weeks, the dashing of cold water from a few feet above the head over the spine

increases its usefulness. For many of the weaker class of patients the following procedure may be selected: The patient lies naked in a heavy blanket; an attendant, not necessarily a skilled one, rubs the body vigorously with a very strong hot (110° F.) salt solution, using along the spine the pure moistened salt to produce a greater reaction; then the whole body is gone over with cold water, beginning at 80° to 85° F. and daily lowering the temperature until 50° F. is reached. The time consumed will vary from thirty to fifty minutes for the whole bath; the hand must always be used, no mitten or cloth; and only one part of the body be exposed at a time. It is best done at night; the patient will rest better after such a rub, and the effect upon the capillary circulation and the general condition will often be shown by the cessation of night sweats, even when these are pretty severe.

What results may we look for? Bowditch has clearly proved that sanatorium treatment fifteen miles from the city of Boston gives most encouraging results. The Montefiore Home has followed his example and shown that good results can be obtained within twenty miles of New York city. Such being the case, one should get similar results from the individual home treatment of tuberculosis. The class of patient will not probably be such as will give the most roseate statistics; for among them will be numbered those of very small means; those who are past the earlier stages; those who feel that they can only rest a short time and then must give some attention to business; and those whose family duties prohibit their leaving home.

The writer has had these patients (natives) under observation for three years; one is "apparently cured," and two have the disease entirely arrested. Two other young girls have been under treatment six months and benefited considerably.

The physician, in instituting this form of treatment, will have to meet certain objections on the part of the patient. In this present age, all patients expect better results from specialists and their advice; there is wanting the force of example which spurs on the slow and the dilatory; the visible results of this form of treatment which encourage the patient, are lacking as incentives; each one thinks that climate is the essential part of the treatment; the family, by being over-solicitous about draughts, fresh air, etc., and from one cause or another, often-times reacts badly upon the patient's mental and nervous condition. To overcome these, the doctor must have absolute faith in his own treatment and be capable of dispersing all the patient's doubts. If the doctor has any doubt about his results, or feels, as so many do, that little or nothing can ever be done for tuberculosis except by specialists in proper climates, he quickly becomes discouraged, as will be

shown in lack of detail in treatment and an indifference to the patient's general welfare.

The advantages are great in the sense that it brings to the individual at home what was formerly only to be secured in certain localities long distances away, and in special sanatoria. History has handed down to us, first, the climate or region where tuberculosis was cured; then came the natural evolution of sanatorium treatment; now is added the State care of the consumptive; finally, comes the individual; and it behooves us all now to battle for his interests that, when he is a victim of tuberculosis, he may get the "Home Treatment" for tuberculosis and his physician may extend to him the value of our scientific knowledge, instead of relegating him to the class of chronics whose fate it is to have all nostrums and new pharmaceutical compounds poured into his stomach *ad nauseam*. In another sense the advantages are great, as those of us who have witnessed the lot of the (financially) poor tuberculous invalid in a health resort know so well. His room is larger, he gets more air at night; his food is much better; he does not suffer from loneliness or homesickness; mentally he is happier, since there are not present constantly before his eyes the very sick who nearly always fill the cheaper class of boarding houses in health resorts; his money goes much further, and he gets more out of it.

In conclusion, the writer offers a theme for discussion apropos of his paper: Has the prevailing idea that climatic changes were essential to the treatment of tuberculosis retarded the progress of treating this disease? The majority of physicians consider the climatic treatment the only one to be advised for such patients, and for this reason they have not kept posted on what could be done for tuberculous persons; consequently little or no effort has been made to apply scientifically the knowledge of how to treat tuberculosis.

After five years' residence under Dr. Trudeau, in the Adirondack Cottage Sanatorium, the writer has spent another five years in the country fifty miles from New York, and it is his opinion that a rational pre-arranged system of action, such as that outlined above, controlled by common sense in dealing with each individual patient, will influence favorably a large number of all cases treated in this way; occasionally your efforts will be crowned with the success of an "apparently cured" case, and many will have their disease arrested.

The wider the spread of the knowledge concerning the home treatment of tuberculosis, the greater the enlightenment of the patient, his family, and his friends; in this way the prevention of the spread of the disease will have been strengthened and this treatment result in the advancement of prophylactic measures along with the benefit of the individual.

A NEW METHOD OF TESTING FOR LACTIC ACID.

By MARK I. KNAPP, M. D.,

NEW YORK,

ATTENDING PHYSICIAN EAST SIDE DISPENSARY DEPARTMENT OF DISEASES OF THE STOMACH.

This method is especially adapted to test for the presence of lactic acid in the gastric juice. It is essentially a modification of the Straus method, but differs from it in being more delicate, and more readily and more easily appreciated; the differential color is very easily seen, much less ether is consumed, and much less gastric juice is needed.

To make this test we need a very weak solution of ferric chloride, and ether. The strength of the iron solution is 1 to 2,000, freshly prepared. The test is performed as follows: One cubic centimetre of the filtered gastric juice is put into a cylindrical separatory funnel and to it is added ether up to five centimetres. The gastric juice with the ether is then well shaken, by which procedure the lactic acid, if present, is extracted by the ether. This is allowed to remain quiet for a little while to permit of the separation of the two liquids. About two centimetres of the iron solution are put into a test tube of about half an inch in diameter, the iron solution appearing then practically colorless. The test tube is now held inclined and the ether extract is allowed slowly to run from the separatory funnel on the wall of the test tube, which is now turned to a vertical position. At the line of contact of the two liquids appears the canary-yellow ring, which is in very marked contrast with both the subnatant and supernatant fluids. If this canary-yellow ring is not so well distinguished immediately, then the test tube may be looked at again after a few minutes. To see this yellow ring better a white paper is held behind the test tube, our back being turned toward the source of light.

136 EAST SEVENTY-EIGHTH STREET.

A Lotion for Erysipelas.—The following formula is credited by the *Journal de médecine de Paris* for May 19th to J. Hays:

R	Carbolic acid,	} of each . . . 30 minims.
	Tincture of iodine,	
	Alcohol,	
	Oil of turpentine 60	
	Glycerin 90	"

M. For external application. Every two hours the erysipelatous part may be painted with this liquid, as well as a small zone of the surrounding healthy tissues, and the whole covered with aseptic gauze.

Correspondence.

LETTER FROM TORONTO.

Small-pox in the Province of Quebec.—Toronto Vital Statistics.—The Prevention of Infectious Diseases in Ontario.—The Canadian Medical Association.—Koch's Views on Human and Bovine Tuberculous Disease.

TORONTO, August 3, 1901.

Statistics of the number of cases of small-pox that have occurred in the Province of Quebec since January 1st have just been issued by Mr. Elzear Pelletier, secretary of the board of health of that Province, and it would appear from his report that there have been 337 cases and one death. Thirty-four municipalities now have a clean bill of health, and those which are still infected are two in the County of Laprairie, one in Rimouski, one in Beuce, and the cities of Hull and Montreal. In the two last-named cities there were in all 161 cases, and in these three deaths occurred, which would make a total of four deaths for the Province.

For the seven months of this year, Toronto has the following to report as regards vital statistics: Births, 400, 271, 379, 430, 431, 318, 252; marriages, 164, 130, 99, 158, 105, 280, 241; deaths, 354, 281, 322, 303, 283, 255, 303. For the same months in 1900, the following are the figures: Births, 365, 287, 378, 391, 404, 325, 479; marriages, 141, 125, 115, 96, 135, 205, 157; deaths, 270, 248, 330, 367, 323, 249, 301. In July, 1901, there were thirty-four more births than in June, thirty-nine fewer marriages, and forty-eight more deaths, 127 fewer births than in the corresponding month of 1900. For the month of June, 1901, there were 521 marriages against 362 for the same two months of 1900. This shows an increase of 159, or nearly fifty per cent. In the seven months there were 2,481 births, as compared with 2,629 in 1900, a decrease of 148.

During the past seven months, the provincial health authorities of Ontario have had to cope with a severe outbreak of small-pox in the northern unorganized districts of the Province, and as a result the Ontario government has deemed it wise to adopt special regulations in order to safeguard the health of people living in these districts, who are mainly employed in lumbering and mining camps, saw-mills, smelting works, and railway construction camps. In this territory, which stretches from the Ottawa River on the east to the boundary of the Province of Manitoba on the west—1,200 miles in extent and including over 400 unorganized townships—there is a total population of 100,000; and the regulations will seek to provide for sanitation and the control of outbreaks of infectious and contagious diseases in these districts. Immediately on

the appearance of any contagious disease, it will be the duty of the owner or foreman in charge of any of these works or the special medical officer, where there is one, to report directly to the secretary of the board of health at Toronto, in order that prompt measures may be instantly instituted to limit the outbreak. Unsanitary conditions discovered in any of these lumbering and mining camps, etc., will also be rigidly looked after.

Very recent outbreaks of small-pox at Burlington, Toronto, and other points in the Province of Ontario have been the subject of earnest investigation on the part of the provincial health authorities, and it would now appear as though the thirteen cases reported could be directly traced to a case which occurred during military camp at Niagara-on-the-Lake, the authenticity of which has been vehemently denied by the surgeons in charge of the camp. The affair has caused no little friction between the provincial health officers and the Toronto Health Department on the one hand and the military authorities on the other, who are upholding the assertions of their surgeons who persistently deny that there ever was any small-pox in camp. It would appear that, acting on instructions issued from the Department of Militia at Ottawa, all soldiers before going to camp were vaccinated. In one of these the vaccination had taken well, but small-pox had also developed and ran its course in him concurrently with the vaccinia, and thus escaped diagnosis by the military surgeons, who considered that the rash was due to the vaccination, whereas, in fact, there now appears to be no doubt that it was genuine small-pox. In order to prevent the possibility of any more outbreaks, it has been advised that all the effects of this soldier, together with those who came into immediate contact with him during his stay in camp, be most thoroughly disinfected. Whether the military authorities will follow out this suggestion remains to be seen.

All seems to be pointing well toward a great gathering of medical men at Winnipeg from the 28th to the 31st of this month, the occasion being the annual meeting of the Canadian Medical Association. Under the earnest and energetic presidency of Dr. H. H. Chown, of Winnipeg, and the general secretary, Dr. F. N. G. Starr, of Toronto, the meeting promises to be exceptionally good, both from a scientific and from a social standpoint. The Address in Medicine is to be delivered by Dr. J. R. Jones, of Winnipeg, the Address in Surgery by Dr. O. M. Jones, F. R. C. S., of Victoria, B. C., and the Address in Gynecology by Dr. Thomas S. Cullen, of Baltimore. In addition, many of the prominent members of the profession throughout Canada are down to contribute papers. Among those from the United States who will read papers are Dr. H. M.

Bracken, of St. Paul, Professor Russell, of the University of Wisconsin, and Dr. L. H. Warner, of New York. No doubt many of the profession in Ontario will be prevailed upon to attend this meeting, especially as the trip on Lake Huron and Lake Superior from Owen Sound through the Straits of Sault Ste.-Marie by the palace steamers of the Canadian Pacific line is one which is not surpassed on the lakes of America. The profession in Winnipeg are at present busily engaged in planning entertainments for their visitors. Among others, there is to be a visit to old Fort Garry and a trip through the great wheat belt of Manitoba; and side trips after the meeting have been arranged for over the Canadian Pacific lines to Banff and Vancouver. Altogether, the promises for the Winnipeg meeting of the Canadian Medical Association are indeed bright.

From interviews in the newspapers it would appear that Toronto physicians did not take kindly to the professed views of Dr. Koch recently given to the public at the London Tuberculosis Congress. Dr. Sheard, the medical health officer, points out that Professor Koch's discoveries have not always realized his hopes of them. He considered that if Dr. Koch's assertions were true it would materially change the import of a great many legislative enactments adopted throughout the civilized world for arresting the spread of tuberculosis. He further considered that the investigations of the Royal Commission appointed in England fifteen years ago clearly showed that there was not so much to be dreaded from the production of tuberculosis through meat and milk as some were inclined to fear. If Dr. Koch's statements are substantiated by experience, it would not alter Toronto's system of inspection of dairies and food products in the slightest. Dr. H. B. Anderson, professor of pathology in Trinity Medical College, considered that any statement made by Dr. Koch had certainly been well considered before being made. He seemed to regard the statement of Professor Koch as more interesting from a scientific than a practical standpoint. Dr. N. A. Powell, secretary of the National Sanitarium Association and president of the Ontario Medical Association, does not attach much weight to Professor Koch's assertions, although Professor Koch had put the whole world under an immense obligation by enabling physicians everywhere to demonstrate the presence or absence of the germ of tuberculosis. He considered that it was worthy of note that Lord Lister had placed himself on record as being unconvinced. Dr. P. H. Bryce, secretary of the Ontario Board of Health, considered that even if the statements of Professor Koch were true, the saving of cattle from the terrible ravages of tuberculosis was a sufficient justification for the measures which are being taken to stamp out bovine tuberculosis.

Therapeutical Notes.

Chrysarobin for Hæmorrhoids.—The *Journal de médecine de Paris* for May 19th ascribes the following formula to Rounne:

R Chrysarobin 22½ grains;
Iodoform 7½ "
Extract of belladonna..... 15 "
Vaseline 300 "

M. fiat unguentum.

A Sedative in Tuberculous Meningitis.—The *Journal de médecine de Paris* for May 19th ascribes to Malba the following prescription to combat the agitation, the cries, and convulsions in tuberculous meningitis. It should be given in coffeespoonful doses every half hour until quiet is obtained:

R Strontium bromide..... 15 grains;
Chloral hydrate..... 7½ "
Syrup of valerian..... 300 minims;
Syrup of mint..... 900 "

M.

For Intestinal Tuberculosis in Infants.—The *Gazette hebdomadaire de médecine et de chirurgie*, for July 11th, cites the following from *Nouveaux Remèdes*:

R Silver nitrate..... $\frac{1.5}{100}$ ths of a grain;
Powdered starch, { of each, $\frac{3.0}{100}$ ths of
Powdered marshmallow, { a grain.

M. For one pilule. One pilule to be taken daily for three consecutive days after the administration of a light saline aperient. If the diarrhœa does not cease, the dose should be raised to two, or even three, pilules daily during two consecutive days.

This treatment is suitable for children from five to ten years of age. For young infants the following draught is recommended:

R Silver nitrate..... $\frac{1.5}{100}$ ths of a grain;
Raspberry syrup, { of each.... 750 minims.
Distilled water, }

M. From a few coffeespoonfuls to the entire draught, according to age.

For Paralysis Agitans.—The *Gazette hebdomadaire de médecine et de chirurgie* for July 11th ascribes the following to M. Bourneville:

R Fowler's solution..... 150 minims.
Distilled water, { of each.... 75 "
Neutral glycerin, }

M. One cubic centimetre (about 16 minims) for a hypodermic injection.

For Meteorism in Young Infants.—The *Gazette hebdomadaire de médecine et de chirurgie* for July 11th, citing *Nouveaux Remèdes*, attributes the following to M. Freyberger:

R Sodium sulphocarbonate,
from 3¾ to 6½ grains;
Syrup of bitter orange
peel 75 "
Distilled peppermint water 375 minims.

M. Three coffeespoonfuls to be taken daily for two consecutive days.

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NEW YORK, SATURDAY, AUG 10, 1901.

MALARIAL DISEASE IN NEW YORK.

The unusual rainfall in New York during the latter portion of the spring and the early weeks of the summer this year led naturally to the expectation that mosquitoes would be uncommonly numerous before the warm months were over. We have not yet reached the time of the year in which they are generally most prevalent, but we are verging on it. It was timely, therefore, for the city board of health to warn the public, as it did last week, of the danger of malarial infection by the bite of the insect, and to instruct the people as to means of preventing its access to the person. If we are not misinformed, the board had some time before given out the statement that very few of the mosquitoes ordinarily encountered in the borough of Manhattan were of the genus *Anopheles*; nevertheless, the first one that attacks any of us may belong to that genus. We now know that certain mosquitoes, besides being exasperating disturbers of people's sleep, are the chief if not the only bearers of malarial infection, and it is for our safety as well as for our comfort to take all possible precautions against being bitten by them. The substance of the board of health's advice in the matter was given by us last week, but it may be well to call attention again to the simple expedient for killing mosquitoes that have alighted on the walls and ceilings of rooms by means of a few drops of kerosene in a shallow tin dish nailed to the end of a stick. It seems exceedingly difficult to bring about concerted action on the part of rural property-owners in measures for the extinction of the mosquito, easy of employment and free from noteworthy expense as those measures are; but we may hope that the quasi-official campaign against

the insect which we hear of as having set in or as just about to open on Staten Island may prove so effective as to set the population in general an example that they will not be able to ignore.

We are not aware that malarial disease is yet more than commonly rife in New York, but the probability seems to be that a decided increase of its prevalence may be looked for within the next two or three months unless such means are generally resorted to as the board of health advises. Nevertheless, we must in the interest of the public health protest against spreading the notion that children should not be taken near any of the ponds in the Central Park, lest they should be infected. Not many weeks ago an excellent observer in entomology stated publicly that he had never known mosquitoes to deposit their ova on water in which there were fishes. It is our impression that there are fishes in the Central Park ponds; if there are not, the ponds can promptly be stocked with them. It is not to be endured that any portion of the park should constitute a menace to health; rather it should be one of the prime agencies in maintaining the good physical condition of our people, and we believe it really is. Children should be taken to the park in still greater numbers, not kept away from it.

THE INTERMEDIATE EXAMINATION IN THE STATE OF NEW YORK.

As was briefly announced in our news columns last week, the Board of Regents of the University of the State of New York have decided that students who have passed the entrance examination and taken two full courses, of not less than nine months each, in two different calendar years, in a medical school of approved standing, may take their final examinations in anatomy, physiology, hygiene, and chemistry. This move is understood to have been made as a concession to the medical schools of the State, which, owing to the strict requirements of the laws of the State, have to some extent been outstripped in the number of students by the schools of certain other States in which the medical practice laws are not so exacting. The result of it is expected to be that the student, who now spends much of the second half of his undergraduate course in refreshing his memory concerning the elementary branches of the curriculum, will be free to devote his entire time to the practical branches and will to

that extent be less handicapped than he is at present. The schools of the State, of course, will profit by this relief afforded to the students. We welcome this prospect, for full use of the immense clinical advantages of New York ought not to be hampered by unnecessary legal requirements; still more, however, do we welcome the promised alleviation of the overworked students' lot.

But we are not quite able to see why the regents regard hygiene as an elementary branch of medical study. In the intermediate examination it might, in our opinion, well be replaced by *materia medica* (not by therapeutics, of course). We know of no good reason why a young man should spend any considerable amount of time in burdening his memory with chemical formulæ, the physical properties of crude drugs, and the characteristics of the plant or animal that yields a medicinal substance, only to forget them and cease to care a straw for them as soon as he has passed his examination. On the other hand, he must study hygiene all his life, for it is the highest phase of medicine. In some States a board of health is invested with the prerogatives of our board of regents, as regards medical matters, and no such board, we imagine, would look upon hygiene as an elementary branch of medicine in the sense of a preliminary to be memorized for an occasion and then forgotten.

There is another feature of the regents' action of which, provided we are correctly informed, we cannot approve, and that is this, that candidates who fail, either in the intermediate or in the final examination, to win a mark of seventy-five per cent. in one or more "topics" must be examined again in all the "topics," and must wait six months for the privilege. Why cannot an applicant be "conditioned" as to a branch in which he has failed, and be passed definitively as to the branches in which he has shown his proficiency, as is constantly done in the universities? Or is it the ruling idea to make the license to practise medicine as nearly unattainable as possible?

Perhaps, however, we ought not to complain concerning these matters, seeing that the regents have really granted the students a substantial boon and at the same time strengthened the hands of the State schools. Medical education ought to be as free as it can be made consistently with thoroughness, and the right to practise ought not to turn on any ques-

tion of memorizing. We must eventually have a uniform standard in all the States, but the path to the achievement of this object does not at present seem plain. The State examination should cease to be vexatious, and tend more and more in the direction of eliciting the candidate's mental qualities rather than the length of his memory.

PRECIPITATED CALCIUM CARBONATE IN THE TREATMENT OF DIABETIC COMA.

Last week, in an article entitled *Temporary Restoration of Consciousness in Diabetic Coma*, we took as our text the report of a case treated by M. Rondet, who employed large subcutaneous injections of sodium bicarbonate, according to the teaching of M. Lépine. This fact has moved Dr. Heinrich Stern, of New York, to send us a copy of an article of his presented to the Section in *Materia Medica, Pharmacy, and Therapeutics* of the American Medical Association at the Atlantic City meeting, in June, 1900, and published in the *Journal of the American Medical Association* for December 8th. Dr. Stern's article is on the treatment of diabetic coma. In the introductory portion of his article Dr. Stern remarks that the term diabetic coma is not very specific, as the phenomenon is by no means characteristic of diabetes alone, and he appears to accede to the substitution of the term *dyspnœic coma*, as suggested by Kussmaul, Riess, and Naunyn. He points to the singularity of the coexistence of extreme general weakness with the vigorous inspiratory movements in the *dyspnœa* first described by Kussmaul. The patient, he says, breathes with great exertion, although there is apparently no obstruction to either inspiration or expiration. Every respiratory muscle is greatly taxed, and the thorax expands perfectly in all directions. The inspirations are perfect, intensely deep, and long drawn; the expirations also are perfect, but of shorter duration. Gradually the respiratory movements assume greater frequency, and they may become more superficial, particularly if the patient has been unconscious for some time. At the onset the circulation is unaffected, and cyanosis is rarely present. The alkalinity of the blood is somewhat diminished during the attack of *dyspnœic coma*, and this fact Dr. Stern, in common with some other observers, attributes to the formation of an acid,

an "acidosis" consisting in the production of oxybutyric acid.

Dr. Stern credits Stadelmann with having been the first to recommend the use of sodium bicarbonate to neutralize this acid. The efficiency of the alkaline treatment he believes to be much greater in the incipient stage of the comatose condition than when coma has become pronounced, and he has observed far better results from the use of precipitated calcium carbonate than from that of sodium bicarbonate. In one of the two cases reported the calcium preparation was given by enteroclysis, forty-five grains suspended in a quart of water with the aid of gum arabic.

AN IMPORTANT RULING CONCERNING A PHYSICIAN'S FEES.

A very important ruling was made by Judge Armstrong, at Camden, N. J., on August 2d. Dr. Godfrey, who had attended a woman for four years, put in his claim as a preferred creditor for \$349 against her estate, after her decease. It appears that the patient had been suffering from Bright's disease and, while under Dr. Godfrey's care, had been recommended by him to go to Bedford Springs, where she died. While she was there, another physician attended her. The claim was made by the defendant estate that, not Dr. Godfrey, but this other physician, who was called in at the last, attended the patient in her last illness, and that, therefore, Dr. Godfrey had no *locus standi* as a preferred creditor. In this point of view the court, very properly as it seems to us, declined to concur, but ruled, on the contrary, that Dr. Godfrey did attend the woman in her last illness. It seems to us to be clear that as the attendance was continuous over the period of the illness which ended fatally, until the patient, at Dr. Godfrey's advice, went to Bedford Springs; her being there was in fact part of the treatment prescribed by him; and, unless it could be shown that the patient had actually dismissed him after going there, it must reasonably be assumed that she continued to carry out his treatment in general, notwithstanding the presence of another physician, whose attendance should be regarded in the light of auxiliary aid in an emergency, much as would be the case were the nearest physician summoned, say, in an attack of hæmoptysis, when the doctor under whose continued care a tuberculous patient was, did not happen to be at home. Surely both physicians in such a case would be properly held to have been in attendance during the last illness.

OUR SUBSCRIBERS' DISCUSSIONS.

The date on or before which we must receive answers to our third question (How do you treat Colles's fracture of the radius?) is next Monday, August 12th. We have already received a goodly number of replies. As illustrations will have to be made for some of them, there may be a little delay in their publication and in the announcement of the award. We expect, however, to bring them out in our issue for August 24th. Meantime we will now announce the sixth question, answers to which should reach us not later than November 11th. It is this: How do you use quinine for the prevention and cure of malarial disease, and what other treatment do you employ? We are meeting with many indications of the interest which our subscribers are feeling in these discussions. One of these indications is rather remarkable; it is a request from a subscriber to be allowed to propound a question and himself furnish the prize for the successful competitor. This, of course, we could not accede to, but we mention it as a noteworthy piece of evidence of the importance attached to the new department.

ANOTHER DISCREDITED DRUG.

Recent literature has contained frequent mention of yohimbine, or johimbine, as it is also written, as a safe and efficient remedy for sexual impotence, but in all probability no such remedy exists. It is without surprise, therefore, that we note Krawkoff's recorded experience in its use (*Klinisch-therapeutische Wochenschrift*, 1901, Nos. 22-25; *Centralblatt für innere Medizin*, July 27th). He tried it on six men (physicians). One of them was in perfect health, and the five others had sexual debility connected with neurasthenia. In not one of them was any aphrodisiac effect produced, but almost all of them showed signs of poisoning. Krawkoff concludes that in cases in which it has been reported to have cured impotence the result has really been due to suggestion, and he adds that its use is not free from danger.

A SUPPOSED SUPERNUMERARY PANCREAS.

A curious formation was lately encountered by M. Gandy and M. Griffon in the wall of the upper portion of the duodenum. At a meeting of the Paris Anatomical Society (*Gazette hebdomadaire de médecine et de chirurgie*, July 18th) they did not hesitate to call it an accessory pancreatic gland, though they had not been able to discover in it any of Langerhans's islets. It was a rounded, flattened body about as large as a franc piece.

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general, during the week ending August 3, 1901:

Smallpox—United States and Insular.

California....	Los Angeles....	July 13-20.....	2 cases.	
"	San Francisco.	July 14-21.....	1 case.	
Kentucky....	Lexington.....	April 27-May 4..	11 cases.	
Michigan....	Grand Rapids..	July 13-27.....	2 cases.	
Nebraska....	Omaha.....	July 6-20.....	5 cases.	
N. Hampshire.	Nashua.....	July 20-27.....	1 case.	
New Jersey..	Newark.....	July 20-27.....	6 cases.	1 death.
New York....	New York.....	July 20-27.....	46 cases.	9 deaths.
Ohio.....	Cincinnati....	July 19-26.....	1 case.	
Pennsylvania.	Philadelphia...	July 20-27.....	1 case.	1 death.
Tennessee...	Memphis.....	July 20-27.....	1 case.	
Utah.....	Salt Lake Cy..	July 20-27.....	7 cases.	
Washington..	Tacoma.....	July 14-21.....	6 cases.	
West Virginia	Martinsburg...	July 26.....	13 cases.	

Smallpox—Foreign.

Argentina....	Buenos Ayres..	May 1-31.....		247 deaths.
Austria.....	Prague.....	July 6-13.....	1 case.	
Belgium.....	Antwerp.....	July 6-13.....	4 cases.	1 death.
France.....	Paris.....	July 12-19.....	5 cases.	5 deaths.
Gibraltar....		July 1-14.....	2 cases.	
Gt. Britain...	Glasgow.....	July 12-19.....	3 cases.	1 death.
"	London.....	July 6-13.....	12 cases.	
India.....	Bombay.....	June 25-July 2..		4 deaths.
"	Calcutta.....	June 22-29.....		5 deaths.
"	Karachi.....	June 8-30.....	13 cases.	6 deaths.
Italy.....	Messina.....	July 6-13.....	5 cases.	4 deaths.
Netherlands..	Rotterdam....	July 13-20.....	1 case.	1 death.
Russia.....	Moscow.....	June 30-July 6..	9 cases.	3 deaths.
"	Odessa.....	July 6-13.....	1 case.	1 death.
"	St. Petersburg.	June 15-July 6..	7 cases.	1 death.

Plague—Insular.

Hawaii.....	Honolulu.....	July 17.....		1 death
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Plague—Foreign.

India.....	Bombay.....	June 27-July 2..		65 deaths
"	Calcutta.....	June 22-29.....		14 deaths.
"	Karachi.....	June 8-30.....	23 cases.	23 deaths.

Yellow Fever.

Costa Rica...	Port Limon....	July 4-21.....	2 cases.	
Cuba.....	Cienfuegos....	July 15-18.....	2 cases.	
Mexico.....	Vera Cruz....	July 13-27.....	2 cases.	1 death.

Cholera.

India.....	Bombay.....	June 25-July 2..		3 deaths.
"	Calcutta.....	June 22-29.....		23 deaths.
Java.....	Batavia.....	June 8-22.....	49 cases.	27 deaths.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending August 3, 1901:

DISEASES.	Week end'g July 27		Week end'g Aug. 3	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	37	13	58	13
Scarlet fever.....	114	16	130	11
Cerebro-spinal meningitis.....	□	8	0	7
Measles.....	120	10	127	21
Diphtheria and croup.....	122	16	103	28
Small-pox.....	46	9	41	14
Tuberculosis.....	255	153	249	152

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the United States Marine-Hospital Service for the seven days ending August 1, 1901:

BEAN, L. C., Acting Assistant Surgeon. Granted leave of absence for thirty days from August 2d.

CLARK, TALIAFERRO, Assistant Surgeon. Upon being relieved by Passed Assistant Surgeon J. B. GREENE, to proceed to the Immigration Depot, New York, and report to Surgeon G. W. STONER for duty, relieving Assistant Surgeon J. D. LONG.

COBB, J. O., Passed Assistant Surgeon. The Bureau letter of July 22, 1901, granting him leave of absence for thirty days from July 24th, is amended so that the said leave shall be effective on July 25th.

GREENE, J. B., Passed Assistant Surgeon. Relieved from temporary duty at Washington and directed to proceed to Stapleton, New York, and report to the medical officer in command for duty and assignment to quarters, relieving Assistant Surgeon TALIAFERRO CLARK.

HARRIS, B. Y., Acting Assistant Surgeon. Granted leave of absence for fifteen days from August 12th.

IRWIN, FAIRFAX, Surgeon. Granted leave of absence for twenty-one days from August 7th.

KORN, W. A., Assistant Surgeon. Granted leave of absence for one month from August 12th.

LONG, J. D., Assistant Surgeon. Upon being relieved by Assistant Surgeon TALIAFERRO CLARK, he will proceed to Manila, Philippine Islands, and report to the chief quarantine officer for duty. He is granted leave of absence for two days.

MARTIN, H. McD., Acting Assistant Surgeon. Granted leave of absence for thirty days from August 1st.

O'GORMAN, T. V., Hospital Steward. Granted leave of absence for sixty days on account of sickness, to take effect on date of departure from station.

WERTENBAKER, C. P., Passed Assistant Surgeon. To proceed to Camp Fontainebleau and adjacent coast towns as inspector.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army from July 27 to August 3, 1901:

EDIE, GUY L., Major and Surgeon, is granted leave of absence for one month, with permission to apply for an extension of one month.

EWING, CHARLES B., Major and Surgeon, is relieved from duty in the Division of the Philippines, to take effect September 4, 1901, and will then proceed to the United States for further orders.

RUTHERFORD, HENRY H., First Lieutenant and Assistant Surgeon, is honorably discharged as captain and assistant surgeon United States Volunteers.

SHAW, HERBERT G., First Lieutenant and Assistant Surgeon, now at the Presidio of San Francisco, will report to the commanding officer of that post for temporary duty.

STRONG, RICHARD P., First Lieutenant and Assistant Surgeon, is granted leave of absence for one month.

TRUBY, WILLARD F., First Lieutenant and Assistant Surgeon, is granted leave of absence for one month.

WILLIAMS, ALLIE W., First Lieutenant and Assistant Surgeon, is detailed as a member of the examining board convened at the Army Building, New York, vice JOHN S. KULP, Captain and Assistant Surgeon, relieved.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending August 3, 1901:

ASSERSON, F. A., Assistant Surgeon. Detached from the Naval Hospital, New York, and ordered to the Asiatic Station, August 16th.

BACKUS, J. W., Assistant Surgeon. Detached from the *Vermont* and ordered to the Asiatic Station, August 16th.

GRIFFITH, S. H., Surgeon. Relieved as recruiting officer at Buffalo, and ordered to continue other duties.

The College of Physicians and Surgeons of Chicago.—We are glad to learn that, reports to the contrary notwithstanding, the administration of this school, which is the College of Medicine of the University of Illinois, has suffered no serious disturbance in consequence of the fire which happened on June 25th, but is now better housed and equipped than formerly, and work is progressing as usual.

Changes of Address.—Dr. L. Napoleon Boston, to No. 1531 South Broad Street, Philadelphia; Dr. Joseph Wiener, Jr., to No. 1001 Madison Avenue, New York.

Prof. Schenck to Discuss His Method of Predetermining Sex.—According to a cablegram, the programme arranged for the forthcoming zoological congress in Berlin includes one hundred and thirty addresses. Professor Samuel Schenck, of the University of Vienna, will discuss before the congress his method of predetermining sex.

Denver's Consumptives Requested Not to Expectorate.—The health commissioner of Denver, Col., has published a circular which is to be distributed by the police force of that city requesting victims of tuberculosis to abstain from expectorating on streets and in public conveyances. The commissioner explains in these circulars the dangers of spreading the disease through disregard of the rules he promulgates.

Outdoor Treatment for Tuberculosis Patients.—A system of outdoor treatment for insane patients affected with tuberculosis has been in operation at the Manhattan State Hospital for the last two months, and the State Commission reports that it has been attended with most gratifying results. About sixty patients have been quartered since June 1st in tents having wooden floors. Old and feeble patients have been greatly invigorated, and formerly helpless patients are now able to walk and care for themselves.

A Japanese Physician Begins Practice in Brooklyn.—Dr. Kinyi Ugai, a Japanese, of No. 63 Stands Street, Brooklyn, has registered as a physician in the County Clerk's office, and received a certificate entitling him to practice in Kings county. Dr. Ugai was born in Tokio. After studying four years in Japan he came to New York and entered Bellevue Hospital, which he has just left after remaining there a year. His intention is to take a post-graduate course in one of the Brooklyn institutions, meanwhile practising, after which he will return to his native land.

An Illegal Practitioner Prescribes Poisonous Doses.—The New York State Medical Association are searching for a man in New York city who is practising medicine illegally. This man is considered to be a dangerous person to be at large, as he has seemingly no knowledge of drugs. He recently wrote a prescription for a mixture to be taken internally that would have caused instant death. It was this prescription that led to his discovery. The prescription was given to a druggist to be filled by the man who had gone to the bogus doctor for treatment. The druggist said he could not fill the prescription, as it called for enough poison to kill many persons.

Governor Odell Believes That New York State Hospitals Are Too Expensively Run.—According to a recent statement of a member of the party which, with Governor Odell, has been inspecting New York State's public institutions, the Governor

has reached the conclusion that the State hospitals are too expensively run. In his message he cited the fact that the State has \$20,000,000 invested in buildings and equipments, which, the Governor said, shows that it has cost \$909 for each patient for buildings and equipments. This sum indicates to the Governor's mind that there has been great extravagance in the matter of buildings and equipments. He is determined that in the future greater economy shall be exercised in appropriations for these purposes.

Kansas City Physicians Recommend a Hot Weather Hospital.—Kansas City physicians recommend the erection of a hot weather hospital. In such an institution the air would be cooled artificially and the hospital could be built near one of the ice plants, with pipes through which refrigerated air could be pumped into the rooms of the building. It is agreed that deaths are caused every day by the intense heat that are not reported as heat prostrations. The temperature in the average hospital ward is enough to double the sufferings of a patient. By the use of cold air the wards of a hot weather hospital could be kept at the same temperature day and night. There would be fewer deaths and much less suffering were these conditions made possible. The idea will probably be seriously considered by those interested in the care of the sick.

Deficiency in Preliminary Qualifications among Graduates in Medicine.—Dr. Henry Beates, president of the Pennsylvania State Board of Medical Examiners, claims that of the 407 candidates before that board for examination last month eighty-nine, or less than 25 per cent., failed. The board completed its sessions at Atlantic City, N. J., recently. "It is the commercialism of the medical schools that is the cause of so many rejections," said Dr. Beates. "The papers of this examination prove clearly that the medical colleges continue to admit students who are utterly illiterate. These students cannot pass even the simplest rudimentary examination, and to them medicine is a study entirely beyond comprehension. Just so long as these colleges admit men of little or no preliminary education there must be a large percentage of rejections when they take the board examinations. I wish to say emphatically that the granting by a college of diplomas to such men is a fraud."

Florida's Quarantine Work Transferred to the Marine-Hospital Service.—On August 1st a transfer took place of all the quarantine work hitherto conducted by the State of Florida to the Marine-Hospital Service, which will greatly increase the power of the federal government in keeping contagious diseases from the country. Under the old method the ports of Florida have been under the direction of that State so far as quarantine regulations have been concerned, and although the State cooperated with the Marine-Hospital Service in times of danger, yet it is expected that greater efficiency will be secured now that the work is directly under the guidance of the central quarantine service. This transfer was made in accordance with an act of Congress and the willingness of Florida to relinquish her rights in the matter. The transfer

places the entire quarantine force under the Marine-Hospital Service. This force consists of nine acting assistant surgeons, two sanitary guards and twenty-four employes. There are in all eleven quarantine stations involved in the transfer.

The First Pan-Hellenic Medical Congress was held, according to *'Ιατρικὴ πρόδοος*, for May and June, at Athens on May 6, 7, 8, 9, and 10, 1901, when many important subjects came under discussion. Among these may be enumerated Phthisis and its Treatment in Greece, with addresses by Dr. Makkas and Dr. Patrikios; On the Use of Vinous and Spirituous Liquors in Greece, and its Consequences, with addresses by Dr. Vaphas and Dr. Foustanos (editor of *'Ιατρικὴ πρόδοος*); On Malarial Fevers in Greece, with addresses by Dr. Theophanides and Dr. Kardamates; On Leprosy, with addresses by Dr. Chatzemikales and Dr. Mitautses; On Echinococcus in Greece, with an address by Dr. Tsakonas; On School Hygiene, with addresses by Dr. Papagianes; On Scolecoiditides, with addresses by Dr. Galvanes and Dr. Phocas; On the Surgical Treatment of Tumors, by Dr. Galvanes; On the Application of Asepsis and Antisepsis in Greece, by Dr. Maurakes; On Pelvic Dystocia, by Dr. Kampanes; On Affections of the Eyes in Infectious Diseases, by Dr. Metaxas; and on Syphilis in Greece, by Dr. Protopoulos.

Much good work was done at the congress, which appears to have been very successful.

Much Speculation as to Surgeon-General Van Reyepen's Successor.—The term of Surgeon-General W. K. Van Reyepen, Chief of the Bureau of Medicine and Surgery in the Navy Department, will expire December 18th. Dr. Van Reyepen will be retired from service in November, 1902, under the law. His services during and since the Spanish war undoubtedly will secure for him a reappointment to the head of the bureau, and that reappointment will assure to him retirement with the rank and pay of a rear admiral. There is no suggestion in the service, either in or out of the Medical Corps, that this programme will not be carried out. What the officers of the Medical Corps are interested in is what will become of the office after Dr. Van Reyepen has been put on the retired list. After his retirement there will be available several medical directors, whose terms are approaching completion, and it is thought the President may choose one of these, and thus give to the fortunate man the chance to retire with the highest rank. But it is also suggested that the President may overlook the medical directors and select a medical inspector for the place. Two medical officers of this rank are known as intimate friends of the President. John Covert Boyd, now fleet surgeon on the *Kearsarge*, is one, and Presley Marion Rixey is another. Dr. Boyd will not retire until 1912, and Dr. Rixey, who is six numbers below Dr. Boyd, will not be due to be retired until 1914. The appointment of either of these officers will deprive about twenty of their seniors of the prospective chance of retirement as rear admirals.

A Crusade Against Mosquitoes on Staten Island.—Dr. Alvah H. Doty, Health Officer of

the Port of New York, began his crusade against the plague of mosquitoes at Concord, near Clifton, Staten Island, on August 2d. Dr. Doty had water taken from twelve stagnant pools suspected of being the breeding places of anopheles, the mosquito which spreads malaria, and which are known to contain the larvæ of several species of gnats. These samples will be under inspection at the Quarantine bacteriological laboratory, and careful note will be taken of results. Despite the rainy weather of the early August days, the war of extermination was continued and five small ponds at Concord were treated to a spray of oil, while the weeds and underbrush adjacent to the ponds were mowed down, raked into heaps and sprayed. An oil tank wagon was used, filled with a hundred gallons of crude petroleum. Another wagon carried the party and the apparatus, including the spraying raft, force pump, long lengths of garden hose and scythes. When a pond was reached the tank wagon was driven as close as possible to its banks, a raft was floated with a gridiron spraying apparatus suspended by chains beneath it; while one man worked at the pressure pump two others drew the raft to and fro over the surface by long ropes, until every part had been traversed. The oil, discharged in tiny streams some fifteen inches beneath the surface, quickly rose carrying myriads of minute wrigglers, the mosquito larvæ, to the surface and killing them, at the same time forming a light scum over the pond and preventing such larvæ as escaped the oil from obtaining enough air to support life.

While the men were engaged in this work the houses in which cases of malarial fever had been reported were inspected. Dr. Doty declares that he is learning a lot about the habits of mosquitoes in these expeditions. One thing which particularly attracted his attention was the fact that during the day myriads of the insects found refuge in the grass, weeds and underbrush adjacent to their breeding places. The mosquito is of a delicate organization and it seeks refuge from the sun, high winds and storms in this undergrowth. Without this refuge they would be destroyed or be compelled to migrate. He has consequently determined to cut away the undergrowth more thoroughly than at first proposed.

It is too soon, Dr. Doty said, to determine the effect of the work, but inquiries made among the residents near the ponds treated elicited opinions that there seemed to be a marked diminution in the number of mosquitoes.

Dr. Doty has received very little assistance from the residents in the district to be treated so far, except that they have been ready to collect specimens for analysis, but he has encountered no opposition and there have been no unpleasant incidents.

Small-Pox.—There is no abatement of the disease in New York and health inspectors have been busy in Little Italy, a district in Harlem inhabited almost entirely by Italians.—It is feared that the wholesale robbery of hospital supplies and other articles from a storage house on the grounds of an abandoned small-pox camp at Gloucester City, N. J., may spread the contagion.—Chester, Pa., has recently been visited by the epidemic, so that the local board of health has announced its intention to vac-

ciate every citizen of the place.—A similar announcement has been made by health commissioner Bosley, of Baltimore, Md.—It is stated that unless something is done to stamp out the small-pox, which has again attacked the tribe of Winnebago Indians on the reservation near Black River Falls and scattered on private farms between there and La Crosse, Wis., half of the once great tribe will be wiped out in a short time.—Fifty cases of small-pox among Indians are under quarantine at the Flathead agency in Montana. Steps have been taken to prevent its spread and stamp out the present epidemic. Officials are somewhat surprised at the extent of the disease at this season, as small-pox heretofore has been regarded as a winter disease.

Typhoid.—Pittsburg's hospitals are still reported to be crowded with victims of the typhoid fever epidemic. In many cases half the population of the institutions is made up of typhoid cases, of which there are about 266 at latest account.—Other points where typhoid are reported are in Wisconsin and at Montreal, Canada.

The Lehigh Valley Medical Association.—The twenty-first annual meeting of the Lehigh Valley Medical Association was recently held in Mauch Chunk. Wilkesbarre was selected for the winter meeting, and Dr. Charles P. Knapp, of Wyoming, was chosen president and Dr. Charles MacIntyre, of Easton, was re-elected secretary.

The American Electro-Therapeutic Association will hold its eleventh annual convention in Buffalo on September 24th, 25th and 26th. Its headquarters will be at Hotel Niagara, and its place of meeting at the armory of the Seventy-fourth Regiment. Additional information regarding the meeting can be obtained by addressing the secretary of the association, Dr. George E. Bill, Harrisburg, Pa.

The Central Wisconsin Medical Society held its annual session at Madison recently. The officers elected were: President, Dr. J. A. Jackson, of Madison; secretary and treasurer, Dr. C. S. Sheldon, of Madison; vice-president, Dr. E. C. Helm, of Beloit; M. T. Martin, of Merrimac; S. Moyer, of Monroe, and L. V. Lewis, of Sun Prairie; board of censors, Dr. C. A. Rood, of Reedsburg; Dr. W. F. McCabe, of Beloit; Dr. F. W. Evans, of Madison, and Dr. W. H. Palmer, of Janesville.

The Tri-State Medical Association of Western Maryland, West Virginia, and Western Pennsylvania met in annual convention in Cumberland, Md., on July 25th, at the Queen City Hotel, elected officers and discussed a number of subjects relating to the profession. The officers elected were: President, Dr. William F. Barclay, of Pittsburgh; first vice-president, Dr. H. W. Hodgson, of Cumberland; second vice-president, Dr. F. L. Baker, of Burlington, W. Va.; third vice-president, Dr. Bruce Lichty, of Meyersdale, Pa.; recording secretary, Dr. Percival Lantz, of Alaska, W. Va.; corresponding secretary, Dr. Frederick W. Fochtman, of Cumberland; treasurer, Dr. E. B. Claybrook, of Cumberland.

The William Pierson Medical Library Association has been formed for physicians in Essex county, N. J., with the following objects: "To perpetuate the memory of a great medical man by founding a medical library; instituting medical lectures of scientific interest; establishing a medical reading room; and by forwarding all subjects of interest to the medical profession." The association, for the purpose of founding a medical library, has Dr. Pierson's library of over 1,000 volumes and an endowment fund of \$5,000, donated by Mrs. Pierson, the interest of which will be devoted to the buying of new books and the care of them. The books will be kept in the Orange Free Library, in the Stickler Memorial Building, where they may be consulted by any physician. It is proposed that to the members of this association books may be loaned subject to certain restrictions as yet undetermined.

The Medical Society of the Missouri Valley will hold its fourteenth annual meeting at St. Joseph, Mo., on Thursday, September 19th, and at Eureka Springs on September 20th and 21st. One day's scientific session will be held in each city, one day being devoted to sightseeing at the springs. The Western Passenger Association has granted a rate of one and a third fares for the round trip, on the certificate plan, from points in Missouri, Iowa, Kansas, Nebraska, Oklahoma, Arkansas and North and South Dakota. Those attending the meeting should take receipts from the local ticket agent for the money paid for their tickets. Tickets should be bought to St. Joseph only, the members being carried free of charge from Kansas City to Eureka Springs and return. The programme of papers includes the following: An Illustrated Pathological Lecture, by Dr. L. H. Warner, of New York city; Addresses by Dr. C. H. Hughes, of St. Louis, and Dr. Frank Parsons Norbury, of Jacksonville, Ill.; An Exhibition of Specimens Illustrating Causes of Uterine Hemorrhage, by Dr. Palmer Findley, of Chicago; Some Twentieth Century Thoughts on Medicine, by Dr. Charles E. Davis, of Eureka Springs, Ark.; Club Foot, its Modern Treatment, by Dr. J. W. Cokenower, of Des Moines, Iowa; Is it Rational to Operate upon Every Case of Appendicitis as soon as Recognized, by Dr. Wm. Jepson, of Sioux City, Iowa. Papers have also been promised by Dr. Harold N. Moyer, of Chicago; Dr. Flavell B. Tiffany, of Kansas City; Dr. E. S. Pettyjohn, of Chicago; Dr. LeRoy Crummer, of Omaha, and Dr. Homer Coulter, of Chicago.

The American Association of Obstetricians and Gynecologists will hold its fourteenth annual meeting at the Hotel Hollenden, Cleveland, O., Tuesday, Wednesday and Thursday, September 17, 18 and 19, 1901, under the presidency of Dr. William E. B. Davis, of Birmingham, Ala. The committee of arrangements is composed of Dr. M. Rosenwasser, 722 Woodland Avenue, and Dr. William H. Humiston, 122 Euclid Avenue, Cleveland, either of whom may be addressed concerning rooms or other local information regarding the meeting. The papers to be read include the following: The president's address, by Dr. William E. B. Davis, of Birmingham; Indications for the Combined Vagino-abdominal

Operation of Hysterectomy, by Dr. Rufus B. Hall, of Cincinnati; A Method for Suspension of the Uterus, by Dr. Robert T. Morris, of New York; Tuberculous Peritonitis, Experimental and Clinical, by Dr. John B. Murphy, of Chicago; Report of a Case of Acute Pancreatitis and Fat Necrosis, by Dr. Edward J. Ill, of Newark, O.; Pelvic and Abdominal Tumors Complicating Pregnancy, with Report of Cases, by Dr. Rufus B. Hall, of Cincinnati; Pathology and Treatment of Hourglass Stomach, with Report of Two Cases, by Dr. Charles G. Cumston, of Boston; Early Operations in Appendicitis and Method, by Dr. Joseph Price, of Philadelphia; Title to be Announced, by Dr. J. Henry Carstens, of Detroit; The Undeveloped Uterus, by Dr. C. L. Bonifield, of Cincinnati; An Interesting Case of Tubo-abdominal Pregnancy, by Dr. Wm. H. Humiston, of Cleveland; Report of a Case of Ruptured Tubal Pregnancy, by Dr. Webb J. Kelly, of Galion, O.; Diseases and Injuries of the Cervix Uteri and their Treatment, by Dr. Joel W. Hyde, of Brooklyn; Extra-uterine Pregnancy, Report of Cases with Specimens, by Dr. George S. Peck, of Youngstown; Is Cæsarean Section Justifiable in Placenta Prævia? by Dr. E. Gustav Zinke, of Cincinnati; Some Reflections on Ectopic Gestation, by Dr. David Tod Gilliam, of Columbus, O.; Some Forms of Disease Involving the Uterine Appendages, by Dr. Augustus P. Clarke, of Cambridge; The Mechanical or Combined Plastic and Mechanical Treatment of Retrodeviations of the Womb, by Dr. M. Rosenwasser, of Cleveland; A New Method of Opening the Abdomen in Gynæcological Surgery, by Dr. Charles G. Cumston, of Boston; A Second Contribution to the Surgery of Gastric Ulcer, by Dr. Henry Howitt, of Guelph, Ont.; Indications, Technics, and Remote Results of Salpingostomy and of Resection and Ignipuncture of the Ovaries, with Tables of 104 Cases, by Dr. A. Goldspohn, of Chicago.

The McKeesport Hospital Crippled.—Gov. Stone's action in cutting down the appropriation to the McKeesport (Pa.) Hospital from \$37,500 to \$14,000 will, it is said, sadly cripple that institution. The hospital last year ran behind \$5,000, and as it is heavily mortgaged, it is not likely it will be able to borrow much money. Charity patients may be refused admittance.

St. Luke's Hospital May Abolish Consumptive Wards.—The increase in the death rate at St. Luke's Hospital, due to the presence of the consumptive wards, may lead to the abolishment of the wards at the next meeting of the board of trustees, in September. Two wards, containing forty-two beds, are maintained at St. Luke's for the treatment of consumptives. The death records of the hospital have been greatly raised thereby, and the trustees are reported to favor a discontinuance of the department. The consumptive wards are always filled with patients. They were established in 1891. At that time the House of Rest at Mount Hope gave up its consumptive wards and turned over to St. Luke's an endowment by which fourteen beds could be maintained. The endowment was accepted with the view of adding to the value of the training-school instituted by St. Luke's. St. George's Soci-

ety later furnished provision for sixteen additional beds in the wards, and the hospital gradually increased the number on its own behalf. In case it is decided to do away with the wards the endowments by which they were founded will be returned to the donors.

Hospital Buildings and Endowments.—The Missouri synod of the German Evangelical Lutheran Church will build a \$40,000 hospital in St. Paul, to be devoted exclusively to the church. Articles of incorporation have been filed with the secretary of state for the Evangelical Lutheran Hospital Society.—The Common Council of Lockport, N. Y., has appropriated \$5,000 toward building a hospital. Efforts are being made to raise another \$5,000 by subscription. The building will be erected in the fall.—The cornerstone of the new Frederick City Hospital, at Frederick, Maryland, was laid on July 11th.—The building of a nurses' home to the Monmouth Memorial Hospital, at Long Branch, N. J., will be started in a few weeks, plans for it having been completed. The home, together with another wing to be built later, will cost about \$20,000.—The Board of Directors of the Winchester (Va.) Memorial Hospital have selected plans for the new hospital building and selected designs submitted. The building will be equipped with all modern appliances, and will be able to care for fifty patients at one time. It will cost \$14,000 and be finished by January 1st next.—The Foreign Missions Board of the Southern Baptist Convention is considering the advisability of having two mission hospitals erected in North China. While the board has for some years been doing medical missionary work, it has not before undertaken the erection of hospitals, such as some of the denominations have. It is more than likely that one of these hospitals will be opened at Li Chaw Foo, in North China, by Dr. P. S. Evans, son-in-law of Mr. Joshua Levering, of Baltimore, who was recently appointed a missionary to China.—Charles B. Rouss, the New York millionaire, has announced that he will give \$5,000 to the Winchester (Va.) Memorial Hospital fund.—A new St. Peter's Hospital is proposed for Albany, N. Y., and a subscription list has been started.—Governor Stone, of Pennsylvania, has granted an allowance of \$50,000 for the establishment of a homœopathic State hospital for the insane. It is hoped that a free site of 400 acres of land can be obtained at Mauch Chunk, which would give the absolute use of the \$50,000 for the erection of the hospital.—The West End Maternity Hospital, of Baltimore, Md., was recently incorporated.—An infirmary, to cost \$35,000, is to be built in connection with the Central Hospital for the Insane at Jacksonville, Ill.—The will of Mrs. Harriet Bacon Smith, of Brooklyn, contains a bequest making an endowment of \$10,000 in United States bonds of the Eye and Ear Hospital, Brooklyn.—Mrs. Edward Pisco, of Denver, Col., who started last October on a trip throughout the South, East, and North to obtain money for the National Jewish Hospital for Consumptives, recently returned, bringing \$20,000 to enrich the exchequer of that institution.—A wealthy business man, who conceals his identity, has presented the Children's Home, at Hamilton, Ohio, with an order to build and equip a fine

hospital at his expense.—Work upon the Consumptives' Hospital, to be erected on Newington Mountain, near Hartford, Conn., has been begun. The State has appropriated \$25,000 for the enterprise, and an amount nearly as large has been contributed by private subscriptions.—The New York Post-Graduate Medical School and Hospital has purchased the three-story and basement brick dwelling at No. 305 East Twentieth Street. The parcel adjoins the hospital building.—Plans for three new hospital buildings at Blockley, Pa., have been completed, and work will shortly be begun. They are a Children's Hospital, the Hospital for Contagious Skin Diseases, and the Maternity Hospital.—Work is to be commenced immediately on the Emergency Hospital, at Batavia, N. Y. All of the money for the hospital was raised by women and the hospital will be controlled by them.—Although it has not been formally opened, patients are now admitted to the new annex to St. Mary's Hospital, Philadelphia.—Ground has been broken for a new hospital building at Rochester, N. Y., to cost \$9,000.—Property upon which a hospital, among other buildings, is to be erected, has been purchased by Teller Co., Colorado.—Bids were opened at Washington, D. C., for the construction of an extension to St. Elizabeth Asylum, the government hospital for the insane on August 2d. The extension is designed to accommodate one thousand additional inmates. The lowest of the seven bids submitted was \$1,351,082, made by Horton & Hemingway, of Providence, R. I. The appropriation for the purpose is only \$900,000. New bids may have to be advertised for.—A project to erect a private hospital for the treatment of small-pox cases where patients able to pay could obtain advantages not to be had on North Brother Island, has been agitated in New York city, but it is frowned down upon by officials of the Department of Health. It is estimated that it would cost about \$75,000, while the annual expenses would be about \$25,000.—The Protestant Hospital for the Insane at Verdun, Que., will shortly be enlarged by the erection of two new buildings to cost \$70,000.—A. C. Burrage, of Boston, has leased Bumkin's Island, in Hingham Bay, and will build a hospital there for crippled children.—Bids were recently opened for the construction of a new wing to the County Hospital at Denver, Col.—The late Dr. John P. Wheeler, of Hudson, N. Y., has bequeathed \$2,000 to the Hudson City Hospital.

Births, Marriages, and Deaths.

Born.

SIMONTON.—In Fort Robinson, Nebraska, on Thursday, July 18th, to Dr. A. H. Simonton, United States Army, and Mrs. Simonton, a son.

Married.

ADAMS—JENNINGS.—In St. Joseph, Michigan, on Saturday, July 27th, Dr. Emil Adams, of Chicago, and Miss Lucie Jennings.

ANDREWS—ANDREWS.—At Lake Winola, Pittston, Pennsylvania, on Saturday, August 3rd, Dr. Percy W. Andrews and Miss Mattie Andrews.

IVES—CHANDLER.—In Ogdensburgh, N. Y., on Wednesday, July 31st, Dr. Augustus W. Ives, of Detroit, and Miss Julia Clair Chandler.

SMITH—MCNEAL.—In Lock Haven, Pennsylvania, on

Wednesday, July 31st, Dr. Harvey F. Smith, of Harrisburg, and Miss Blanche L. McNeal.

MOWRY—LEHMAN.—In Decatur, Illinois, on Monday, July 29th, Dr. Albert E. Mowry, of Chicago, and Miss Ruth Pearl Lehman.

WILLIAMS—SEMPLE.—In Jersey City, on Friday, August 2d, Dr. Allie Walter Williams, United States Army, and Miss Elizabeth Morris Semple.

Died.

BEACH.—In Springfield, Massachusetts, on Tuesday, July 23rd, Dr. John C. Beach, in the eighty-fourth year of his age.

BINGHAM.—In Buffalo, on Friday, August 2d, Dr. Frank P. Bingham.

FASS.—In Brooklyn, on Wednesday, July 31st, Dr. Stephen Fass, in the seventy-sixth year of his age.

FAUST.—In Poughkeepsie, N. Y., on Wednesday, July 31st, Dr. John Faust, in the sixty-sixth year of his age.

HOLE.—In Salem, Ohio, on Friday, July 26th, Dr. James M. Hole, in the seventy-ninth year of his age.

HORLBECK.—In Charleston, S. C., on Thursday, August 1st, Dr. Henry B. Horlbeck.

KENDALL.—In Baldwinsville, N. Y., on Monday, August 5th, Dr. James V. Kendall, in the eighty-third year of his age.

MARSHALL.—In Wytheville, Virginia, on Thursday, August 1st, Dr. Arthur B. Marshall, in the forty-sixth year of his age.

OSTERSTOCK.—In Easton, Pennsylvania, on Tuesday, July 30th, Dr. Joseph H. Osterstock, in the sixty-fifth year of his age.

SMITH.—In Atlantic Highlands, N. J., on Friday, August 2d, Dr. Orson H. Smith, of Brooklyn, in the eighty-first year of his age.

STITH.—In Suffolk, Virginia, on Thursday, August 1st, Dr. Lawrence A. Stith, in the sixty-ninth year of his age.

WALSH.—In New York, on Monday, July 29th, Dr. P. Valentine Walsh, in the fifty-second year of his age.

WHITCOMB.—In Rochester, N. Y., on Thursday, August 1st, Dr. Edwin Eugene Whitcomb, in the sixtieth year of his age.

WHITNEY.—In Olean, N. Y., on Tuesday, July 30th, Dr. Lambert Whitney, in the eighty-ninth year of his age.

WRIGHT.—In Luray, Virginia, on Friday, July 26th, Dr. Oren C. Wright, of Pittsburgh, in the forty-fifth year of his age.

Dr. James V. Kendall, who died at his home at Baldwinsville, N. Y., at the age of eighty-three, was at one time president of the Central New York Medical Society and vice-president of the New York State Medical Society. He served as chief medical officer on the staff of General Greene during the civil war and was mustered out with the rank of lieutenant-colonel. Later he took an active part in local politics and served as an assemblyman in the legislature of the State of New York.

Precocious Development of the Mammæ.—*Taranta*, *speiden* for April publishes a photograph sent by Dr. A. Grammatikos of a girl six years of age with the mammary development of a well-developed girl of eighteen years. The photograph shows this extraordinary development very clearly.

Fecundity Extraordinary.—The *Gazette médicale de Paris* for May 25th, citing the *Pester Lloyd*, states that the wife of a Greek priest, at Deligrad in Servia, has recently given birth to six children, three boys and three girls. All are doing well and are well developed. Eighteen months ago the same lady gave birth to triplets, making a total of nine children in a year and a half.

Pith of Current Literature.

American Medicine, August 3, 1901.

Cancer of the Uterine Neck, with Comments on the Present-day Teaching. By Dr. J. M. Baldy.—In the author's opinion, cancer of the neck of the womb is practically incurable. He estimates the proportion of such cases as it is possible to save, as being less than five per cent. He believes that two per cent. would more nearly approximate the real truth. He makes a strong plea for the more thorough realization of these facts as they stand, and for a sound understanding of the importance of the early discovery of this disease. In the matter of diagnosis, there are three symptoms—pain, odorous discharges, and hæmorrhages, and these, taken in conjunction with progressive loss of flesh and strength, form a picture such that no one is justified in failing to see its significance. Too much importance is given, in this connection, to statistics and to the microscope. The microscope as a means of diagnosis is vastly inferior to clinical symptoms and observation. The author asserts that the teaching of the day in this respect is as bad as it well can be.

Important Sequels Resulting from Delayed Operation in Appendicitis. By Dr. A. Stewart Lobingier.—Both the citations and the illustrative cases in this article are strong arguments in favor of early operation. Too often, in the discussion of appendicular inflammation, the probability and gravity of these after-conditions are lost sight of. In the minds of a very large number, the problem is simply whether the operation will result in immediate recovery or immediate death. While this thought must ever occupy the uppermost place in the surgeon's mind, next to it, and very nearly equal in seriousness, is the question of the speedy dissemination of this deadly and destructive virus to organs and structures whose injury means the permanent physical wreck of the patient.

The Subarachnoid Injection of Cocaine for Operations on all Parts of the Body. By Dr. A. W. Morton.—The author's experience with the Corning method in three hundred and fourteen cases has made him an enthusiastic advocate of the procedure. The patient is certainly in a more advantageous position, as regards safety and chances for favorable results, with all his faculties acute, able to speak and move with ease, to take stimulants or food, susceptible to every test of consciousness excepting only that of pain, than when in a complete state of coma produced by general anæsthesia.

Two Cases of Vicious Circle after Gastroenterostomy. By Dr. Theodore A. McGraw.

Twenty Years' Experience as Surgeon to Cambria Iron Company. By Dr. W. B. Lowman.

Report of a Case of Hystero-epilepsy, in which the Climax of the Seizure was Expressed by Discharge of Blood through the Intact External Auditory Canal. By Dr. K. K. Wheelock.

Some New Therapeutic Applications of Europhene. By Dr. W. E. Thomas.

Scientific Research: the Indispensable Basis of all Medical and Material Progress. By Dr. George Bagot Ferguson.

Boston Medical and Surgical Journal, August 1, 1901.

The Fight against Tuberculosis in the Light of Experience Gained in the Successful Combat of other Infectious Diseases. By Dr. Robert Koch.—See abstract of *British Medical Journal* for July 27th in this issue of the *Journal*.

Scientific Research: the Indispensable Basis of all Medical and Material Progress. By Dr. George Bagot Ferguson.—President's address, delivered before the Sixty-ninth Annual Meeting of the British Medical Association.

Practical Blood Examination. By Dr. Henry F. Hewes.—The author believes that in this recent era of laboratory methods, one of the most important and practical aids in the understanding and diagnosis of our cases is the examination of the blood. He mentions the Tallquist method as being a simple means for the estimation of the hæmoglobin. In this method a specially prepared book known as the Tallquist hæmoglobin book contains specially prepared porous paper, which will soak up the blood, and a color table containing ten color plates. By comparison of the stain made by a drop of blood to be examined on the porous paper with the color table the estimation of the hæmoglobin is very simply arrived at. The author describes several staining methods, which, while simple, would seem to be of particular interest only to the specialist.

Rhachitic Deformities of the Spine. By Dr. J. S. Stone.

Measurements of Girls in Private Schools and of University Students. By Arthur MacDonald.

Medical News, August 3, 1901.

Injuries of the Head in the New-born. By Dr. Andrew F. Currier.—The importance of this class of injuries is measured, not merely by the immediate damage to the head or soft parts of the skull, but by the possibilities of death as a near or remote result, by the possibility of life-long defect or deformity, and especially by such detrimental effect upon the structure of the brain, which effect cannot always be analyzed or explained, that development is arrested or prevented, the individual manifesting mental incompetence. The author believes that the significance of the lesions which may be received is not fully appreciated by the medical profession.

The State of the Gastric Secretions in Chronic Rheumatism and Rheumatoid Arthritis. By Dr. Frank H. Murdoch.—In regard to the prognosis in chronic rheumatism, Dr. Osler states that it is unfavorable, for it is a disease which persists indefinitely, and the majority of cases resist all methods of treatment. Dr. Smith says that it is impossible, in chronic joint troubles, to be certain that simple synovial rheumatism will not *clinically*, in the long run, assume the features of rheumatoid arthritis. In view of these facts, it is interesting to note that, in the six cases reported by the author, the patients recovered from their rheumatism under treatment directed, not against the affection of the joints, but against the existing dyspepsia, which in every instance was of nervous origin. The author con-

cludes that in each individual case of chronic rheumatism or rheumatoid arthritis the diet should be such as best to suit the existing state of the gastric secretions.

The Administration of Ethyl Chloride as a General Anæsthetic, with Description of a Mask for its Use. By Dr. Martin W. Ware.—The author emphasizes the fact that this agent is only of service in minor operations, and as a preliminary to cut short the agonies of the early stages peculiar to chloroform and ether. The mask suggested by the author is a modified laughing-gas mask.

The Therapeutic Uses of Tri-chlor-tertiary-butyl-alcohol. By Dr. E. M. Houghton.—The author believes that, owing to its moderate antiseptic, local anæsthetic and hypnotic properties, and its apparent harmlessness to animal tissues when brought into direct contact with them by local application or when absorbed and distributed to the various parts of the body by the circulatory system, this drug bids fair to assert for itself a wide field of usefulness.

Belladonna versus Scopolia. By Dr. Reynold Webb Wilcox.—The author reports a series of observations which indicate that, so far as the application of the medicament by inunction is concerned, scopolia rhizome cannot be substituted for belladonna root.

Ulcer of the Duodenum Considered from a Surgical Standpoint. By Dr. D. S. Fairchild.—If a diagnosis of duodenal ulcer can be made in a non-perforating case, an operation seems to be indicated before grave symptoms develop. The location of the ulcer is such that efforts at healing are rarely attended with success, and, if healing does take place, a contraction of tissue is probable, thus leading to symptoms of stenosis. If the symptoms of ulcer are sufficiently positive and persistent to warrant a diagnosis, the same indications for surgical treatment exist as for ulcer of the stomach.

Journal of the American Medical Association,
August 3, 1901.

A Further Study of Pseudo or Modified Small-pox (?). By Dr. T. J. Happel.—See abstract of Joint Session in the Practice of Medicine and in Hygiene and in Sanitary Science, in this issue of the *Journal*, p. 279.

Small-pox—Old and New. By Dr. W. L. Beebe.—See abstract as in the preceding case, p. 280.

Sanitary Features of Small-pox. By Dr. Louis Leroy.—See abstract as before, p. 280.

The Diagnosis of Mild and Irregular Small-pox as Found in the Present Outbreak in the United States. By Dr. Heman Spalding.—See abstract as before, p. 280.

The Distinguishing Characteristics between Mild and Discrete Small-pox and Chicken-pox. By Dr. Frederick Leavitt.—See table on p. 279.

Variola. By Dr. H. M. Bracken.—See abstract in this issue of the *Journal*, p. 281.

Cancer of the Uterine Neck, with Comments on the Present-day Teaching. By Dr. J. M. Baldy.—See abstract of *American Medicine*, August 3d, in this issue.

Acute Mastoiditis after Subsidence and without Recurrence of Tympanic Inflammation. By Dr. Hiram Woods, Jr.—See *New York Medical Journal*, June 29th, p. 1154.

The Present Status of Renal and Ureteral Surgery. By Dr. J. Henry Barbat.

A Note on the Use of Thuja Occidentalis in Removal of Papilloma of the Larynx. By Dr. James M. Brown.

Scientific Research. The Indispensable Basis of all Medical and Material Progress. By Dr. George Bagot Ferguson.—An abstract of the President's Address, delivered at the Sixty-ninth Annual Meeting of the British Medical Association, Cheltenham, July 30, 1901.

Philadelphia Medical Journal, August 3, 1901.

The Importance of a More General Study of Diseases of the Nervous System. By Dr. Wharton Sinkler.—The author points out how important a more extended study of nervous diseases would be for the general practitioner and family doctor. The study of the anatomy of the nervous system is a necessary preparation to the clinical observation of neurology, and there is nothing of greater value than the work done in the laboratory devoted to the pathology of the nervous system. The foundation must first be laid upon a thorough comprehension of the normal histology of the nervous system. The author cites cases to prove that the early recognition of nervous diseases is essential to their successful treatment, and hence the "family doctor" should be prepared to recognize warning symptoms when they appear.

The Mosquito an Insignificant Factor in the Propagation of Yellow Fever. By Dr. John H. Purnell.—A number of cases are presented, and to the author it seems utterly impossible to reconcile the mosquito theory with the recitals he gives. He notes several instances within the last few years in the South, where yellow fever has been completely stamped out, "without, so far as is known, the killing of a mosquito." He concludes that if the combating of yellow fever has been accomplished by controlling and destroying other agents than the mosquito—ignoring the mosquito entirely—then it seems that the mosquito has not been proved guilty of being the sole conveyer of the yellow fever germ. Future observation and study will convince the profession that fomites cannot be ignored.

Typhoid Fever with Perforation of the Colon and Gall-bladder; Operation; Death; Autopsy. By Dr. Herman B. Allyn.

A Post-typhoid Case, in which During Four Months the Following Operations were Performed: (1) Fixation of a mobile painful kidney with subscapular hæmorrhagic effusion; (2) removal of a large gastric ulcer by a new method and pyloroplasty; (3) opening of a large rectal abscess; (4) appendectomy by electric forceps and invagina-

tion of a portion of the cæcum. By Dr. Andrew J. Downes.

Typhoid Fever Occurring in a Tuberculous Patient, and the Influence of Tuberculin on this Condition. By Dr. Erwin Fischer.

British Medical Journal, July 27, 1901.

An Address on The Fight Against Tuberculosis in the Light of the Experience that has been Gained in the Successful Combat of Other Infectious Diseases. By Geh.-Med.-Rath, Professor Dr. Robert Koch.—Professor Koch believes that the fact that tuberculosis is a disease of parasitic origin, and therefore a preventable disease, has been accepted, not only by the medical profession, but by the non-medical public. Therefore, the time has come when cooperation of medical men, the State and the public is possible to stamp out the disease. He calls attention to the mistake that has been made in the past in uniform and similar measures employed against all forms of infectious diseases and says: "We know that every disease must be treated according to its individuality, and that the measures to be taken against it must be most accurately adapted to its special nature, to its ætiology." As example he cites the fact that bubonic plague is rarely communicated from one patient to another, but is usually spread by rats, and that when the rats have been exterminated, the plague has ceased; that cholera comes through infected water, and when the water is kept pure cholera does not flourish; that while preventive inoculations may do much to diminish hydrophobia, compulsory muzzling is the only real way of combating the pestilence; that leprosy, which is communicated by direct contact, has died out where isolation of cases has been faithfully carried out.

The hereditary transmission of tuberculosis is declared to be so rare as to make it possible to leave it entirely out of account as a cause. Sputum is considered to be the main source of infection in tuberculosis, and the author thinks that this is now generally conceded.

In studying another generally accredited source of infection, *viz.*, the milk and flesh of tuberculous cattle, his investigations for the past two years have confirmed his former opinion that bovine and human tuberculosis are different diseases. The experiments were as follows: Young cattle proved to be free from tuberculosis were infected with pure cultures of human tubercle bacilli by injection under the skin, into the peritoneal cavity, or into the jugular vein; other cattle were fed with tuberculous sputum, or inhaled large quantities of bacilli sprayed upon the floor. None of these animals developed tuberculosis, but all thrived and gained flesh.

When the same experiments were tried with tubercle bacilli obtained from the lungs of animals suffering from bovine tuberculosis all the cattle died.

Young swine fed daily with the sputum of consumptive patients for three months remained healthy, while others fed with bovine bacilli for the same period sickened and died. The conclusion reached is that animals like the cow, pig, sheep, and goat, are not susceptible to human

tuberculosis. The susceptibility of man to bovine tuberculosis could not be proved by direct experiment, but the facts that transmission of the disease in such a case must be through the alimentary canal, and that *primary* tuberculosis of the intestines is extremely rare, makes such susceptibility very doubtful. By making a pure culture from the tuberculous material taken from the intestine, and injecting cattle therewith, it could be determined whether they were human or bovine bacilli. This has been done, but the number of cases is too small to make a positive statement. While the question is not yet decided, Professor Koch's experiments lead him to conclude that the susceptibility is so rare that he does not deem it advisable to take measures against it.

Since human sputum is believed to be the main source of infection, the care and disposal of the sputum has become *the* problem in preventing the spread of the disease.

Under existing conditions of life in crowded tenements and lack of public hospitals for tuberculous patients it has been impossible to prevent the spread of the disease; and therefore the following recommendations are made:

First. Improved dwellings for the poor.

Secondly. More hospitals for consumptives.

Thirdly. Obligatory notification of cases.

Fourthly. Education of the public.

Fifthly. Disinfection of dwellings after the death or removal of a consumptive.

Sixthly. Building of sanatoria. The work of department of health in New York is especially commended.

An Address on The Measures Adopted by Different Nations for the Prevention of Consumption. By Professor P. Brouardel, Dean of the Faculty of Medicine, Paris.—The author states that since the establishment of the true nature of tuberculosis and its preventability, nearly all nations have taken about the same means to check the spread of the disease and reduce its terrible mortality.

These consist chiefly in the education of the masses by the formation of societies for discussion of the subject and the distribution of literature; in the passage of laws for the improvement of the dwelling places and workshops of the poor; regulations against expectoration in public places; rigid inspection of meat and milk, and curing or arresting the disease where it exists by the erection of dispensaries, hospitals, and sanatoria.

Introductory Address on the Classification of Climates and Comparison of Results. By C. Theodore Williams, M. A., M. D., F. R. C. P.—The author of this paper considers what he calls "marine climates," such as are found at British and Irish south coast places, suitable for most cases of chronic pulmonary tuberculosis, and especially for the strumous forms. In the warm marine climates of Madeira, the Canaries, and West Indies, those cases accompanied by a large amount of bronchial catarrh do well.

A sea voyage appears to be most beneficial (1) in cases of hæmorrhagic phthisis where hæmor-

rhage accompanies small areas of tuberculization; (2) in scrofulous or strumous phthisis where lung disease is accompanied by strumous gland or joint affections; (3) in cases of chronic cavity, where the tuberculous disease is unilateral or quiescent.

To be successful, the patient must be sure to have (1) good and abundant food, and (2), proper cabin ventilation; also (3), the cruise must be principally in temperate climes and not tropical.

In the warm, dry climates, such as are found in the deserts, the Riviera, etc., he has found the most benefit in the following class of cases; (1) Phthisis in which inflammatory processes have played a large part in predisposing to the disease; (2) strumous phthisis; (3) laryngeal phthisis; (4) unilateral, rather than bilateral, pulmonary tuberculization; (5) those cases which, from feebleness or advanced age, are unable to endure the rarefied atmosphere and cold of the great altitudes.

His conclusions as regards the effects of the climate of great altitudes on consumptives are:

1. The respiration of rarefied air produces hypertrophy of the healthy lung and local pulmonary emphysema around the tuberculous lesions, giving rise in time to thoracic enlargement.

2. It is possible that the arrest of tuberculous disease is, at least partly, due to the pressure exercised on the tuberculous masses by the increasing bulk of the surrounding tissue, which, by emptying the blood vessels, promotes cascation and cretification of the tubercle.

3. That these changes are accompanied by general improvement in digestion and assimilation, the cessation of all symptoms of disease, the return of natural functions, by gain of weight, of color, of nervous and muscular activity, and of respiratory and circulatory power.

4. That arrest of disease takes place in fifty-eight per cent. of the tuberculization cases, and great improvement in eighty-seven per cent. That, in excavation cases, arrest occurs in twenty-one per cent. and great improvement in sixty-one per cent.

5. That the climate is specially beneficial in hæmorrhagic phthisis and phthisis in which hereditary predisposition is strongly marked, and is well suited to chronic tuberculosis of the lungs in general, provided the extent of lung involved is not too large or the disease accompanied by much fever.

6. That males and females do equally well and profit most between the ages of twenty and thirty years. Males over forty years of age and females under twenty, benefit least.

7. That the climate is contraindicated in acute phthisis, catarrhal phthisis, laryngeal phthisis, cases accompanied by great nervous irritability, in patients with double cavities, with fibroid phthisis, and in all patients whose pulmonary surface has been so much reduced from any cause that it does not suffice for complete respiratory purposes.

Introductory Address, Mainly on the Classification of Cases. By I. Burney Yeo, M. D., F. R. C. P.—The classification of cases and the various climates recommended for each agrees

quite closely with that of Dr. Williams, just preceding.

Lancet, July 27, 1901.

An Address on The Combating of Tuberculosis in the Light of the Experience that has been Gained in the Successful Combating of Other Infectious Diseases. By Geh.-Med. Rath. Professor Dr. Robert Koch.—See abstract of *British Medical Journal* for July 27th in this issue of the *Journal*.

An Address on The Prevention of Tuberculosis in the Different Civilized Nationalities. By Professor P. Brouardel, Dean of the Faculty of Medicine of Paris.—See abstract of *British Medical Journal* for July 27th in this issue of the *Journal*.

The Administration of the Manchester Milk Clauses, 1899. By James Niven, M. A., M. B., B. C. Cantab.—This paper by the officer of health for Manchester gives the history of the effort to obtain for Manchester a pure milk supply, and states the laws which were enacted relative to tuberculosis in cattle. These were, in effect: 1. That a cow known to be suffering from tuberculosis of the udder must be isolated, and by isolation was meant isolation on the farm on which it was. 2. Powers were given to inspect the cows, and to take samples of milk from particular teats, also to take samples of mixed milk produced, or sold, or intended for sale, within the city. These powers, however, could only be exercised outside the city on production of an order from a justice having jurisdiction in the place in which the farm was situated. 3. If the medical officer of health was of opinion that tuberculosis was caused, or likely to be caused, in persons residing in his district, from the consumption of the milk supplied from any dairy, the dairyman might be summoned before the corporation to show cause why an order should not be made prohibiting him from supplying milk within the city. 4. A dairyman supplying milk within the city who had in his dairy any cow affected with, or suspected of, or exhibiting signs of, tuberculosis of the udder, should forthwith give written notice of the fact to the medical officer of health of the district which he supplied, stating his name and address and the situation of the premises where the cow was. The penalty for neglect to do so should be 40s. The author considers these laws inadequate to produce the effect expected.

Sterilization and Pasteurization v. Tubercle-free Herds, etc. By E. W. Hope, M. D. Edin.—The author is of the opinion that, while sterilization and Pasteurization accomplish the purpose for which they were intended, *viz.*, the destruction of the tubercle bacilli, and while the process does not materially affect either the digestibility or nutritive qualities of milk, yet it is much preferable to have the milk supplied in a pure and uncontaminated condition. This may be accomplished by strictly enforced laws in regard to the care of the cattle, handling of the milk, and rigid inspection of the milk supplied.

Natural Immunity from Tuberculosis in Natal, South Africa. By James F. Allen, M. D.—The

author, who has lived in Natal for twenty-six years, states that both the cattle and people of that country are singularly immune to tuberculosis, the number of cases being exceedingly small. This is due, in his opinion, not to the absence of the tubercle bacilli, for they are universal, and the fact of any cases proves their presence, but to a natural immunity or resisting power to the invasion and development of the disease. When the cattle are confined or the people change their mode and habits of life they fall victims to tuberculosis. This immunity is attributed by him partly to the climate, but more to the fact that there is no overcrowding, even in the larger towns; that the houses are mere shelters, and that the greater part of the time, both waking and sleeping, is passed out of doors, and all kinds of outdoor sports are indulged in by every one.

The Treatment of Phthisis as a Prevalent Disease in Holland. By Dr. R. de Josselin de Jong.—The author says that the establishment of sanatoria for the treatment of consumption in Holland was delayed for a long time owing to the prevailing idea that altitude was absolutely necessary for the treatment of this disease. In 1897, a society was formed for the purpose of erecting popular sanatoria, and one establishment will soon be opened at Overysel, in the interior. It is proposed also to build one on the coast. In concluding, attention is called to two important points: *First*, the time spent in a sanatorium must necessarily be long if a cure or arrest is to be effected, and, in the case of breadwinners, provision should be made for the family. *Secondly*, care must be taken that what has been gained is not lost through return to unwholesome surroundings.

On the Relations of Tubercle Bacilli to Other Bacteria Resistant to Acids and to Actinomyces. By Dr. Alfred Moeller.—In addition to the lepra and smegma bacilli, which the author passes over as being uncommon, he has found other bacilli which are very common, and which strongly resemble tubercle bacilli. These are the grass bacillus in its primitive form, the varieties found in milk and butter, and the manure bacillus. They are all resistant to acids and alcohol; in color reaction they differ but very little from the tubercle bacilli, and under certain conditions it is impossible to distinguish them microscopically. In culture growth they differ materially, and the tubercle bacillus is distinguished by its slow and difficult growth in any culture medium.

Examination of Carcasses in Cases of Cattle Tuberculosis. By William Brown, F. R. C. S. Edin.—In this paper, which was illustrated by lantern slides, the appearance of the various organs affected by tuberculosis is described.

Tuberculin as a Diagnostic Agent. By Harold Sessions, F. R. C. V. S., F. H. A. S.—The author of this paper believes that tuberculin is a very reliable and satisfactory diagnostic agent for tuberculosis in cattle, and thinks that, where reports of errors have been made, they have been due to (1) old or inefficient tuberculosis; (2) hurried or improper performance of the test; (3)

errors at the post-mortem examination; (4) inability of the operator to interpret the facts. He advises that all tuberculin should be standard quality, and issued only by a central authority.

Lyon médical, July 7, 1901.

Cardiac Hypertrophy in Contracted Kidney. By M. M. L. Bouveret.

Dermatomyositis.—M. L. M. Bonnet reports the case of a man, fifty-nine years of age, who presented a small tumefaction on the forearm with formation. He had pains in the back and an enlarged spleen. The examination of all other organs was negative. There was considerable œdema of the skin and of the underlying muscles. A diagnosis of dermatomyositis was made. No phlebitis or lymphangitis was present. The disease is rare and is frequently fatal, many of the patients dying of pneumonia.

July 14, 1901.

Melancholic Delirium in a Degenerate. By M. Lannois and M. H. Carrier.

Adherent Pleurisy at the Onset of Tuberculosis (concluded).—M. R. Bernard says that his clinical studies show him that a tuberculous pleurisy may be adhesive at the onset of the disease. The symptomatology is not marked; pain and râles may be absent, and the temperature curve is inconstant. The evolution is very insidious, and even latent. One may suspect a pleural lesion after daily careful percussion, but the Röntgen-ray examination alone will be conclusive. This form of pleurisy is benign.

Gazette hebdomadaire de médecine et de chirurgie, July 4, 1901.

Psoitis Following a Perforation of the Cæcum.—M. E. Eudard describes the case of a man who suffered a perforation of the cæcum in the course of an appendicular inflammation. This was followed by a suppurative inflammation of the psoas muscle, which finally involved the entire right leg. The diagnosis of the original disease was not made on account of the atypical course of the disease. Death resulted.

July 7, 1901.

Congenital Scoliosis. By M. A. Codivilla.

Piecemeal Embryotomy.—M. J. Jourdet reports two successful cases in which embryotomy was performed by splitting the fœtus through the scapulo-thoracic diameter. The operation is suitable in neglected shoulder cases. It shortens the labor and the amount of operative manœuvring upon the mother. Breech extraction is the final step.

Presse médicale, July 10, 1901.

New Experimental Researches in Small-pox. By M. H. Roger and M. Emile Weill.—These experiments show the inoculability of dogs by pus from human variola.

Treatment of Wounds of the Sinuses of the Dura Mater.—M. G. Luys says that digital compression, tamponing, or forcipressure is the means of controlling hæmorrhage from one of the sinuses.

The entry clamp is to be left in place about sixty hours if the last method is employed. Lateral ligature and the placing of catgut in the sinus are other means which have been successfully used. Thrombosis of the sinus and pyæmia, and the entrance of air into an opened sinus are the dangers of injury.

Centralblatt für Chirurgie, June 29, 1901.

Attempt to Simplify the Treatment of Pseudarthrosis.—Dr. F. Colley has used bone ash, prepared with mucilage and sterilized water, as an injection into a false joint caused by a fractured radius and ulva. Every four weeks he injected ten cubic centimetres of this mass with a large hypodermic syringe, and after six injections consolidation of the bones was noted.

The Technics of Phimosi Operation. By Dr. Herman Schloffer.—A modified operation. Illustrated article.

Wiener medicinische Blätter, June 27, 1901.

Traumatic Hæmatoma of the Abdominal Rectus Muscle.—Dr. Julius Flesch reports such a case in a man, fifty years of age, who landed upon his abdomen in falling downstairs. While hæmatoma of the abdominal muscles is not rare in pregnancy, it is uncommon as the result of an accident. The tumor did not disappear for three months.

Wiener klinische Wochenschrift, June 20, 1901.

Subcutaneous Injection of Paraffin Ointment.—Dr. Ludwig Moszkowicz records cases in which the injection—which has been shown to be without reaction—has been employed as a prosthetic substance after resection of the testicle, in deformities of the nose and cheek and thorax, to separate compressed nerves from their imbedding, in cases of incontinence of urine due to loss of the sphincter and the entire urethra. Vaseline, previously sterilized, answers well in some cases.

Objective Disturbances of Sensation in the Gluteal Region in Abdominal Aneurysm. By Dr. H. Frick.

Case of Infantile Encephalopathy. By Dr. Hugo Lukacs.

June 27, 1901.

Treatment of Syphilitic Mothers.—Professor G. Riehl highly recommends the use of vaginal suppositories so soon as pregnancy is established. The suppositories contain fifteen grains of the official grey mercurial ointment and from fifteen to thirty grains of cacao butter. They are inserted into the vagina and kept in place with a tampon. No irritation of the vagina has been experienced. Of thirty-three cases, twenty-nine living children were born at term, among which there was a mortality of twelve per cent., figures which are much better than those recorded for other methods of treatment.

Case of Localized Arthropathy in Syringomyelia. By Dr. C. Hödlmoser.

Two Cases of Thrombosis of the Inferior Vena Cava Due to Neoplasms. By Dr. Karl Sternberg.

Wiener klinische Rundschau, June 30, 1901.

Pneumonotyphoid Fever.—Dr. Adolf Hoff accepts Wagner's classification of this so-called disease-entity. 1. The disease begins gradually, like typhoid fever, the subjective symptoms of pulmonary disease not appearing for several days. Pneumonia is then evident, with slight cough and expectoration; the febrile condition persists for two or three weeks. Certain signs of typhoid are absent. 2. After several days of a more or less characteristic pneumonia, the usual symptoms of typhoid appear more or less pronounced. 3. The onset may be like that of either pneumonia or typhoid, both diseases may run parallel courses with the symptoms of one or either predominant. (*To be continued.*)

Ways of Infection (conclusion). By Dr. L. Huismans.

Conjugate Sensations. By Dr. E. Strausky.

Münchener medicinische Wochenschrift, July 2, 1901.

Severe Crushing of the Chest, with Recovery. By Dr. Heinecke.

Injection Treatment of Syphilis.—Dr. Max Stern uses Lassar's solution for injection:

R Bichloride of mercury.....	15 grains;
Sodium chloride.....	45 "
Distilled water.....	1500 "

This quantity is sufficient for from thirty to sixty injections. Stern advises the injections when other skin diseases or disturbances of the digestive organs preclude the use of inunctions or internal treatment; when a grave form of the disease exists with involvement of important organs and it is necessary to proceed rapidly and energetically; to clear up a doubtful diagnosis; when other mercurial preparations have proved inefficient and relapses occur; and when it is desired to alternate the treatment with other methods.

Endogenous and Ectogenous Intoxications. By Dr. Toppel.

Treatment of Syphilitic Sciatica.—Dr. F. Mendel recommends the intramuscular injection of salicylate of mercury in these cases. He has found little danger from embolism, abscesses or infiltrations.

Case of Chronic Ileocæcal Invagination. By Dr. Quadtlieg.

Constipation Lasting Thirty-five Days. By Dr. P. Ostermaier.

Treatment of Chronic Chorea by Hypnotism. By Dr. Schilling.

Resection of the Trigemmus for Facial Neuralgia (continued). By Dr. Krause.

Riforma medica, June 20, 26 and 27, 1901.

Suppurating Echinococcus of the Right Kidney. By Dr. Ferdinando Gangitano.—The patient was a woman, aged thirty-one years, who first complained of a sense of weight and pain in the right loin. A swelling soon appeared in this region and the pain became intense. One month before admission she was seized with fever, chills, lancinat-

ing and tearing pains in the renal region, transmitted toward the groin, and vomiting. This painful attack subsided after a while, and the patient's urine was found to be turbid and foetid, and to contain a number of white round bodies. There was a history of severe traumatism to the right renal region some years before. The tumor was located in the right kidney, and the white bodies in the urine proved to be vesicular membranes of echinococcus. Pean's incision was used in the operation, and the whole kidney was found to be converted into a multilocular echinococcus cyst with purulent contents. The kidney was therefore removed, and the patient made a good recovery.

June 22, 1901.

The Bacteria of Cholelithiasis Grown in Bile. By Dr. F. E. Italia.—The author has studied the behavior in bile of certain organisms which have been suspected of causing the formation of biliary calculi. With this end in view he studied the *Bacterium coli commune*, the bacillus of Eberth, the *Streptococcus pyogenes*, the *Staphylococcus pyogenes aureus*, and the *Bacillus subtilis*. He used ox bile for the purposes of cultivation, after sterilizing and filtering the natural secretion. At first, the germs were grown in a mixture of broth and bile, then upon bile alone. His conclusions are as follows: The *Bacterium coli commune* and the bacillus of Eberth are the specific micro-organisms of biliary calculi composed of cholesterin. The *Streptococcus pyogenes* and the *Staphylococcus pyogenes aureus* are rarely the causes of cholelithiasis; were it otherwise, the calculi formed as the result of their activity must be composed of calcium salts only, for these germs do not precipitate cholesterin. When the *Bacterium coli commune* is associated with the streptococcus and the staphylococcus, its action upon bile is more pronounced. In these cases the calculi are probably mixed—i. e., composed of cholesterin, calcium salts, and biliary pigments.

June 24, 1901.

The Physical Signs of Healing Pulmonary Tuberculosis. By Dr. V. Cervello.—In this article, Cervello answers the criticisms and objections which have appeared against his method of treating tuberculosis (the so-called igazol method, involving inhalation of the fumes of iodine and formaldehyde). He asserts that the disappearance of the dulness and bronchial breathing has been complete in a number of his cases, and cites various authorities on the subject, showing that the actual disappearance of tuberculous lesions is possible. Lauder Brunton and Allbutt visited his hospital and saw a striking case which illustrated the disappearance of all physical signs beyond any doubt. The author reports a number of other illustrative cases sustaining his claims. In regard to the disappearance of lesions, skiagraphy shows that this is possible, as has been demonstrated by Ehrenfeld, in Vienna. As regards the time that the treatment took to effect a complete cure, he says that Detweiler's statistics show a number of cases which were cured within two months. In reply to criticisms concerning the diet of his patients, he remarks that he is sorry that the conditions of the hospital were such that he

could not make use of over-feeding, as has been done by so many other observers.

Gazzetta degli Ospedali e delle Cliniche, June 9, 1901.

On a New Form of Polyarthritis, Infectious in Origin, Malignant in Character (Concato's Acute Malignant Polioarthritis; Bozzolo's Infectious Malignant Form; Bonardi's Rheumatic Infection). By Dr. Umberto Boccarani.—The author believes that the cases of acute malignant infectious polyarthritis described under various names by Bonardi, Bozzolo, Bassi, Galvagni, and others, have enough features in common to justify their grouping under one name. In all these cases there was a malignant and rapidly progressive course, a multiple involvement of joints and other serous surfaces, of the kidneys and lungs, and in all the exudate was fibrino-purulent. In some patients Galvagni noticed a peculiar expression, "facies pneumonia." As regards the significance of the process, the author does not concede its identity with acute articular rheumatism, nor is he willing to label it vaguely "septicæmia." Bozzolo found in two cases a capsulated coccus; Bassi met with Fraenkel's diplococcus; the *Staphylococcus pyogenes albus*, a special form of capsulated bacillus; and the *Staphylococcus pyogenes aureus*. The injection of cultures of these germs was not followed by specific pathologic results. The ætiology of this disease is, therefore, as yet obscure. The author believes it to be a morbid entity, characterized by inflammation of the various serous membranes and joints, and accompanied by the symptoms of a grave pneumonia, although the lung may not participate directly in the disease.

The Appearance of Red Blood Cells in the Urine. By Dr. C. Tarchetti.—The red blood cells may be so well preserved that they do not differ in appearance from those found in circulating blood, but more frequently they are discolored because the urine takes up a part of their hæmoglobin. In the first stages of this discoloration, these red cells in the urine become round, homogeneous bodies paler than normal blood cells. At a more advanced stage they become quite colorless, but their contour is distinct, so that they appear as rings with circular or irregular outline. They also diminish in size to about one third or one fourth of the original, and in advanced stages they disappear completely from view, inasmuch as all the hæmoglobin is removed. The importance of the degree of discoloration as an index to the source of the blood has been usually over-estimated. If the cells are massed in cylinders they probably come from the kidney. Sabroziz and Boncom have found that when blood is mixed with urine in the proportion of 1.50, the red cells are fairly well preserved if the subject has been fed on a mixed diet, while they lose color rapidly if a milk diet has been enforced. In these urines the amount of urea (and the specific gravity) may be raised to thirty grains per one thousand without destroying the urine's property of dissolving hæmoglobin. The authors mentioned therefore conclude that the power of preserving the red cells in urine depends upon the amount of sodium chloride in the urine. The author also thinks that red cells from the kid-

ney are more strongly discolored than those from the bladder—not because the former have remained in contact with urine for a longer time, but because they have been in contact in the glomeruli with a more dilute urine, poorer in chlorides.

A New Form of Treatment in Pneumonia.

By Dr. C. D. Ruzza.

Vratch, June 9 (June 21, New Style), 1901.

Clinical Lectures Delivered at the St. Mary's Hospital. By Dr. Th. K. Geissler.—The cases shown included one of primary malignant new growth in the lungs. On autopsy a few weeks later this growth proved to be a lymphosarcoma of the lung with secondary involvement of the glands of the anterior mediastinum.

A New Variety of Bandage for Fractures of the Clavicle.

By Dr. M. G. Tcherniakhovsky.—Gurlt, in his treatise on fractures, collected no less than ninety varieties of splints and bandages used for clavicular fractures until 1860. The appliances of the older surgeons which are still in use are those of Desault, Velpeau, Mayor, and Schimanovsky, while the more modern ones of Sayre, Landerer, and Moore, enjoy greater popularity. The author believes, however, that the problem of constructing a clavicular splint which shall meet all requirements has not yet been solved. The simplicity of Sayre's dressing loses its advantages when we remember that, in practice, a Velpeau or Desault bandage or some other form of bandage is almost always applied over the plaster. Without this protection the plaster, warmed by the heat of the body, may become detached and thus the bone may be displaced. The skin of some patients does not bear the plaster well. In addition, Sayre's dressing does not exercise a sufficient amount of backward traction upon the shoulder, so that Landerer was moved to modify it in such a manner that a broad, hand-like end with spreading digits was fixed in front of the affected shoulder as a base of traction. Moore's dressing pulls the shoulder upward, but not backward and outward. It is made simply of a long towel.

The author's dressing consists of a flannel bandage, from 12 to 14 centimetres wide and a few yards long, and a small cotton pad for the axilla, such as is used in Desault's dressing. The affected arm is held by an assistant horizontally, and gently pulled forward. The surgeon, now standing behind the patient, the bandage is passed over the affected shoulder and under the axilla, and tied so that the knot is on the scapula and the loose end hangs down along the back. The axillary pad is now placed in the loop and under the arm, and pinned to the bandage. While the assistant now allows the arm to fall gradually, at the same time flexing the elbow at an acute angle and bringing the hand up to the opposite shoulder, the surgeon pulls the shoulder backward, pulling upon the flannel loop until the bony fragments are in juxtaposition. The bandage is now led under the healthy axilla, forward over the healthy acromion, then backward over the scapula, to the postero-external aspect of the middle third of the humerus on the affected side, thence forward around the arm, horizontally across the front of the chest, partly covering the flexed forearm. The end of the bandage is then passed

through the layer that encircles the healthy shoulder, thus making a loop under the axilla, and then backward over the chest obliquely, under the affected elbow, and again across the back to the healthy axilla where it is fastened by a knot at the level of the infraspinal fossa. The disposition of the knots is important, as on this depends the tightness of the bandage. Small wads of cotton are placed under the knots.

A Case of Subphrenic Pyopneumothorax. Gaseous Abscess under the Diaphragm.

By Dr. N. D. Stragesko.—Leyden defines this condition as a cavity situated under the diaphragm and filled with pus and air, which projects more or less into the thorax and gives physical signs similar to those of pneumo thorax. These cases are of considerable rarity. The patient was a man, aged thirty-eight years, who complained of pain in the upper part of the abdomen, aggravated by any motion, a sense of oppression in the stomach, and general weakness. He had been ill for three weeks, beginning with an attack of acute abdominal pain, vomiting, and swelling of the abdomen. On examination, the epigastric region was found to be markedly prominent. A tympanitic sound was obtained on percussion over the right half of the swelling, a dull sound over the left, due to the liver which was displaced downward and to the left by the cavity. The pain in the abdomen, the absence of pulmonary signs, and the extensive displacement of the liver spoke of a subdiaphragmatic cavity, rather than of a pleural one. The operation consisted of resection of the seventh rib between the mammary and axillary lines, and of the opening and drainage of the cavity by incising through the diaphragm. The patient died on the day of the operation. In Maydl's statistics of 104 cases there is a mortality of 52 per cent. The autopsy revealed an extensive sub-diaphragmatic abscess, but no intestinal perforation was found, though the cause in this case undoubtedly lay in such a perforation, as the possibility of perityphlitis or perinephritis was excluded. Before the first attack of pain the patient had lifted a heavy weight, and the author thinks that possibly there followed a hæmorrhage between liver and diaphragm, into which streptococci and colon bacilli entered, forming a gaseous abscess.

The Treatment of Ulcers by Means of Heat Rays.

By Dr. G. J. Tarabrine.—The author has treated eighteen cases of chancroid ulcers, buboes, and other chronic ulcerations, by exposing them to heat rays from a red-hot Paquelin's cautery. He held the tip of the cautery at distance of from two to five centimetres from the ulcer until the patient felt a sensation of warmth and something between pricking and burning. The distance and the duration of the exposure varied with the sensation produced. At the beginning when the ulcer was not yet clean, the distance might be two centimetres, later on a greater distance was required. The sore should be carefully cleaned before each *séance*. His cases included two soft chancres cured in two sittings, and two in three sittings, one bubo in nine sittings, one chronic ulcer in eleven sittings. No untoward effects were noted.

Abas-Tuman as a Climatic Station. By Dr. L. P. Abraham.

Proceedings of Societies.

AMERICAN MEDICAL ASSOCIATION.

Fifty-second Annual Meeting, Held in St. Paul, on Tuesday, Wednesday, Thursday, and Friday, June 4, 5, 6, and 7, 1901.

Joint Session of the Sections in the Practice of Medicine and in Hygiene and Sanitary Science.

Further Report on Pseudo, or Modified, Small-pox. By Dr. T. J. Happell, of Trenton, Tenn.—At the Atlantic City meeting of the association last

could be called variola vera, or was it a hybrid? He presented the following differential points for the consideration of the section: In the modified form there did not appear to be any prevailing types of the disease; they had the same general character, differing in degree only; the incubation period was from fourteen to eighteen days. In small-pox, the types were varioloid, discrete, hæmorrhagic, and confluent, and the incubation period was from fourteen days to twenty-one days.

Symptoms. From the first to the third day: In the modified form, at the onset, the patients complained of cold; they felt as though an attack of gripe or amygdalitis were coming on. Tempera-

	SMALL-POX.	CHICKEN-POX.
Age	Any age.	Childhood.
Incubation.	Two weeks.	13-17 days.
Invasion.	Marked headache, backache, fever, general malaise, lasting from 3 to 4 days.	None, or at most only slight indisposition.
Surfaces attacked	Worse on the exposed parts and extremities. Invariably on the palms.	Worse on the covered portions—thorax; rarely or never seen on the palms and soles.
Character of the eruption.	Progressive; papules, vesicles, pustules, crusts.	Papules and crusts. Lesion very superficial. Easy to rupture.
Histology	Lesion includes the lower layers of the derma. Hard to rupture. Multilocular.	Unilocular.
Temperature.	Remains high (103°-105° F.) till the eruption appears, then it drops and does not rise again for a week, and not then in mild discrete forms.	Rises with the severity of the attack.
Contour of eruption.	Quite uniform in size. Has a reddened area at base. Frequently umbilicated.	Not uniform. Also inflamed area about the vesicle, but less marked.
Sensation.	Painful to the touch; it may itch.	Not painful to touch.
Duration, including period of invasion and desquamation.	From two to four weeks.	From seven to fourteen days.
Vaccination.	Protects.	Does not protect.
Pitting.	When confluent on face, will occasionally mark in the discrete form.	Seldom, unless infected.
Complications.	Generally none.	None.
Mortality.	High in severe confluent and hæmorrhagic types.	Nil.
Resolution.	By crisis.	By lysis.

This table is a summary of Dr. Leavitt's paper, p. 281.

year, Dr. Happell reported to the section his experience with 300 cases of pseudo, or modified, small-pox, which he had made from a bedside study of the cases in all stages of the disease. The present paper dwelt upon some of the anomalies met with in 400 cases that had recently come under his observation. In many cases the disease was not communicable. Many persons who had been vaccinated had had the disease, while many who had not been vaccinated had escaped. He next considered the diagnostic points between this epidemic, which had occurred in Gibson county, Tenn., and variola vera as seen by him prior to 1895. He asked whether this

ture, 102°-105° F.; little or no vomiting; pulse rapid and full; little or no prostration; no delirium; no convulsions in the young. In a few cases there might be sleeplessness. In small-pox the onset was sudden, with violent chill, persistent vomiting, agonizing pains in the back and limbs and head. Temperature, 103°-104° F.; pulse full, strong, and rapid. Prostration great from the onset. Eyes injected. Sleeplessness, delirium, and convulsions in the young. *Third day:* In modified small-pox no coarse red spots appeared. In small-pox, coarse red spots appeared on the lips and forehead. With the appearance of these spots the temperature fell

to the normal and the patient was comfortable. *Fourth day:* In the modified form the eruption appeared, the character of which was generally that of an acne. In some instances the shot-like papules appeared, but this was rare. The temperature fell to the normal, and the patient invariably got up, if he had gone to bed, and stated that he was well. The eruption first appeared on the face; in men, about the forehead, cheek, and chin; in women and children, irregularly about the face. There was usually a sore throat. In small-pox the small red spots appeared on the forehead at the juncture of the hair, and subsequently on the extremities. Papules followed the red spots; these had a shot-like feel. *Fifth day:* In the modified form the acne-like eruption developed into vesicles which immediately became opalescent. These vesicles were unicellular, and were not umbilicated. The serum which exuded at their apices dried and turned brown, which, in some cases, gave them the appearance of umbilication. There was no puckering of the vesicle at its border. The temperature was generally normal unless it rose from abscesses or other causes. The vesicle might dry up and the disease might then be said to have aborted. A rapid recovery followed. In small-pox, papules appeared on the wrists and forehead. *Sixth to ninth day:* In the modified form the vesicles became filled with an opaque lymphoid fluid; in some cases with a brown nucleus in the centre, which gave them an umbilicated appearance. This vesicle, with its opaque fluid, mis-called pus, shrank to half its diameter and became a thin brown scab, perfectly circular. There was no stench. The patient was well after the appearance of the eruption, and insisted upon getting up and having plenty to eat. If the eruption was copious he looked bad, but he would tell you that he was all right and felt well. The eruption in a few cases effected the conjunctiva. There was no secondary fever. From this time on the scabs rapidly fell off, and by the tenth day the patient was entirely well. If the eruption spread over the entire body he might not be clear from scabs until the fourteenth day. In true small-pox the vesicles appeared in place of the papules and the eruption spread gradually over the entire body. The vesicles were umbilicated and multilocular. On the eighth and ninth days the vesicles became pustular and each was surrounded with a broad, red band, or efflorescence; the features became distorted, there were repeated rigors and fever, the early symptoms reappeared, stench was beginning, etc. There were marked delirium and convulsions in the young. This was the critical period. *Tenth to twelfth day:* In small-pox the pus oozed out and formed scabs, and the stench was particularly bad. *Seventeenth to the twenty-first day:* In small-pox the scabs dropped off, leaving red glistening pits which soon became white. Ulceration was deep, reaching the corium. Ophthalmia was generally present. Pustules pervaded the mouth, larynx, pharynx, and trachea. Petechiæ formed on the lower part of the abdomen and inner aspects of the thighs on the first and second days in some cases. *Papules:* In the modified form, papules, when present, were the same size as in small-pox, perhaps a little smaller, but fewer in extent. There might be no papules. Vesicles ranged in size from that of the head of a pin to that of a split pea. They

were not umbilicated, and, when punctured, collapsed. The vesicle was unilocular. Convalescence began on the appearance of the eruption. The so-called pustule did not extend into the derma. The epidermis was the only structure of the skin involved; there was, consequently, no pitting. The vaccinated took the disease. In small-pox the pustules were about the size of No. 4 shot, and had a translucent appearance, encroaching on the entire body, including the palms and soles. They appeared first on the face and hands. Vesicles were umbilicated and multilocular. This was also true of the pustule, and neither would collapse *in toto* if pricked with the needle.

The Old and the New.—This was the title of a paper by Dr. W. L. Beebe, of St. Cloud, Minn. He said that he had been identified with two epidemics (twenty years apart) and, though they evidently both represented a species of small-pox, they were dissimilar in many characteristics. He thought that many of the recent cases of small-pox had been diagnosticated as chicken-pox.

Remarks Concerning the Sanitary Features of Small-pox. By Dr. Louis Leroy, of Nashville, Tenn.—In the event of an outbreak, a competent physician should be placed in charge and given absolute power to act; he should communicate with boards of health and should have police backing if necessary. Official reports should be made daily to the newspapers, giving the exact condition of affairs. Small-pox treatment in private houses he considered a make-shift; complete and perfect isolation must be insisted upon. All articles should be disinfected in the usual manner; everything possible should be destroyed by fire after the patient had been discharged as cured. The speaker said that in Tennessee this year he had introduced on a large scale the hypodermic needle as a means of vaccinating. He had first tried this method in Philadelphia, in 1895, then using an aqueous solution. He now employed the glycerinated lymph. A solid piston needle was used. The skin was cleansed in the customary manner and the needle inserted into the skin, not through it, and a drop of the lymph was forced between the epithelial cells. This method had many advantages; in cases of compulsory vaccination it could not be washed off; there was absolute freedom from infection at the time of vaccination; it was painless, and no immediate dressing was necessary.

The Diagnosis of Mild Small-pox as in the Present Outbreak of the Small-pox in this Country. By Dr. Heman Spalding, of Chicago.—On February 15, 1899, small-pox was introduced into Chicago from Cincinnati; in the seventeen months following there were 72 cases; 25 of these from direct importation. For a period of three months and a half, the city was entirely free from the disease. Then another outbreak occurred. These two outbreaks gave him an opportunity of studying 310 cases in Chicago in the Isolation Hospital. (See next page.)

He did not think that the term varioloid should be used; many persons were under the impression that varioloid was not small-pox and thought that if they were taken to a small-pox hospital while sick with the former they would contract the latter disease. It was a useless term and should be discarded. In Chicago they placed all patients, whether afflicted with hæmorrhagic, confluent, or

very mild small-pox, into the same wards in the hospital. In two hundred and seventy-one of the cases reported, the patients had never been vaccinated. None of those afflicted with the mild form of disease had contracted small-pox from the severer typical cases in the wards, where the exposure had been long and certain. The mild form of the disease gave immunity from small-pox and yet would transmit typical confluent or hæmorrhagic small-pox; of this he had had abundant proof in Chicago.

Cases.	Deaths.
1 hæmorrhagic case.	1
13 confluent cases.	3
24 semi-confluent cases.	2
54 severe discrete cases.	0
179 mild discrete cases.	0
39 modified form of cases.	0
Total. 310	Total. 6

The Distinguishing Characteristics between Mild Discrete Small-pox and Chicken-pox was the title of a paper by Dr. Frederick Leavitt, of St. Paul, Minn., in which he gave the summary in the table on page 279.

Variola. By Dr. H. M. Bracken, of St. Paul, Minn.—In the State of Minnesota there had been reported 7,211 cases of variola, with 49 reported deaths, during the past two years and a half. He did not think that we could be governed in our diagnosis of all cases in this present epidemic by the usual text-book description of variola. Typical prodromal symptoms might be present, but the rash might vary in degree, in form, in type of progress, and in final disappearance, in a way that was described in but few text-books. He asked if vaccination protected against the disease. Of 662 cases, in 244 houses, but 10 patients had been successfully vaccinated at any time prior to their infection, and of these 10, over thirty years had elapsed since successful vaccination for 2 of them, over twenty-five years for 4 of them, twenty years for 1 of them, and six years for 1. The Chicago Board of Health made the following statement: "Out of a total of 171 cases of small-pox found in Chicago between November 30, 1900, and April 10, 1901, 140 had never been vaccinated. Of the remaining 31 cases, 29 were adults showing faint, poor, or irregular scars, claimed to be evidence of attempted vaccination in infancy or childhood—the most recent being twenty-three years old. Only 2 out of the 171 cases exhibited scars of successful vaccination."

Since vaccination had been made compulsory in the schools of Chicago small-pox had disappeared from them. The degree of immunity depended, at least in part, on the intensity of the infection. Marson gave the death-rate as follows among those who had been vaccinated: One cicatrix, 7.73 per cent.; two cicatrices, 4.7 per cent.; three cicatrices, 1.95 per cent.; four or more cicatrices, .55 per cent.

Signs of Diphtheritic Infection.—M. Simonin (*Progrès médical*, June 22d) considers rapid asthenia and tachycardia, accompanying an anginal affection, as excellent signs of diphtheritic infection. In his opinion, these signs alone are sufficient to call for the use of serum therapy.

Letters to the Editor.

HEART DISEASE AND PULMONARY TUBERCULOUS DISEASE.

1605 WALNUT STREET,
PHILADELPHIA, July 17, 1901.

To the Editor of the New York Medical Journal:

SIR: I should be exceedingly obliged to the subscribers of your valuable journal for answers to the following queries:

I. In what percentages of the cases of chronic valvular diseases affecting the mitral and aortic segments has pulmonary tuberculosis developed as a secondary event?

II. If notes have been kept, kindly give the total number of cases, both of valvular disease and of pulmonary tuberculosis, as well as the percentage.

III. If no records have been kept, kindly state opinion as to the frequency of the occurrence of pulmonary tuberculosis secondary to chronic valvular disease at the orifices mentioned above.

IV. What is the effect of valvular disease, mitral and aortic, upon the course of chronic pulmonary tuberculosis?

V. Have lesions of the pulmonary artery valves seemed to predispose to pulmonary tuberculosis? (Statistics on this head are also desired.)

VI. If chronic valvulitis affecting the mitral and aortic cusps exercises a preventive effect, what is the explanation?

VII. If disease of the pulmonary valves (I refer especially to stenosis) predisposes to phthisis, how is the effect accounted for?

J. M. ANDERS.

Book Notices.

Vorlesungen über die pathologische Anatomie des Rückenmarks. Unter Mitwirkung von Dr. SIEGFRIED SACKL, Nervenarzt in München. Herausgegeben von Dr. HANS SCHMAUS, a. o. Professor u. i. Assistant am patholog. Institut in München. Mit 187 theilweise farbigen Textabbildungen. Wiesbaden: J. F. Bergmann, 1901. Pp. xxi-589.

These lectures are a most important contribution to the pathology of the spinal cord. All the subjects treated are gone into with a thoroughness hardly to be found elsewhere. Beginning with degenerations, secondary degenerations are considered first, followed by general chapters on degeneration of the nerve cells and nerve fibres. The vexed subject of the pathology of tabes is examined in great detail, and after rejecting the numerous other theories the authors are inclined to believe that tabes is a primary intramedullary degeneration of the posterior roots. Four chapters are given to the circulatory disturbances in the spinal cord and to myelitis.

In the chapter on traumatic diseases the researches of Schmaus, which first brought his name prominently into notice, are again referred to. Under developmental disturbances and congenital anomalies of the spinal cord, a long study is given to myelosyringosis. The volume concludes with a

chapter on tumors of the spinal cord and its membranes.

From the point of view of its literary thoroughness and the originality of its contents, the volume is to be warmly recommended to neurologists. Its many plates are beautifully and accurately executed.

Atlas of the Nervous System, including an Epitome of the Anatomy, Pathology, and Treatment. By Dr. CHRISTFRIED JAKOB, Head of the Pathological Institute for Nervous and Mental Diseases at the University of Buenos Aires, etc. With a Preface by Professor Dr. AD. V. STRUMPELL, Director of the Medical Clinic, Erlangen. Authorized Translation from the Second Revised German Edition. Edited by EDWARD D. FISHER, M. D., Professor of Diseases of the Nervous System, University and Bellevue Hospital Medical College, etc. With 112 Colored Lithographic Figures and 139 other Illustrations, many of them in Colors. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 3 to 218.

The high standard of illustration and of accuracy in text which has made the *Saunders Medical Hand-Atlases* so popular is maintained in the present volume. The lithographic plates are superbly executed, and are amplified by schematic representations which make them readily comprehensible. It is really astonishing how large a field is covered both by text and illustration in this little volume. The morphology of the nervous system, development and structure, anatomy and physiology, general pathology and treatment, special pathology and treatment, and general remarks on autopsy technics, and the microscopic examination of the nervous system are all considered. The consideration is necessarily brief, but as a whole it offers a very satisfactory sketch of neurology as it exists to-day.

Most of the illustrations have been taken from original preparations of the author's. The reviewer can join with the editor, Dr. Fisher, in saying that he knows of no other work in which so much is compressed within so small a space.

Clinical Pathology of the Blood. A Treatise on the General Principles and Special Applications of Hæmatology. By JAMES EWING, A. M., M. D., Professor of Pathology in Cornell University Medical College, New York. Illustrated with 30 Engravings and 14 Colored Plates drawn by the Author. Philadelphia and New York: Lea Brothers & Company, 1901. Pp. xiii-17 to 432.

We are glad to welcome another book on the blood by an American author whose extensive research in this particular line of microscopy is widely known. The general scheme of the work is excellent, and a glance at the copious bibliography following each chapter alone shows how exhaustive has been the author's study of the current literature of the subject.

The book is divided into six sections, dealing with general physiology and pathology, special pathology, the acute infectious diseases, constitutional diseases, general diseases of the viscera, and animal parasites. A further subdivision into numerous chapters is made, and the entire field is thus well covered.

The chapter on malaria is especially interesting

and instructive, and the distinctive diagnosis of the various parasites found in this disease is lucid and complete, reflecting the results of the author's original and careful investigations. Nocht's modification of the Romanowsky method is the stain preferred in identifying the minute structure of the parasite.

It is the opinion of the reviewer that the occasional and slight changes discovered in the blood in many diseases, such as dyspepsia and amygdalitis, are not sufficiently diagnostic or pathognomonic to warrant their mention in a book of this kind. Yet, a glance at the index shows that few diseases have been neglected in the text. It is quite probable that any pathological condition of the body may give rise to certain changes in the blood, very often of a highly complex chemical nature, but not sufficiently important from a clinical standpoint to be of practical value. A slight increase or diminution in the number of the red or white corpuscles is so frequently seen in health and disease that this change in the blood alone is of no diagnostic import.

It may be said of this work, however, that, besides offering a most valuable contribution to hæmatology, it can be recommended to any experimental and practical pathologist in this line of research. The illustrations, many of which are original and in colors, are excellently reproduced. The text is fairly free from typographical errors, and the general appearance of the book is very pleasing.

Chronic Urethritis of Gonococcic Origin. By J. DE KEERSMAECKER, Chief of Service, Diseases of the Urinary Organs at the Centraalkliniek of Antwerp, and J. VERHOOGEN, Agrégé at the University of Brussels, etc. Translated and Edited, with Notes, by LUDWIG WEISS, M. D., Attending Physician to the Genito-urinary and Skin Service, German Poliklinik, etc. New York: William Wood & Company, 1901. Pp. xiv-263.

Not since the appearance of Finger's work on *Gonorrhœa*, and See's *La Gonocoque*, has this separate subject been so ably and systematically handled as in the volume under consideration. In its original form, the work was written to further exploit the teachings of Oberländer, whose prefatory remarks are far more conservative than the allegations of the authors for endoscopy.

The very important chapter on endoscopy, the substratum of the entire work, must be charged with a prolixity that is needless, and which tends to reiteration. To place the findings of endoscopy on a par with those of ophthalmoscopy was at one time ardently hoped for, but now, after all has been most skilfully seen with the aid of this most efficient apparatus, we are, from the therapeutic standpoint, once more face to face with the original old empirical precepts of "silver and the sound." It is in conjunction with the use of the various dilators that the strongest plea is made for the endoscope, to control their repeated application and to prognosticate the course of the disease.

The fragmentary information bearing on dilators which is extant in current literature is here presented in complete form. Firmly rooted as is the faith of the authors in the mechanical treatment of chronic urethritis, yet they prove themselves just as staunch

adherents of the Neisser school by always making the search for the gonococcus the *experimentum crucis* in pronouncing the case cured.

The interpolations of the translator are numerous and have gone far to make up for the deficiencies of the original volume. The scope of the work has been enlarged by the addition of important chapters by the translator on aseptis of instruments, massage of the urethral annexa, therapy with the newer silver products, and the relation of chronic gonorrhœa to marriage.

Interest in endoscopy having been rekindled by perfection in the construction of American-made instruments, devotees of urethroscopy will find a good guide in the selected and well-executed urethral pictures in natural colors given in this work.

Uterine Tumors: Their Pathology and Treatment.

By W. ROGER WILLIAMS, Fellow of the Royal College of Surgeons. New York: William Wood & Company, 1901. Pp. xvi-359.

It is always profitable to read a book which is conceived in a thoroughly scientific spirit and bred in a scientific atmosphere, in which the author is not striving to produce evidence of his own great skill, but is merely noting, in judicial and conservative fashion, and exemplifying from a vast storehouse of facts and of knowledge, data which are susceptible of reasoning. From the very preface of the present work, it is plain that the author is a man of wide reading and of philosophical mind; and the perusal of his work in its entirety is not disappointing in this or other respects. It is a scientific treatise, of interest to the pathologist, to the surgeon, and to the embryologist. It is a complete treatise, and much of its value arises from this fact.

The author practically excludes bacteria and "irritation" as factors in the production of myomata, and regards it, from the evidence he adduces, as much more likely that these growths arise from embryological or developmental faults. The various varieties and complications of myomata are next discussed thoroughly. The author thinks that it cannot be denied that myomatous neoplasms sometimes take on malignant characteristics, but he regards it as a rare occurrence and does not believe that fibroid tumors are especially prone to this variety of degeneration. Radical treatment Williams thinks desirable on account of pressure of symptoms, septic infection, the discomfort caused by large tumors, possible *dystocia*, severe and oft-repeated hæmorrhages. He does not believe that fibroid growths diminish after the menopause, and he urges therefore the performance of radical operations if they are otherwise indicated. He favors the vaginal route for the various surgical procedures for relief from myomatous tumors when this method is feasible. He does not look with favor upon the various so-called palliative measures of treatment.

The malignant neoplasms are treated by the author in the same thorough manner as the benign growths. Their etiology, pathological variety and structure, clinical course, and treatment are considered in minutest detail.

The entire work is based upon the author's experience, but references are freely given and credit is assigned for the views and opinions of others. To

those interested in the subject it may be said that no book in the English language covers the entire subject of uterine growths so satisfactorily and scientifically as this one. The illustrations are not very numerous, but they are clear and well executed.

An Introduction to Physiology. By WILLIAM TOWNSEND PORTER, M. D., Associate Professor of Physiology in the Harvard Medical School. Cambridge, Massachusetts: The University Press. Pp. xvi-314.

The fundamental basis of Professor Porter's method of teaching physiology corresponds to the now generally accepted views as to clinical teaching, that the student shall "do things" for himself. It is with this in mind that he has written the little volume before us. The first part treats of electrical stimulation of muscle, and the second part deals with the mechanics of the circulation. Upon these themes Professor Porter has elaborated and explained the means by which the student of physiology may perform the experiments for himself. The apparatus required is largely of his own device. Those who are interested in the practical teaching of physiology will find the book a very clear exposition of the two subjects treated of.

Introduction to the Differential Diagnosis of the Separate Forms of Gall-stone Disease. Based upon his own Experience gained in Four Hundred and Thirty-three Laparotomies for Gall-stones by Professor HANS KEHR, Halberstadt. Authorized Translation by WILLIAM WOTKYNs SEYMOUR, A. B. Yale, M. D. Harvard, formerly Professor of Gynæcology in the University of Vermont, etc. With an Introduction by PROFESSOR KEHR. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. xv-17 to 370. [Price, \$2.50.]

A service was rendered to physicians who cannot read German in the translation of Kehr's important monograph on gall-stone disease. The value of that service, however, is diminished by the nature of the translation, which is, to say the least, too literal. As a result, the English is awkward and at times not at all indicative of the author's meaning; for example, the following on page 21: "I have always, consequently, held fast to this: that it did not simply concern gall-stones, but that it considers the pathologico-anatomical forerunners which are hidden from us, the seat of the stones, and the degree of inflammation"; and on page 64: "then the immediate removal into a hospital may not hinder that the peritonitis makes further progress, etc." These are but instances of the faults, which appear on almost every page.

As to Kehr's work itself, representing as it does the results of perhaps the greatest experience in the surgery of the biliary organs, too much cannot be said in praise. Up to November, 1900, this surgeon had performed 547 operations for gall-stones, with the most brilliant results. Of operations on the gall-bladder itself there were 204 cases, with but four deaths; of 121 cases of additional removal of the cystic duct, four also proved fatal; and, of 97 choledochotomies, or hepatic-duct drainages, six ended fatally; in all, 422 laparotomies for gall-

stones, with fourteen deaths, or a mortality of 3.3 per cent. The remaining cases included carcinomata of the liver and of the biliary passages, diffuse septic cholangiitis, peritonitis, etc., usually fatal affections.

With such an unusually large experience the author is more than qualified to speak dogmatically on the subject of cholelithiasis. While the reviewer believes that the diagnosis of the various affections of the biliary passages induced by gall-stones is not so simple as the author would have us believe, even with his experience, and that an ante-operative diagnosis of the exact pathological conditions present in a given case is not possible to the extent that the author represents, much may be learned in this regard from a study of the author's cases, the histories of most of which form the major part of the book. Kehrer contends that many attacks of colic are not due to the passage of the stone through the ducts, but are not infrequently the results of inflammatory processes and adhesions of the gall-bladder to the adjacent structures. This view is likewise held by Naunyn, who has shown that a large stone may lie in the fundus of the gall-bladder, there excite a cholecystitis, and, in spite of the increased serous secretion and gall-bladder distention due to the cholecystitis, may become surrounded by the swollen mucosa of the gall-bladder so that there can be no question of obstruction of any of the ducts by the stone.

Functionelle Nierendiagnostik mit besonderer Berücksichtigung der Nierenchirurgie. Klinisch-experimentelle Untersuchungen von Dr. LEOPOLD CASPER, Privatdocent an der Universität, und Dr. PAUL FRIEDRICH RICHTER, Assistant der III. med. Klinik, in Berlin. Mit 2 Holzschnitten. Berlin: Urban & Schwarzenberg, 1901. Pp. 155.

Following the increased confidence accorded cystoscopy and its offshoot, ureteral catheterism, it lay in the natural order of things to look for still finer methods of determining the function of each kidney. It was, perhaps, the want of any such evidence that afforded a loophole for the minority, comprising a small but influential body of surgeons, to decry any great gain from catheterism of the ureters. By experimenting with the various methods of ascertaining the individual renal function as set forth in this monograph, we believe Casper, as the champion of ureteral catheterism, to have effectively dealt with his critics.

The methods that have been in vogue, from time to time, to determine renal sufficiency are critically reviewed in historical order. All methods that are given to estimate a departure from the normal of any one or several constituents of the urine are counted invalid, because no cognizance is taken of the amount of fluids ingested or of other channels by which these have been excreted. Elimination of methylene blue only is retarded with constancy in chronic interstitial nephritis. This test is, furthermore, limited by the length of time necessary for its execution, which makes it unserviceable for ureteral catheterism. Finally, we have in cryoscopy a most efficient method of determining, not any one constituent of segregated urine, but its molecular constitution expressed in terms of its freezing point, varying with its degree of concentration. Further

corroboration of diminished renal function, unilateral or bilateral, is attainable from a study of the complementary changes in the freezing point of blood serum. Cryoscopy is but a qualitative test of renal sufficiency. Subcutaneous injection of phlorrhizin, because of its selective action on normal kidneys, in causing a transient renal glycosuria which appears and disappears rapidly, offers a quantitative test.

The option of the removal of a kidney, provided its associate is performing its function properly, will often depend on these finer tests. We can recall clinical experiences in which ureteral catheterism or ocular inspection (exploratory incision) proved disease of both kidneys in varying degree, yet, following the removal of the organ most affected the derelict kidney recovered and made thorough compensation. In such instances and as to the capability of the associate kidney, with even a normal freezing point of its urine, to effect sufficient compensation, the criteria of cryoscopy alone would not suffice. Cryoscopy is but an approximately accurate test, but its readings strongly add to the cumulative evidence when used in conjunction with other tests.

Tuberculosis as a Disease of the Masses, and how to Combat it. Prize Essay by S. A. KNOPF, M. D. New York: M. Firestack, 1901. Pp. 86.

It is not very difficult to understand why this very practical monograph should have received the commendation, and its author the prize which was awarded by the International Congress to Combat Tuberculosis as a Disease of the Masses in Berlin in July, 1900. Not only is the subject dealt with in very thoroughly and practically, but the facts presented are expounded so clearly and forcibly that they act as an object lesson. The author's motto, "to combat consumption as a disease of the masses successfully, requires the combined action of a wise government, well-trained physicians, and an intelligent people," is the keynote to the subject as presented in this most excellent essay, which, by the way, has already received almost universal recognition by having been translated from the original German into Dutch, French, Italian, Russian, and English.

The manner of treating the subject is so free from technicalities that even persons of ordinary education can perceive the value of carrying out the provisions which the author shows are essential to successfully overcome the "white plague." Governments of States and municipalities, in view of the wide dissemination of tuberculous disease, would do well to have this essay distributed to the adult and adolescent members of every household in the land, with the object of instructing the people that the only way to combat this disease is by their intelligent cooperation.

The Feeding of Infants. A Home Guide for Modifying Milk. By JOSEPH E. WINTERS, M. D., Professor of Diseases of Children, Cornell University Medical College. New York: E. P. Dutton & Company, 1901. Pp. vii-47.

Little more is attempted in this book than directions regarding the home modification of milk. These are clear and definite and in accord with the

best opinions of the day in regard to the subject. The author's great experience and his astuteness of thought give to the work a value which the practitioner will not be slow to recognize.

BOOKS, ETC., RECEIVED.

Webster's International Dictionary of the English Language. Being the Authentic Edition of Webster's Unabridged Dictionary, comprising the Issues of 1864, 1879, and 1884. Thoroughly Revised and much Enlarged under the Supervision of Noah Porter, D. D., LL.D. With a Voluminous Appendix, to which is now Added a Supplement of Twenty-five Thousand Words and Phrases. Prepared under the Supervision of W. T. Harris, Ph.D., LL.D., Editor-in-Chief. Springfield, Mass.: G. & C. Merriam Company, 1901. Pp. cvi-2011.

The Diagnosis of Internal Medicine. A Clinical Treatise upon the Recognized Principles of Medical Diagnosis, prepared for the Use of Students and Practitioners of Medicine. By Glentworth Reeve Butler, A. M., M. D., Chief of the Second Medical Division, Methodist Episcopal Hospital, Brooklyn, etc. With Five Colored Plates and Two Hundred and Forty-six Illustrations and Charts in the Text. New York: D. Appleton & Company, 1901. Pp. xxviii-1059.

Traité de chirurgie clinique et opératoire. Publié sous la direction de MM. A. Le Dentu, Professeur de clinique chirurgicale à la Faculté de médecine de Paris, etc., et Pierre Delbet, Professeur agrégé à la Faculté de médecine de Paris, etc. Tome dixième. Première partie. Par MM. Pierre Sebileau, R. Pichevin, S. Bonnet, E. Schwartz. Avec 186 figures intercalées dans le texte. Deuxième partie. Par MM. A. Le Dentu, S. Bonnet, P. Mauclair. Avec 147 figures intercalées dans le texte. Paris: J. B. Baillière et fils, 1901. Pp. 1334.

Bibliographia Lacteria. Premier supplément (année 1901) à la bibliographie générale des travaux parus sur le lait et sur l'allaitement jusqu'en 1899. Par le Dr. Henri de Rothschild, Lauréat de la Faculté de médecine de Paris. Paris: Octave Doin, 1901. Pp. 98.

Klinisches Jahrbuch. Herausgegeben von Professor Dr. Freih. von Eiselberg, in Wien, Professor Dr. Flügge, Geh. Med.-Rat, in Breslau, Professor Dr. Freih. von Mering, in Helle a.S., und Professor Dr. Werth, Geh. Med.-Rat, in Kiel. Achter Band. Erstes Heft. Mit 2 Tafeln, 1 Abbildungen und 2 Kurven im Texte. Jena: Gustav Fischer, 1901. Pp. 160.

Clinical and Pathological Papers from Lakeside Hospital, Cleveland. Series 1, 1901.

The Microbe-producing-disease Theory Inconsistent with the Laws of Nature. By J. P. Schmitz, M. D. San Francisco, 1901.

Transactions of the Southern Surgical Gynecological Association. Thirteenth Session held in Atlanta, November 13, 14 and 15, 1900. Volume XIII.

The Illinois State Board of Health. Report of the Sanitary Investigations of the Illinois River and its Tributaries.

Miscellany.

The Finsen Light Treatment.—A medical correspondent of the *New York Sun*, writing from London, describes in the issue of that paper for July 14th the workings of Professor Finsen's instrument for the treatment of lupus by the application of the concentrated violet and ultra-violet rays of light. Recourse is had, he says, to a powerful arc electric light which is rich in the chemical rays, that is, the violet and ultra-violet rays in the light. The lamp is hung from the roof of a temporary ward, and is surrounded by a metal screen. The screen shades the light and excludes draughts. Four telescopes project from under the screen, pointing in four dif-

ferent directions. The telescope lenses are of rock crystal and the lower part of the telescope is filled with distilled water, which absorbs the heat and is in its turn kept cool by a jacket through which a stream of water continuously flows. This water is conveyed by a tube of india rubber through a "pressure glass." The glass is held by the nurse on the affected spot, so that the skin is "pressed" in order to keep the blood out of it, whereby it is rendered more sensitive to the light, which is kept in focus, and the glass also assists in rendering the skin cool. The patients lie upon couches or rocking chairs, one under each telescope, and a nurse for each manipulates the pressure glass. Four patients can thus be treated by the one light at the same time, the treatment lasting an hour a day. Smoked glasses are used by both nurses and patients to protect the eyes from the very powerful white light, which is destructive to the germs.

In addition to the actual cost of the apparatus, which, being a royal benefaction, the correspondent could not ascertain, the cost of working the four lamps is \$8,000 per annum, so as to keep the instrument in constant working order under the control of graduate nurses.

"Our Mutual Foe"—The Printer.—We noted, but forbore to comment on, the matter jocosely referred to in the following clipping from the *Lancet* for July 20th:

"THE PRINTER AGAIN.

Our esteemed contemporary, the *Journal of the American Medical Association*, in its issue of July 6th, 1901, has on its contents page under the heading 'Addresses,' the following startling title, 'Poverty and Pregnancy: their Cause, Prevention, and Cure.' That poor people do sometimes attempt by various measures, some of which are unpleasant, some of which are injudicious, and some of which are illegal, to escape the responsibilities while enjoying the privileges of matrimony is well known. But it is so contrary to the medical view of what is right publicly to advocate the prevention of pregnancy as a cure of poverty that we turned to the article with apprehension. Yet we might have guessed to whose jocosity we had fallen a victim. It was the merry printer. Within the pages of the journal the article receives its proper heading—viz., 'Poverty and Degeneracy: their Cause, Prevention and Cure.'

We have, thus far, not had any stab so deep as this, though the printer *did*, some months ago, make us discourse of Babies in the District of Columbia when we had wished to speak of Rabies in that district. But *absit omen*; it may be our turn next—or even the *Lancet's*.

On the Study of Cases.—Dr. Keith Norman Macdonald (*Caledonian Medical Journal*, July), in an article entitled How to Become a Good Physician, to one portion of which we referred in a leading article in our issue for July 20th, has some wholesome remarks on "The Importance of Taking Cases to 'Avizandum.'"

"The sheriffs of Scotland," he says, "and probably the judges also, have got a very good system in their law proceedings—which doctors would

do well to imitate when cases come in their way requiring extra caution—before giving a decision they take their cases to what is termed 'avizandum,' that is to say, they take their notes home with them, and consult all the best law works on the subject in the seclusion of their studies, and thus grapple with many points which they could not do off-hand. Similarly, the good physician should read up his cases at night, and be prepared to corroborate, or modify, or alter his diagnosis of the previous day, and however trivial a case may seem, he is never the worse of a further acquaintance with the subject. This refreshes his memory, and besides consulting the works of the ablest men of his day, much may be learned by a perusal of some of the works of our predecessors, whose mature experience enabled them to reason with singular capacity and judgment.

"One of the most vexatious things in medicine is the terrible frequency with which new editions of works are reproduced, and the rapid changes in treatment, and the host of useless remedies that are advocated as *the panacea* for all diseases. This should be stopped. Ten years should elapse between each edition, and even that is short enough. The heaven-born geniuses who have got something new to tell us can do so through the medical journals."

The Rôle of the Infections in Diseases of Women.—Dr. C. A. L. Reed (*St. Paul Medical Journal*, June) concludes a paper on this subject, read before the Medical Society of the State of New York, at Albany, as follows: I beg leave to formulate tentatively at least, a few of the laws which seem to determine the rôle of the infections in diseases of women: 1. The epithelial surface of the genital tract, in its integrity, is an efficient barrier against invasion of the underlying structures by pathogenic micro-organisms, that establish parasitic and saprophytic relations to the vagina. 2. The normal cervix and its contained secretions, are adequate barriers against invasion of the uterus by pathogenic bacteria that are capable of maintaining a habitat in the vagina. 3. The vagina possesses certain powers of self-disinfection, which work only against the organisms that are at once true parasites and facultative aerobes. 4. Certain pathogenic bacteria, notably the gonococcus of Neisser, the Klebs-Loeffler bacillus, and the *Oidium albicans*, find in the warmth and moisture of the genital epithelium, conditions favorable to their propagation and to the increase of their virulence whereby the epithelium itself may be destroyed, to the extent of losing its protective properties. 5. Pathogenic bacteria, innocuously present in the genital tract, may become virulent when introduced into the underlying structure through a breach in the protective epithelium. 6. Pathogenic bacteria, when introduced into previously normal tissues, immediately provoke the process called inflammation, the essential phenomenon of which is the speedy deposit and rapid extravascular migration of the leucocytes, which act as phagocytes in preventing the further invasion of the system.

A Case of Splenectomy for Floating Spleen.—The comparative rarity of this operation lends

special interest to a case recently reported by Dr. J. P. Bryson (*St. Louis Courier of Medicine*, June) to the Medical Society of City Hospital Alumni, St. Louis, of which case the following is a *résumé*:

A large, well-developed woman, aged twenty-seven years, single, with good family and personal history, but presenting evidences of congenital floating spleen which had become hypertrophied, gradually developed symptoms of obstruction, anæmia, dysmenorrhœa, and intermittent amenorrhœa. Within the past year crises of acute pain and shock, becoming more and more severe and frequent, referable to axial rotation of the enlarged spleen, have developed. Absence of lymphatic involvement. Splenectomy followed by neither shock nor hæmorrhage. On the sixth day epistaxis and bleeding from the gums, which was quickly followed by pyrexia, anorexia, diarrhœa and acute nephritis, all of which subsided within twelve days. Recovery was complete and the anæmia is distinctly improved two months after operation. During convalescence no enlargement of the lymphatic tissues was demonstrable.

There is an unfortunate hiatus in the record, viz., the absence of a competent blood examination before operation. On September 25th, when the analysis was made, the blood was also examined, whence Dr. Bryson got the impression from a verbal report that, while there was a high degree of anæmia, there was not a true leucæmia. Even in the face of such contraindications there was urgent need for relief, which could only come from operation. The case seemed to be one of congenital wandering spleen, enormously enlarged, and developing symptoms due to displacement, obstruction, pressure, dragging on certain viscera, and crises referable to axial rotation. Only after the occurrence of two such crises, causing dangerous symptoms of collapse, was it determined to face the risk of splenectomy.

Both of these crises appeared to be due to rotation of the enlarged organ, the lower border of which slipped over beyond the median line, at the same time that it greatly increased in size and became tender to pressure. Quickly there followed nausea, emesis, a heavy dragging feeling in the epigastrium, rapid pulse, cool, clammy skin, and greater pallor. Under such conditions one might be justified in taking considerable risks, as when splenectomy was done in those cases of acute anæmia due to lacerations and internal hæmorrhage with collapse. Moreover, the pressure symptoms manifested by œdema and hyperæsthesia of the lower extremities and symptoms of obstructive constipation, were not only increasing, but seemed to account, in a measure at least, for the anæmia.

The author then considers the cases of splenectomy for various causes collected by different writers, and cites the opinion of Greig Smith (*Abdominal Surgery*, Vol. ii, p. 1093) as follows: "Operations for leucocythæmic spleen are unjustifiable, operations for traumatic lesions are justifiable and safe. For movable spleen, excision ought not to be carried out till less severe measures, such as mechanical support or operative fixation, have been tried and found ineffectual. For cysts, the spleen may be removed with a fair chance of success, but puncture or incision with drainage ought to have a trial first. In the early stage of malignant disease

the operation is justifiable. In the rare cases of primary hypertrophy the operation is permissible if the disease is attended with danger or serious discomfort."

Dr. Bryson continues: "In the case of cysts, abscess, and certain cases of wandering spleen, the trend of opinion seems to be toward splenectomy rather than splenopexy, or incision and drainage. In this, surgical opinion seems to run parallel with that in regard to nephrectomy as related to nephrotomy and nephropexy in certain conditions.

"So far as I have been able to see, the estimates of mortality have been based on the figures given above, but it is encouraging to note that Burtz has demonstrated that the mortality from splenectomy has, in recent years, been diminished, which he thinks may be attributed to improved technique, asepsis and a proper restriction of the cases in which it should be done. . . . Up to this time only a few splenectomies for floating spleen associated with twisted pedicle causing pain and shock, have been recorded. One such case by Dr. Isaac Scott Stone may be found reported in the *Annals of Surgery*, Vol. xxx, page 321, 1899. So far as I have been able to ascertain, no splenectomy has been done in such cases associated with splenic leucæmia.

"The report of the pathologist demonstrates that the leucæmia in the case reported here was not myelogenous or lymphatic, but splenic. While sufficient time has not elapsed to determine the ultimate result, the case may assist in modifying somewhat the sweeping generalization against splenectomy in cases associated with leucocythæmia because of the high mortality, as well as in explaining the few successful operations done in such cases, operations which have been discredited, perhaps, unjustly."

The Treatment of Cyanide Poisoning.—Dr. C. J. Martin, F. R. S., and R. A. O'Brien (*Intercolonial Medical Journal of Australasia*, June 20th), having been requested by the Department of Mines to draw up instructions for the treatment of cases of cyanide poisoning, which, owing to the use of that poison for the recovery of gold, is very common in Victoria, publish the results of a most careful series of elaborate experiments into the value of peroxide of hydrogen, chloride of cobalt and ferrous iodides as antidotes in cyanide poisoning. The experiments are too long for reproduction, but the following is the authors' own summary of results:

"At the present time, no physiological antidote to hydrocyanic acid is known, nor is there any remedy available which can follow this powerful poison into the circulation, and there neutralize it. One can only endeavor to stop further absorption by converting the unabsorbed balance into some non-poisonous compound. Any chemical reaction, to successfully accomplish this end, must be such an one as takes place very rapidly. We have shown that *hydrogen peroxide fails entirely on this account*. This oxidizing agent completely destroys prussic acid in time, but it is essentially a slow reaction.

Cobalt salts are poisonous, otherwise they would be extremely valuable, for their solutions are stable, and the reaction, which disposes of the hydrocyanic acid, is instantaneous, and takes

place in the presence of amounts of hydrochloric acid, such as occur in the gastric contents.

Ferrous salts, administered with sufficient alkali, are as efficacious as cobalt salts. At the body temperature, the formation of ferrocyanides is instantaneous, but they possess two disadvantages—(1) The difficulty in keeping them in solution; (2) *the absolute necessity* of administering enough alkali at the same time to completely neutralize any stomach contents. This can best be effected by the simultaneous administration of magnesium oxide. The displacement of ferrous salts by other remedies of recent years, is no doubt due to inadequate appreciation of this fact.

The extreme rapidity with which cyanides poison (we never succeeded in saving a rabbit unless treated within five minutes of the administration of a certain fatal dose of KCN) leaves no time to prepare solutions and collect remedies. We therefore think that, in all mines and mining laboratories where opportunities for accidental poisoning by cyanides occur, solutions of ferrous sulphate, weak potash, and a small packet of magnesium oxide, together with a stomach tube and suitable receptacle for mixing, should be kept ready prepared in some suitable position, so that they could be administered with only a few seconds' delay.

The total acidity of the stomach contents in man would be unlikely ever to exceed that of 500 cubic centimetres of decinormal hydrochloric acid (.36 per cent HCl). This would be met by 1 gramme of magnesium oxide. We would recommend that the following be prepared:

(1) 30 c.c (1 oz.) of 23 per cent. solution of ferrous sulphate.

(2) 30 c.c. (1 oz.) of 5 per cent. solution of caustic potash.

(3) 2 grammes (30 grains) of powdered magnesium oxide.

(4) A metal receptacle of 1 pint capacity.

(5) A stomach tube.

Nos. 1 and 2 should be in hermetically sealed tubes, which can be broken into the receptacle, and powdered magnesia and half a pint of water added, shaken up, and administered. This amount of antidote would account for 5 grammes of cyanide of potassium, a quantity far in excess of what is likely to be drunk accidentally, but, as mentioned above, to secure a sufficiently rapid reaction, the ferrous sulphate and alkali should be in considerable excess.

Hæmorrhagic Bulla of the Mouth and Pharynx.

—J. Preston Maxwell, M. B., F. R. C. S. (*Journal of Tropical Medicine*, July 1st), gives the following description of a disease, seemingly hitherto undescribed, which is prevalent in the Tokien province of Southern China. Dr. Maxwell says that it occurs principally in those in the prime of life, at all seasons of the year, and in about 95 per cent. of cases, during the act of eating food. He records the case of a woman, forty years of age, who, while eating rice, suddenly became aware of a stinging pain and a swelling in the roof of her mouth. On examination, in the middle line, at the junction of the hard and soft palates, and extending partially over both, was a large tense hæmorrhagic bulla.

covering an area the size of a two-shilling piece (half a dollar). It resisted attempts to burst it, and was finally left alone, breaking of its own accord an hour or two later, and leaving an eroded surface from which dark blood oozed. This was easily averted by a tannic-acid gargle and a dose of ergot, and in a day or two the patient was well. Another case is recorded. The swelling appears never to take place on the inner surface of the lips, but the roof of the mouth, the palate and uvula, cheeks and pharynx are all known to have been affected. The pathology is obscure. Dr. Maxwell has known it to come on (a) while eating rice and small fish; (b) while eating candied sugar; (c) while drinking tea; (d) while eating soft biscuits; (e) while playing about. In the latter case the boy insisted that an insect had flown in his mouth and bitten him. The Chinese universally attribute the disease to the web of a fly-catching spider. In several cases the patients assert that they have been affected by eating out of a dish of condiment from which the spider has been seen to spring. Dr. Maxwell has, however, made many experiments with all kinds of spider's webs and has been unable to reproduce the condition. No site of puncture has ever been found. The prognosis is favorable, no serious effects following, and the treatment simple, as detailed above.

Surgical Luxuries: A Caution.—The *Medical Press and Circular*, for June 26th, says:

Lord Lister, speaking at the opening of the new operating theatres at St. Thomas's Hospital on Friday last, touched upon the very important matter of the sumptuous and elaborate apparatus now used at hospitals to secure perfect asepsis in operations. Lord Lister had nothing but praise, and well-deserved praise, for the admirable way in which the new operating theatres had been fitted up, but, as he put it, he felt jealous lest students who learnt their surgery where these luxurious appointments and arrangements prevailed should, when they had to operate in the homes of the poor, feel discouraged at the absence of the accustomed perfection of apparatus, and relinquish in despair any attempt to obtain asepsis. The remedy for this very real danger is that the surgical staff should be mindful to warn their students that to obtain good results in operative work it was not absolutely essential that the operating room should have walls of white enamel with a dado of marmorite, should be floored with terrazzo pavement and ventilated by warmed air pumped through sterilizing filters by rotary fans. It is, of course, to be desired that such accompaniments should be within reach of all, but it is equally desirable to remember that Lord Lister did the great work which made his reputation in old-fashioned hospitals, without any of the excellent, but costly and elaborate details now in vogue. Lord Lister was careful to guard against his reference being misunderstood, and he made it clear that his criticisms were not directed against perfection in surgical methods, but were intended to convey the lesson that elaborate precautions, though they make for success, are not indispensable thereto.

Specialist Criticism.—The medical and chemical errors of novelists and dramatists, says the

American Druggist, have received frequent allusion in our columns. The London *Lancet* has of late been amusing its readers with references of the same kind, directed more particularly, however, to the characteristics of the stage doctor. This variety of physician may be known, according to our contemporary, by "a supernatural and most depressing solemnity, and an inconceivable rapidity in the construction of prescriptions." Why the doctor of the play should always appear in a frock coat, even on a summer's day in the country or in the city at an hour when other men of his standing are in evening dress, is a question that is beginning to be asked of the playwright. But the most recent contribution to the mistakes of dramatists is found in *The Only Way*, where Sydney Carton performs the most amazing feat of overpowering Darnay by making him inhale a volatile anæsthetic some thirty-eight years before the discovery of chloroform, sixty-three years before the discovery of anæsthesia by Morton, and at least seven years before Sir Humphry Davy first mooted the idea of anæsthetization by inhalation in the first year of the nineteenth century. Truly, specialist criticism of art, literature, and the drama gives startling results.

The Effect of Gum Chewing on the Teeth.—

A. Lenhardtsen publishes in the *Medicinische Woche* for July 1st a note upon the teeth of the inhabitants of the province of Dalecarlia, in Sweden. He observed that 24.7 per cent. of the boys and 28 per cent. of the girls in the province of Goedermanland had caries of the permanent teeth, and that 38.5 per cent. of the boys and 34.2 per cent. of the girls had caries of the milk teeth, whereas in the province of Dalecarlia 15.6 per cent. of the boys and 16.2 per cent. of the girls had caries of the permanent teeth and 34.4 per cent. of the boys and 42.1 per cent. of the girls had caries of the milk teeth. It will be noted that there was but little difference in the proportion of caries in the milk teeth of the children of both provinces. But in the permanent teeth the proportion of caries was very much lower in Dalecarlia than in Goedermanland. This comparative freedom from caries is attributed by the author to the practice of chewing burgundy pitch, which is universal in the province of Dalecarlia. The author furthermore attributes the beneficent action of the gum, not purely to its mechanical effect, but to the oils contained in it, which are of an antiseptic and bactericidal character.

The Mechanism of Accidental Death from Cocaine.—M. Maurel (*Gazette hebdomadaire de médecine et de chirurgie*, July 11th), as a result of numerous physiological experiments, concludes that the danger of cocaine lies in its penetrating into the veins (other than those of the portal system) in sufficient amount to kill the leucocytes, or at least to cause them rapidly to become spherical in shape.

A Fatal Error.—The *Indian Medical Record* is responsible for the following:

The following plaintive wail from the Burlington churchyard may be found soothing—

Here lies the body of Mary Ann Lowder,
She died whilst drinking a Seidlitz powder.
Called from this world to her heavenly rest—
She should have waited till it effervesced.

Original Communications.

THE RELATIVE MERITS OF
BIPOLAR VERSION WITH SLOW EXTRACTION
AND ACCOUCHEMENT FORCÉ IN
THE TREATMENT OF PLACENTA
PRÆVIA. REPORT OF FOURTEEN CASES.*

By HENRY D. FRY, M. D.,

WASHINGTON, D. C.

Podalic version was discovered by Ambroise Paré in the sixteenth century. The method was practised and prompt delivery recommended in all cases of placenta prævia. Until the discovery, by Braxton Hicks in 1861, of the bipolar method of version, subsequent literature added little of value except the use of the tampon; rupturing the membranes; and separation of the placental attachment so far as the finger could reach.

ered the safer method in the hands of the inexperienced operator. In placenta prævia a fatal result is usually due to hæmorrhage or sepsis. The hæmorrhage is unavoidable and incident to dilatation of the os. Consequently, the method requiring the least degree of dilatation necessary to perform version will naturally be expected to give the least hæmorrhage. After dilatation has been obtained in sufficient degree to allow of the insertion of several fingers, further continuance of the process by manual means is likely to endanger the integrity of the soft parts. In other words, the artificial dilatation sufficient to perform bipolar version is comparatively safe, while that necessary for the insertion of the hand and internal version is dangerous. The rapid delivery of the infant in *accouchement forcé* adds additional risk of rupture.

There is one serious objection to bipolar version and slow extraction. The infantile mortality is greater. When intervention is necessary before

TABLE.

Case.	Para.	Month of Gestation.	Variety.	Method.	Mother.	Child.
1	Multip.	Full term.	Marginal.	Membranes ruptured.	Recovered.	Alive.
2	Primip.	7th month.	"	Tampon.	"	Dead.
3	Multip.	Full term.	Partial.	Forceps.	"	"
4	Primip.	5th month (twins.)	Central.	Version with one finger in uterus; lower extremity brought down; head perforated.	"	"
5	Multip.	8th month.	"	Bipolar version and slow extraction.	"	"
6	Primip.	Full term.	Marginal.	" " " "	"	"
7	Primip.	Last month.	Partial.	" " " "	"	"
8	Primip.	8th month.	Marginal.	" " " "	"	"
9	Primip.	Full term; eclampsia	"	Forceps.	"	"
10	1½ para.	Full term.	Partial.	Bipolar version and slow extraction.	"	"
11	Multip.	8th month.	"	" " " "	"	Alive.
12	Multip.	Near full term.	"	" " " "	"	"
13	Primip.	" "	"	Bipolar version and slow extraction, with forceps to after-coming head.	"	"
4	Multip.	" "	"	Forceps.	"	"

The mortality of these methods of treatment was from 25 to 50 per cent. for the mother, and from 50 to 80 per cent. for the infants. The main cause of death was loss of blood during the dilatation of the os and from laceration of the site of the placental attachment.

The advantage of bipolar version is the ability to successfully perform it with very little dilatation and with consequently less loss of blood. Statistics based on the collection of a large number of cases treated after this method were wanting until the publication of the work of Lomer, Behm, and Hofmeier. The result was astonishing when reviewed in contrast with the mortality of the old method. Seventeen years have elapsed and the brilliant results obtained by these operators have not popularized the treatment.

Suppose we compare theoretically the bipolar method with *accouchement forcé*, and see if there exist any reasons why the former may be consid-

viability of the foetus is attained, or when the foetus is dead, slow delivery is certainly indicated. If the life of the child is endangered during slow extraction, the obstetrician must decide between it and more rapid delivery with its increased maternal risks.

The accompanying table gives briefly the histories of fourteen cases of placenta prævia which came under the writer's personal observation.

Attention is directed to the large proportion of primiparæ; seven out of the fourteen cases, or fifty per cent. Bipolar version and slow extraction were employed nine times; membranes ruptured and delivery left to Nature, once; tampon and natural delivery, once; forceps extraction, four times, including one application to the after-coming head following bipolar version.

All of the mothers recovered, and five out of the fifteen infants were born alive. Of the children lost, two (twins) were not viable; one was at the seventh month, and four were dead when the case came under observation.

*Abstract of a paper read before the American Gynecological Society.

THE PRESENT STATUS OF THE SURGERY OF THE PROSTATE.*

BY WILLIAM N. WISHARD, M. D.,

INDIANAPOLIS.

The Name and Function of the Prostate.—It may not be inappropriate in considering the subject of the surgery of the prostate to refer briefly to the structure and function of this organ. It is generally described as a musculoglandular body encircling the neck of the male bladder with its thicker portion lying below the neck of the bladder and between it and the rectum. Its structure is, however, a matter of controversy, and some of our recent authorities describe it as purely and only a muscular body enveloped in a firm sheath of fibrous tissue, the symmetry and density of which outer envelope accounts for the tolerably uniform character of the enlargement ordinarily felt by the rectum. The absence of similar resistance on the urethral and vesical side of the prostate may explain, in some measure, the eccentric shapes assumed by intra-urethral and intravesical hypertrophies. Fuller says: "The prostate is a firm muscular body," and adds that the term "gland" is unfortunate and misleading, since the organ is essentially a muscle, while White and Martin, in their last edition, say: "The prostate is a genital organ, the bulk of which is glandular and muscular."

Its function is generally accepted as that of an auxiliary sexual organ, its chief purpose being the ejaculation of semen. It is thought by some also to have a contributory influence as a urinary organ. The latter function is slight, if it exists at all.

The Pathological Character of the Enlargement.—Cases of permanent enlargement may be regarded as true hypertrophy, including connective tissue and muscular and glandular elements. If the connective tissue element predominates, the hypertrophy may not be great in size, and it is harder and slower in development. Fuller says: "If, on the contrary, the muscular element predominates, then the size of the tumor is excessive and somewhat elastic, compressible to the feel, and of more rapid development." Prostatic hypertrophies resemble in many respects uterine myomata. Surgery is believed by many to be inadmissible when directed toward the removal of the local obstruction, because the impaired bladder function is regarded as being more due to sclerous changes in the walls than to the prostatic obstruction. Thompson believed that the prostatic enlargement was simply coincident with similar changes in the rest of the urinary tract, and he was so firmly of this opinion that he said: "I am entitled to require that if it does happen, or has happened, to any surgeon to divide or remove any part of an en-

larged prostate for a patient, who had previously been compelled to pass all his urine by catheter, say for a period of twelve months, and that after the division in question, he was enabled to dispense with the instrument, or at any rate to pass, say, only half his urine by natural effort, the case ought to be seen and examined by others. I desire extremely to see such a result from any of the proceedings alluded to. I have long wished to see this sight, and have travelled considerable distances abroad and elsewhere expressly seeking it, but at present, without success." Clinical experience has abundantly proved this view to be incorrect.

The Mechanical Character of the Enlargement.—The firm fibrous capsule surrounding the prostate has already been referred to as explaining the tolerably uniform character of the enlargement, which is ordinarily found when making a rectal examination. While the enlargement is not always in evidence upon rectal examination, it is true that a very large proportion of patients having enlargement of the prostate show greater or less evidence of this fact by digital examination in this locality. It is, however, a matter of very great interest to recognize that the size of the rectal enlargement bears no necessary relation to the bladder or other symptoms produced by the enlargement. A patient may have enlargement of the prostate to such a degree that a rectal tumor of the size of half an orange may be easily felt protruding from the anterior wall of the rectum and encroaching sharply on the internal sphincter ani muscle, and yet such a patient may be able to wholly and completely empty the bladder, may have no obstruction of the urethra, no encroachment upon the bladder space, and his health may not be impaired or his life shortened by such a growth. Such fortunate and unusual direction and shape of the growth serve chiefly to emphasize the fact that not the pathological character of the enlargement, but its position and mechanical influence, are the chief primary factors in the production of the early symptoms associated with enlargement of this organ. In marked contrast with the harmless effect of some large rectal growths may be placed the extreme symptoms sometimes resulting from very small growths about the urethral orifice or within the prostatic urethra and impinging on the calibre of the urinary channel. Attention is called to the mechanical effect of the prostatic outgrowth, because its position and direction have a large determining influence in the production of the early symptoms initiating the necessity for surgical relief. It is now pretty well recognized that there is no uniform shape or direction which the intra-urethral and intravesical enlargement of the prostate does assume. We have the so-called "collar"-shaped growth, about the vesical orifice; we have the "pear"-shaped

growth, extending its apex high into the bladder; we have the "anterior horse-shoe hypertrophy" and the "posterior horse-shoe;" the "middle lobe" growths on the posterior margin of the urethra at its entrance into the bladder; "the pedunculated and nodular intra-urethral growth," which also may or may not extend into the bladder; and we have quite a variety of irregular-shaped masses protruding into and about the neck of the bladder and the prostatic urethra. Almost all of them encroach to a more or less harmful degree upon the bladder and urethral space, and cripple to a greater or less extent the urinary function. Their shape and position explain to a degree the sudden development of symptoms in some patients previously unaware of any bladder trouble. This is particularly true of certain soft pedunculated growths, such as the so-called "middle lobe" enlargement, when located about the vesical orifice. The growth up to a certain time may have been insufficient to occasion symptoms, until exposure to cold, constipation of the bowels, too prolonged postponement of urination, or some exciting influence has added an element of congestion and swelling to the already existing element of permanent hypertrophy. The result may be any degree of interference with the urinary function, from slight irritation of the bladder to the point of complete retention of urine. Such sudden onslaught of symptoms is not the general rule, but is cited as suggesting the influence of the mechanical obstruction in the production of symptoms. Generally we have the well-known history of gradual increase in frequency of urination, accompanied by more or less bladder discomfort and the coincident changes in the character of the urine. It is not the writer's purpose to consider the methods of palliative relief by the use of the catheter, or discuss the symptoms produced in the bladder and kidneys or the pathological changes in the character of the urine, except so far as they may furnish the warrant for surgical interference.

Cause of the Enlargement.—The cause of the enlargement of the prostate is not known. The fact that the prostate is essentially a sexual organ suggests the conclusion that excessive sexual indulgence may have something to do in producing enlargement. This conclusion, however, seems not to be warranted by facts. Those who lead correct lives suffer quite as much as those who are licentious. Venereal disease has not as yet been shown to have any causative relation to enlargement of the prostate. It is essentially a disease of old age; the symptoms resulting from the enlargement are more frequently observed between the ages of fifty-five and seventy. It undoubtedly exists much earlier than this in many cases, and is a condition slowly acquired, which may have begun many years prior to

the development of symptoms. It is said to be chiefly confined to men of European descent. Otis, while travelling in Japan, ascertained that the condition did not exist there. It is also said to be almost unknown in India and China. Dr. John G. Wishard, of Indianapolis, who has spent some eleven years in medical mission work in Persia and a short time in Turkey, says: "It is of comparatively frequent occurrence there."

Warrant for Surgical Interference.—In a general way, it may be stated that where the well-known clinical symptoms of enlarged prostate have proceeded to such a degree as to involve more or less frequency in urinating, more or less pain in passing urine, with decomposing residual urine constantly present in the bladder, and when these symptoms are not controlled by the systematic use of the catheter and other means of palliative relief, then we have determined a condition which warrants surgical interference. It is to the various methods of surgical interference that the writer especially invites your attention.

Operative Procedures.—Operative procedures are divided into three classes, the first of which contemplates the establishment of bladder drainage for a greater or less length of time by a perineal or by a suprapubic opening.

The second class of operative procedures contemplates the removal of more or less of the obstructing growth and the reestablishment of the original low-level emptying point for the bladder.

The third class contemplates atrophy and shrinkage of the obstructing growth by the removal of the testicles or the division of the vas deferens.

Perineal Drainage.—Where simple prolonged drainage is desired, it can, in a large proportion of cases, be obtained by a median perineal opening. It is usually best where a perineal opening is made for drainage, to also thoroughly dilate the prostatic urethra by insertion of the finger into the bladder. Perineal opening, with dilatation of the prostatic urethra, can be obtained in the majority of cases without the use of a general anæsthetic. Unhappily, the condition of many patients suffering from prostatic disease is such that no radical removal of the prostate can be safely undertaken, and the use of general anæsthesia is almost, if not quite, as dangerous as the surgical procedure itself. In this class of cases perineal drainage under local anæsthesia is of special interest. In the last year or two the writer has applied this method successfully, not only in cases of enlarged prostate, but wherever, for any reason, prolonged drainage of the bladder has been desired. He has also used it in performing external urethrotomy for stricture in cases where a staff could be inserted and in a few instances where no guide of any kind could be introduced. Briefly

stated, local anæsthesia for perineal section and dilatation of the prostatic urethra can be secured by taking an ordinary medicine-dropper, the end of which has been slightly blunted in an alcohol flame, and filling it two thirds full of an eight-per-cent. solution of cocaine. The end of the dropper should be passed slightly beyond the meatus, and before the fluid is injected the meatus should be closed tightly around the dropper with the thumb and finger of the opposite hand. After the solution is injected, the dropper should be withdrawn and allowed to fill with air and immediately reinserted, and the air injected into the urethra. Meanwhile, the meatus is kept constantly closed by pressure of the opposite hand, and only opened sufficiently for the reintroduction of the dropper. After the air has been introduced, the penis should be drawn slightly tense upon the abdomen and the meatus still kept closed, while, with the opposite hand, the loose tissue of the scrotum is used to push the cocaine solution back and forth, by up and down rubbing along the line of the urethra. This manipulation is accompanied by a gurgling sound as the air distends the urethra, and carries the cocaine solution to every fold of mucous membrane in the canal. It is well to continue this rubbing for ten or fifteen seconds and then allow the solution to escape from the meatus. A few drops of the solution can then be injected into the prostatic urethra with a deep urethral syringe. About three minutes should elapse before the operation is begun. A little exploration of the canal with the sound will then determine with approximate accuracy the success of the anæsthesia, and if it is not complete, a small additional amount of cocaine solution may be injected, and in two or three moments there is rarely any pain likely to be encountered. At the end of about three minutes the stronger Schleich's infiltration solution is then used for anæsthetizing the skin and deeper tissues along the proposed line of the perineal incision. The hypodermic needle is then thrust through the centre of the already injected area, and the point is passed directly through the tissue until the end of the needle touches the grooved staff in the urethra. The needle is then slowly withdrawn as the fluid is injected. A test of the degree of anæsthesia should be made with a needle or knife, and, if necessary, the same quantity again injected. After the injection no time is allowed to elapse, but an incision is immediately and freely made through the perinæum to the staff and a Lyttle's director is passed along the knife blade to the grooved staff. The knife is removed and the Lyttle's director passed on into the bladder. The staff is then removed and a larger director or a blunt gorget is passed along the grooved staff and the wound and urethra are thus dilated. If further stretching of the membranous

or prostatic urethra should be necessary, one of the grooved directors is left in position while the index finger of the right hand is passed along it into the bladder. This last step is one which almost universally gives some pain. It requires but a moment, however, and the suffering is less by far than in the extraction of a tooth. In view of the fact that the cutting part of the operation is painless, it would seem preferable to inflict the momentary pain involved in preference to using general anæsthesia in many cases. The pain in dilating is less if the perineal opening has been made large.

The value of perineal drainage depends largely upon the size and position of the prostatic obstruction and the extent of damage already done to the bladder, ureters, and kidneys. Its effect is usually temporary, lasting for a few moments, but in some cases, where the operation is performed early, it may obviate the necessity for any further surgical interference and enable the patient to live comfortably and without much suffering by the occasional or by the regular use of the catheter.

Suprapubic Drainage.—Some years ago the writer published an account of a method of temporary suprapubic drainage, for use in cases of sudden acute retention, where catheterism was impossible. It consists in tapping the bladder in the old-fashioned way with a trocar and cannula by suprapubic puncture, and after the trocar is removed, the insertion through the cannula of a small soft catheter to be left in position four or five days. Care should be taken after the catheter is inserted to remove the cannula with a short, jerky motion and to maintain the pressure on the catheter while the cannula is being withdrawn over it. Otherwise the catheter is liable to be withdrawn from the bladder in removing the cannula. If a few inches of the outer end of the catheter are cut off and a small wire is inserted, it aids materially in holding the catheter in place during the removal of the cannula. Care should be taken to make the puncture at an angle of about forty-five degrees from below upward, as the changed relation of the bladder and abdominal walls after the distended organ has been emptied will give a more direct channel, if the puncture is made in this way. In a few cases drained for four or five days in this manner, catheterism in the natural way has become easy, and the patient has gone along comfortably for years by the systematic use of the catheter.

Permanent suprapubic drainage by Hunter McGuire's method is undoubtedly the best form of artificial relief by a new channel. It consists in performing an ordinary suprapubic cystotomy and making a rather long muscular incision. The skin side of the lower angle of the wound is closed by two or three stitches and a drainage-tube is inserted

for a few days. The tube rests at an oblique upward angle and leaves a sort of coffee-spout shape to the new channel. The opening answers the purpose of the urethra very well in the majority of cases, but after six or eight weeks it is usually necessary to keep a plug of some kind in it to prevent its closure. Some operators make a direct opening, but the coffee-spout channel gives less liability to dribbling of urine, and better power of expelling urine voluntarily. In some cases the patients are able to throw a stream of water three or four feet from the body by simple voluntary effort. The tendency to contraction of the channel in this method of operating is to a great extent obviated by suturing the mucous membrane of the bladder rather high in the muscular channel and by connecting it with small skin flaps drawn into the channel from the upper angle of the opening. Where irritability of the bladder necessitates constant drainage, the suprapubic opening can be utilized for the adjustment of the catheter connected through a Bangs hard-rubber plate with a drainage-tube, emptying into a rubber urinal, which is attached to the leg. Such an arrangement keeps the bladder constantly empty and enables the patient to go about with comparative comfort.

Radical Removal of the Prostate; Perineal Operations.—The perineal route affords access to the prostatic urethra and to the bladder for operative purposes in only the minority of cases. While it affords opportunity for drainage to greater or less advantage in almost all cases, it is not the operation of choice where the removal of any considerable amount of the growth is contemplated. Dittle's operation proposes a sort of lateral dissection between the urethra and rectum, by which access is secured to the apex of the prostate, and through the opening thus made the lateral lobes may be shelled out. It does not afford subsequent drainage of the bladder, and this is the important factor in the after-treatment of all cases. By the ordinary median perineal section certain pedunculated growths hanging loose in the urethra or about the vesical orifice may occasionally be twisted off. The writer several years ago reported the successful removal of the lateral lobes through a perineal opening by splitting the urethral wall immediately over the lateral nodules, then shelling the gland out through the opening thus made on the side of the prostatic urethra. The immediate results were very satisfactory in a few cases, as the patients were able to completely empty the bladder without residual urine being left. The operation was subsequently abandoned, however, as traumatic stricture of the prostatic urethra resulted in two cases after it. The perineal operation may, in brief, be regarded as limited to drainage operations and to small pedunculated growths and to the division of collar-shaped enlargement of small size.

Suprapubic Operation.—Considering the fact that the obstruction in prostatic enlargement is directed upward and forward in the majority of cases and encroaches sharply upon the bladder end of the urethra, it is very easy to recognize the greater availability of a suprapubic opening as affording access to prostatic growths if one keeps in mind the avoidance of extensive injury to the bladder mucous membrane and the production of as little hæmorrhage as possible. We have by this method a more satisfactory surgical procedure than any yet devised. McGill's suprapubic operation, as modified by Fuller, Alexander, and others, may be accepted as best adapted for the removal of all obstructing growths and to the restoration of the low-level emptying point of the bladder. Distinctly pedunculated growths are by this route easily accessible and can as a rule be safely removed by grasping with forceps and carefully twisting them off. In the removal of the denser and deeper growths, notably the lateral lobes, there is no safer or better method than that of Fuller. It is done in the following manner: "The patient is placed flat on his back, neither the Trendelenburg position nor the Peterson bag being commonly necessary. The bladder is carefully washed out, and then left moderately distended to the extent of from eight to twelve ounces. The next step is to open the bladder suprapubically. The forefinger of the left hand is then introduced into the bladder, and the location and extent of the prostatic obstruction are determined, and the vesical opening of the urethra is located. In the right hand is grasped a pair of rough serrated-edged scissors with a long handle. These scissors are slipped along the left forefinger to the urethral opening, and are made to cut through the bladder wall in that region. The cut extends from the lower margin of the internal wall of the vesical opening of the urethra backward for an inch to an inch and a half. The blades of the scissors, being rough and serrated, make an incision which bleeds but little. Then one of the forefingers, whichever the operator may find more convenient, is slipped through the vesical hole made by the serrated scissors, while at the same time the fist of the other hand makes firm counter-pressure against the perinæum. By means of this counter-pressure, the prostatic growth is brought well into reach of the forefinger of the other hand, which is employed all this time enucleating the prostatic obstruction *en masse* or piece by piece, as the case may be. Enucleation can be easily and speedily accomplished in this manner, and should not be desisted from until all the lateral and median hypertrophies, as well as all the hypertrophies along the line of the prostatic urethra, have been removed. The vesical walls at the base, as elsewhere, are very elastic and dilatable, so that it will be found that the

little cut made through the bottom of the bladder will be large enough to admit of the passage through it of the enucleated prostate. A perineal incision is then made, and a large-size (26 American) soft-rubber tube is passed through the perineal cut, and the cut through which the prostate is enucleated, into the bladder. After this, hot water irrigation is employed for some minutes to wash out blood clot and to stop oozing." Fuller prefers to close the suprapubic opening, except in the centre, where the drainage-tube is left for four or five days. The perineal tube can be left for some time. The writer has found it desirable to use a very large suprapubic drainage-tube, as blood clots will sometimes give considerable trouble some hours after the operation and cannot be easily removed through a small tube.

Use of the Cautey.—The Bottini operation *per urethram* has been revived considerably in the last year or two, but it hardly can be said to give permanently satisfactory results. It is an operation done in the dark, with no adequate conception of the size, shape, and position of the hypertrophy with which it is supposed to deal. It simply burns a groove posteriorly and laterally into the vesical orifice. It does not remove the massive nodular hypertrophies in the lateral lobes, and in the nature of things there is an element of uncertainty which always exists in doing any operation incapable of having its technics varied to suit the peculiarities of individual cases. It so happens, however, that in the majority of cases the offending growth is located behind or on the sides of the urethral opening into the bladder, and when the growth is burned deeply in this locality, the emptying point of the bladder is lowered somewhat. Willy Meyer and others have reported remarkable results from this method, but their cases are entirely too recent to base reliable conclusions upon. More or less improvement usually follows any of the milder procedures, and the weight of testimony seems to be that the Bottini operation has its chief usefulness in that class of cases where there are not intra-urethral hypertrophies and where the growth is of moderate size, easily accessible. Several years ago Newman devised a cautey sound with the cautey consisting of a small wire coiled in a window near the farther end of the instrument and on its posterior side. The writer has used it with seeming benefit in a few cases, but it is superficial and suitable only to soft growths of small size located near the back wall of the urethral orifice. The writer, several years ago, in a paper before the American Association of Genito-urinary Surgeons, advocated another method for the use of the galvanocautery in certain cases of nodular intra-urethral prostatic hypertrophies. The manner then used was as follows: In cases where perineal section for drainage revealed the presence of intra-

urethral growth the external wound was made somewhat larger than usual and a very large drainage-tube inserted. After drainage for a few days, the tube was removed and the finger inserted into the wound and the projecting growth located. A single straight tenaculum was then passed along the finger and hooked into the projecting hypertrophies. A large-sized endoscope or a very small-sized cylindrical rectal speculum was then passed over the handle of the straight tenaculum and pushed on through the wound, so that the farther end covered the point held by the hook. A little tension was then made on the tenaculum to draw the hypertrophied tissue into the field of observation, and the entire surface thus exposed was then cocaineized by direct application of an eight-per-cent. solution. Direct inspection was obtained by the use of a head mirror and punctures were made with the galvanocautery. The resultant slough occasioned no special trouble, and the pain incident to the procedure was either trivial or entirely absent. Recently, under localanesthesia, this method has been extended to small growths about the vesical orifice. The method used is to make a free perineal section and, after waiting for a few days' drainage, to then locate the growth by means of the finger and with a Koch's cystoscope, with a cold light to aid inspection, to make punctures in any observed hypertrophies with a long electrode having a slightly curved end. It is the writer's judgment that the use of a cautey in this manner is somewhat limited in its usefulness and gives a comparatively limited area observable in operating, and yet it has seemed to accomplish good results in two cases.

In the principles involved in the construction of the tube, the Koch's cystoscope and Belfield cystoscope are modifications of the Witherspoon endoscopic tube, which has been on the market for several years, but their addition of cold light and air dilatation offers possibilities for the development of a large-sized working cystoscope of this type through which the cautey may have more direct and practical application. The writer believes that a similarly constructed instrument of large size (No. 35 or 40 French) may afford an area for observation large enough to do practically useful work by the direct application of the cautey in selected cases. Such an instrument would, of course, be chiefly useful through a direct perineal opening.

White's Operation.—There is a very great difference of opinion as to the value of castration for enlargement of the prostate. Almost any procedure that involves putting the patient to bed and giving a saline cathartic will be attended by temporary and sometimes prolonged relief of symptoms in many cases. White maintains that the mortality from prostatectomy remains at about sixteen per cent.,

and the mortality from castration is only a little over seven per cent. He and others state that it produces atrophy of the prostate in about seventy-five per cent. of all cases, and that the relief of bladder symptoms is generally noticeable in a few days after the operation. Dr. John G. Wishard has recently told the writer that in his eleven years' residence in Persia and Asiatic Turkey he has never seen a eunuch who suffered from enlargement of the prostatic gland. This is probably due to the fact that most of them are castrated in early life. It has long been recognized that castration in early life does exert an influence in shrinking the size of the prostate. The writer has never performed White's operation for the purpose of relieving enlarged prostate. He has, however, had an opportunity to examine the prostate where castration had been performed for other causes, and in one case he was called upon to operate for stone, resulting from prostatic obstruction, in a patient who had three years previously been subjected to White's operation for enlarged prostate. The prostate in this case was very much in evidence, and phosphatic stones were found very difficult to reach through a perineal opening, owing to a projecting shelf of prostatic tissue just above the vesical orifice. While castration probably does produce shrinkage of the prostate in some instances, it is probable that it is of more value in soft forms of the enlargement and where considerable congestion of the prostate exists. There is no way of determining when it is going to succeed. It affords no opportunity for draining the bladder, and in a number of instances insanity is reported to have followed its performance.

Conclusions.—To sum up the foregoing, it may be said that operative procedures are of the greatest value when undertaken early, and that where they are long deferred, serious resultant bladder, urethral, and renal diseases make the outcome increasingly dangerous. It should also be remembered that where the catheter has failed to give adequate relief, death is reasonably certain to occur ere long, especially in cases where the urethra has greatly increased in length by the elongation of its prostatic end, unless the suprapubic opening for either prolonged drainage or for the removal of the obstruction is done. If the symptoms are not of a severe type and are not amenable to the catheter, and if the length of the urethra from the meatus to the point where the urine is obtained does not exceed nine inches, a perineal opening generally affords opportunity for stretching the entire length of the prostatic urethra, for dividing the small collar-shaped growths around the bladder end of the canal, and for removing the small projections by the finger, forceps, or cautery. One fourth, or, as asserted by some, one third of the operative cases are suitable

for perineal opening. If the suprapubic operation has been thoroughly done and the obstruction all removed, the patients afterward are assured of more perfect bladder function than by any other method. It must be conceded, however, that, in view of the serious dangers involved, many cases should be subjected to nothing more than the formation of a suprapubic channel, as suggested by McGuire and modified by Morris. Morris's improvement lines the channel with skin, and hence it is not so apt to contract.

INFECTION SPREAD BY DOMESTIC PETS: RESEMBLANCES BETWEEN DISEASES OF THE LOWER ANIMALS AND OF THE HUMAN SUBJECT.

By WILLIAM B. MEANY, M. D.,

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Relations of Human Diphtheria to Diseases of the Lower Animals.—An hypothesis of the relation of human diphtheria to diseases of the lower animals is by no means a gratuitous one; on the contrary, it has much to recommend it. Thus, communication of anthrax and glanders from lower animals to man has long ago been established, and we know of the transmission to the human subject of scarlet fever, diphtheria, and enteric fever, by cow's milk.

Without a clear comprehension of the factors that produce disease in individuals, attempts at prevention must be what a great deal of our preventive medicine is—a mere Sisyphean waste of time.

Now, the various orders of animated Nature are so interdependent in regard to the causation and spread of disease, that it appears unwise to limit our investigation to any one family or class. That diseases are not infrequently traceable to lower animals, such as cats, dogs, various species of the feathered tribe or other so-called house pets, and to household pests (rodents), is unquestioned. Investigation into the origin and spread of scarlet fever and other contagion sufficiently illustrates this point.

Indeed, on account of the filth engendered by the so-called domestic animals, and as active carriers of infectious material, the German government has promulgated rules, whereby no domestic animal can be tolerated in a pharmacy, for every detail of the practice of pharmacy is closely supervised by the German government. Do all the filth diseases, many of which are said to be contagious, really require isolation? Is it not the filth which should be isolated, rather than the unfortunate patient from filthy environs?

I am encouraged, therefore, in what follows, to be content with drawing attention to none but broad clinical and pathological resemblances between mala-

dies of lower animals and diphtheria in human subjects.

In 1886, Dr. George Turner (London, Eng.) recording his experience obtained in the course of inspections made for the local government board, says that in the year 1882 a pigeon was brought to him for dissection, and to his surprise—as he had hoped to find strongles in the trachea—the whole of the windpipe was found to be covered with a well-marked, consistent membrane, which hung loosely in the tube like a wind-sail, just as one may see it in the body of a child who has died from croup.

In 1883 an epidemic of diphtheria occurred in the village of Braughing (England), connected with a farm on which the fowls were dying with a disease seemingly identical with that before referred to as affecting the pigeon; and diphtheria made its appearance on other farms, where it was preceded by a similar affection among the fowls. "At a neighboring village, too, a man bought a chicken from an infected farm; he took it home, and diphtheria broke out in his house shortly after. This was the first case in that village." Dr. Turner says that his attention was called to these facts by the medical attendant, and the man himself corroborated the information in all particulars.

Dr. Turner further states, in his official report, that he has seen chickens and pigeons which had been inoculated with diphtheritic membrane from a child's throat attacked with a disease in all respects resembling what he regards as natural fowl diphtheria.

Infection Spread by Cats.—Some curious facts showing that domestic animals are carriers of contagion are recorded in a communication on the sustained prevalence of diphtheria in Enfield (Eng.), by Dr. Bruce Low, of the Local (British) Government Board. He incidentally states, says the *Sanitary Record*, that during December, 1887, and January, 1888, there was a large mortality among cats, so much so that the dustmen ("ashmen") said that they had never remembered seeing so many dead cats in private dwelling dust ("ash") heaps before. The following incident occurred at Enfield at the time, and shows the possible connection between diphtheria in children and in cats.

A little boy was taken ill with what turned out ultimately to be fatal diphtheria. On the first day of his illness he vomited, and the cat which was in the room at the time licked the vomit from the floor. In a few days (the child meanwhile having died), the animal was noticed to be ill, and her sufferings being so severe and so similar to those of the dead boy, the owner destroyed her. During the early period of its illness the cat had been let out at nights in the back yard as usual. A few days later the cat of a neighbor who lived a few doors away was

noticed to be ill. It had also been let out in the back yard at night. This second animal which, however, recovered, was the pet and play-fellow of four little girls, who, grieved at the illness of their favorite, nursed it with great care. All four girls developed diphtheria, the mother being convinced that they got it from the cat, and, indeed, no other known source of contact with infection could be discovered.

Dr. Turner states that on one occasion when called upon by the local municipal board of Brent-Pelham, Eng., to investigate an epidemic of diphtheria at that place, he found that, in the cottage in which the first cases occurred, a pet kitten had previously suffered from a throat affection attended by swelling of the neck, foul discharges from the nostrils, and "running" at the eyes.

Similar accounts are received from abroad as well as in this country, so that the identity of diphtheria in, and its transmissibility from lower animals to human beings, seem very probable. A disease has been observed in swine, sheep, horses, cattle, and dogs, which appeared exactly similar to human diphtheria. I may here incidentally state that hair, fur, wool, and feathers are active carriers of infectious material.

The ratting and mousing propensities of dogs and cats make them especially liable to infection.

Of other influences tending to enhance the severity of diphtheria, unwholesome circumstances of dwellings have been thought of as especially potent. Thus, overcrowding, badly trapped drains, and damp walls and floors, have been cited as influencing the course of attacks of the disease unfavorably.

I have in these desultory remarks avoided earth, air, and water, not because I think the subject either unimportant or already exhausted.

Plague Spread by Cats.—Dr. Mason, the port medical officer at Hull (Eng.), in his official report as to the origin of an outbreak of pneumonic plague on board the steamship *Friary*, at her dock at Hull, where she arrived with a cargo of cotton, January 10, 1901, says: "I am of the opinion that the probable cause of the malignant outbreak was due to a cat, which went on board at the port of Alexandria (Egypt) which showed signs of illness during the voyage. It had frequented the fore-castle occupied by the men. Of the nine sailors taken with the plague, eight of the victims succumbed to the attack. The mortality was confined to the men who lived in the fore-castle of the ship, and to those only. Unfortunately the cat was thrown overboard by some of the crew.

"The bodies of three dead rats, afterward discovered in the ship, were sent to Yorkshire for bacteriological examination. They were found, however, not to be affected with the plague.

"The ship had twenty-one hands all told, with

clean bills of health from Alexandria and Algiers where she touched at. Ships had been arriving regularly in Hull from Alexandria with clean bills of health, and the plague was not believed to exist there, or at the port of Algiers, which also had been declared free from the plague.

"There was no outbreak of the plague in the port of Hull proper."

I cannot conclude, however, without adverting briefly to the subject of contagious diseases and the principle of isolation now so generally insisted upon by sanitarians.

In 1887, I witnessed London rid herself of an epidemic of scarlet fever which had prevailed there to an alarming extent for some three months and more, by equipping a number of hospitals, wherein a refuge was ready for any one who could not with safety to themselves and others be nursed at home.

In cities and towns, diphtheria and other infections are without doubt propagated by personal communication, especially by association of children in schools; and, seemingly, at school slight cases of diphtheria, and cases that are convalescent, get opportunity for passing on the malady, with added intensity to other persons.

No child or person should be permitted to return to school until at least a month, or better, six weeks' time, has expired from the commencement of actual convalescence; or any one coming from a sick room until strictly modern methods of disinfection have been employed, with especial regard to personal hygiene, not only bodily, but of the wearing apparel of the individual as well. No patient, however, should be declared free from diphtheritic bacilli until at least two accurate culture tests have resulted negatively. All school books and other paraphernalia, toys, playthings, etc., or clothing that may have been brought into the sick room, or handled by the sufferer from contagious affections, or during the time of convalescence, should be destroyed by incineration.

Until private dwellings or sick rooms are much more methodically ordered than they are now, popular sentiment had better be educated to admire, rather than condemn, the growing disposition of persons in good circumstances, as well as those in bad, to go where they will not poison others, and will incidentally be rewarded by being more surely healed than if they stayed at home.

In certain diseases depending on a known specific poison, the laws governing the multiplication of such poison, the condition under which it can retain its infectivity, the pabulum, so to speak, on which it lives, the vehicles by which it is distributed, all demand more attention than they have received.

HOT AIR AS A THERAPEUTIC AGENT.*

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The use of hot air is by no means a recent idea in therapeutics. In different forms it has been used with varying degrees of success for ages past, but, while heat has been acknowledged to be of great therapeutic value, the method of its application has, until the past decade, been very unsatisfactory. The use of the modern hot-air apparatus was brought to the attention of the medical profession by Willett, of London, in the early nineties. As we have all had frequent occasion to observe, moist temperatures of from 125° to 150° F. cause a distinct burning of the tissues, and are bearable for only short periods of time. Not only may the same temperature free from moisture be borne with comfort, but a positive sensation of relief may follow its use.

Tallerman, of England, devised a portable apparatus for the administration of superheated air, which, with some modifications, Betz, of Chicago, copied, and, as the oven of the latter maker is universally used in this country, a brief description may be in order. The oven is about thirty inches long, eighteen high, and from twelve to fourteen in diameter at the bottom. It has a square base and a curved or arched top, the interior being covered with some non-conducting material. The bottom has two openings with large inverted funnels through which the heat is fed from below. Covering the base is an inverted hood of sheet metal likewise covered with non-conducting material and so arranged that the heat is evenly distributed throughout the oven. A ventilating sliding door at one end of the top and a thermometer at the opposite end constitute the essential features. For convenience of application, a hammock of canvas is attached within to either side of the oven, and upon this the patient places the member to be treated. One end of the oven may be permanently closed, the other hooded over with some tightly woven cloth snugly tucked about the member with a purse string or elastic band. Alcohol, kerosene, or gas may be used as a source of heat; where gas is used, one or more good-sized Bunsen burners answer the purpose admirably. The machine is mounted upon a collapsible iron stand, which is easily packed and sent about as may be required.

The patient sits so that the affected member can be placed within the oven; the part, having been previously washed and thoroughly dried, is wrapped in some soft absorptive material, to prevent direct contact of heat with the skin, and also to provide a medium which shall absorb moisture as fast as it

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collects on the surface. Rough toweling or heavy cotton batting may be used, though Kirby, of Philadelphia, maintains that light blanketing absorbs in larger measure and prevents a possible burning, being far superior to the lighter protective.

The oven is next brought to a temperature of about 150° F., and the part already wrapped in toweling is placed within the oven upon the hammock. The cloth hood is now brought up and drawn so as to prevent the exit of heat, but not sufficiently to embarrass the circulation. By carefully watching the thermometer the temperature is easily kept under control. If in pain, patients at first speak of a burning or prickly sensation, as though needles were being run into the skin; this rapidly gives way to a sense of relief as the peripheral nerves lose the pressure of surrounding oedema, and in the relief from pain the nervous system is quieted immediately.

The temperature of the oven may be gradually raised, care being taken to admit sufficient ventilation to prevent condensation and consequent burning of the skin. The duration of treatment varies with the case. Frequent sittings of short duration adapt patients to higher temperatures at subsequent sittings, but the relief from pain is the first thing desired; this accomplished, each case requires individual treatment.

For a moment let us now glance at the physiological action of dry heat. The effects observed are more or less marked according to the length of time and body area exposed. On the skin there is rapid dilatation of the peripheral arterioles, followed by a flushing or mottling, which persists for a few minutes to several hours after removal from the oven. Where skin areas involving the axilla and hairy parts are concerned, there is a local stimulation of glandular secretion, which usually retains its acid reaction much longer than glandular secretion found elsewhere. The specific gravity is increased to some extent.

In cases of ulcer of the leg with lowered nutrition and sluggish circulation, cell growth is locally much increased and, the lymphatic system sharing in the general dilatation, local products of metabolism are more easily absorbed.

The heart's action is increased from ten to twenty-five beats a minute, but if the exposure is too long, the beats still continue rapid but are irregular. The *respirations* are increased from two to six a minute, but may likewise be depressed from too high or too long an exposure.

The *kidneys* are much relieved of congestion, though immediately after treatment there may be a decrease of fluid and solid constituents in the urine.

The Bodily Temperature.—After an exposure of an hour, the temperature in the mouth rises from

two to five degrees, according to the extent of body exposed. The rectal temperature may be a fraction of a degree lower than that taken by the mouth.

On the nerves there is a primary stimulation of the vasoconstrictors, followed by marked dilatation and quieting of the sensory fibres. Carried to excess, there may result a twitching and spasm of the muscles. The desire to sleep is probably due to the relief from pain and the cerebral anæmia.

With the foregoing facts in relation to dry heat, it is of some interest to know just what cases are suitable to this method of treatment. For the sake of brevity, I will classify them under two heads, surgical and medical.

I. *Surgical:* Acute sprains, synovitis, contusions, and inflammation from trauma.

Of the chronic conditions, its absorptive action, when combined with massage, is beneficial in oedemas following fractures that have united and following the breaking up of ankylosis and adhesions.

II. *Medical:* In both acute and chronic nephritis, in anasarca and dropsies, but particularly in gout and rheumatism. In the last affection it stands as a most valuable agent.

Of diseases reported as much benefited are the various neuritides, skin lesions, ulcers, bronchitis, pleurisy, suppressed menstruation, etc.; but, having had no experience with these classes of cases, I am in nowise able to vouch for them, and should be pleased to obtain more extensive and accurate data. Dr. Willett, of London, found it a most beneficial agent in rheumatism, a chronic bedridden patient of six years' standing leaving the hospital on crutches after eight weeks of treatment. Dr. Sibley reported excellent results in a paper before the Clinical Society of London, emphasizing its value in treatment of skin lesions and ulcers with marked malnutrition of the part.

Dr. Sargeant, following up the work of Willett, carried on an extensive series of treatments at the Northwestern Hospital, London. He saw benefit derived in acute synovitis, sprains, rheumatic and lithæmic conditions, tuberculous knee, and following ankylosis where the adhesions had been previously broken down.

Dr. Kirby and Dr. O'Malley report 300 cases treated at St. Agnes Hospital, Philadelphia, with an aggregate of 910 heatings; of these cases, 157 were recent sprains—namely 8 of shoulders, 7 of elbows, 22 of wrists, 18 of knees, 55 of ankles, 24 of thumbs, and 23 of fingers, the results being uniformly good. These cases led them to observe that in acute rheumatic conditions brilliant results might be obtained; that marked benefit could be derived in tenosynovitis, in the subsequent treatment of fractures, and as a preliminary treatment to ulcers and tuberculous knee; while they were very doubtful about any ad-

vantage in the chronic rheumatic conditions. In this last report I do not concur.

To the foregoing might be added the experience of Dr. Kessler, of New York, who has treated about 2,500 cases with hot air. He reports excellent results where diuretic and eliminative action is depressed, particularly in nephritic and lithæmic conditions, and considers it unsurpassed as a treatment in surgical trauma.

To rely upon dry heat alone in such cases as have been suggested as a curative agent would be folly. It should act only as an adjuvant to such other treatment as may be instituted.

In the first place, patients (particularly with rheumatism) who have grown steadily worse under home conditions are most benefited by an entire change of surroundings, when such a thing is possible; the food should be nutritious and easily digested; patients exposed to an inclement or rigorous climate should seek a more moderate temperature. In other words, freedom should be sought from home influence with its many well-meant but often ill-advised suggestions as to exercise, diet, and daily routine. The battle is more than half won when the patient is brought entirely under the care of the attending physician.

In connection with heat, too much stress cannot be laid upon the value of massage. It should never be administered in the presence of acute inflammation, never where there is a localized increase of temperature in a joint, and always under the watchful eye of the physician. Massage should invigorate, never depress. Care should be taken in instructing a masseur that no undue pressure be used in the passive motion about joints, particularly after adhesions have been broken up. I have found that five or ten minutes of judicious massage is ample in some cases, while, a week later, the same patient will tolerate half an hour's treatment with no complaint whatever. Cocoanut oil or olive oil and chloroform, equal parts, are sometimes used with advantage, as they not only act as a lubricant, but, by their absorptive action, contribute to the general nutrition of the patient.

In addition to hot air, hygiene, and massage, constitutional treatment should never be neglected. Acute rheumatism demands the salicylates in one form or another. In the chronic varieties I have observed no relief whatever from the salicylates, but rely upon cod-liver oil combined with hypophosphites and full doses of the iodides. The bitter tonics, with iron, arsenic, and strychnine, all have their value in combating the accompanying anæmia. Care of the intestinal tract contributes in no small way to improvement.

Before summing up the advantages and disadvantages of superheated air, I will refer to two

cases which are typical in their adaptability to this mode of treatment:

CASE I.—A boy, thirteen years of age, had fallen and sprained his elbow two days before I saw him. Passive motion was extremely painful, the parts were somewhat swollen, and puffiness was present about the joint. The limb was placed in the hot-air chamber at a temperature of 125° F., which was gradually raised to 210° F., and kept at this for forty-five minutes. On its removal, the overlying parts were reddened. The boy complained of needles going through his hand during the sitting, but the pain was immediately relieved. Passive motion was not painful, and the patient left very much relieved, swinging his arm at his side, whereas he had entered with it in a sling.

CASE II represents a class of cases very intractable to any method of treatment—namely, rheumatoid arthritis. The patient was a woman twenty-four years of age, unmarried, with no family history of rheumatism. She had had some soreness in the middle joint of the third finger of the left hand; soon afterward, the same joint of the index finger was similarly affected. The joints became swollen, puffed up, and somewhat stiff. They were very painful to pressure. A continued treatment of salicylates and very strict diet for a year left the patient worse than at the beginning, and very much discouraged. About a year after the disease began, the joints of the middle and index fingers of the right hand began to swell, the left hand now having marked bony deformity, and flexion of the fingers being possible in only a slight degree. The right ankle and shoulder showed some evidence of involvement, as did the left knee, but both were of moderate degree.

When the patient was admitted to treatment she weighed 117 pounds. She was very anæmic, and the fingers were so stiff that she could not do more than slightly bend them. Bony deformity was advanced, and adhesions had taken place in both hands. The shoulders, knees, and ankles were not badly involved. At the patient's first treatment with hot air, the temperature was raised to 180° F., and each hand, wrist, and arm treated for twenty minutes, followed by gentle massage about the joints. Massage was continued twice daily, but no passive motion of the joints was allowed for ten days, until the structures about the joints had been softened, and was then performed only twice weekly for the first two weeks.

The treatments were continued tri-weekly for ten weeks, the patient bearing a temperature from 280° to 340° F., 300° being easily borne. The pains first subsided in the left wrist, the fingers being able to be closed voluntarily by the eighth sitting. The joints of the fingers subsided uniformly, the structures softened, and the circumference decreased.

The iodide of potassium was started on the first day of treatment with a saturated solution, ten minims three times daily, increasing two minims at each dose. At twenty-five minims, slight physiological symptoms were present. The drops were then rapidly run up to 100 and then to 200, and this was kept up for six weeks with no unpleasant results. Coincident with the iodide of potassium, cod-liver oil with hypophosphites in a fifty-per-cent. emulsion was

given in half-ounce doses three times daily. Diet free, and no limitation as to amount.

The patient gained eight pounds the first two weeks, and then rose gradually to a total gain of fifteen pounds at the end of treatment. At the date of discharge she had lost her anæmia, and, as she expressed it, would have to return home or she would have no clothes to wear. Her fingers could be closed tightly and she was entirely free from pain. Bony deformities, however, still persisted in both hands, but in less marked degree.

Objections have been raised to dry heat, on the ground that the sedative action lasts but a short time. I may as well say here that in acute conditions we cannot hope to do more than alleviate a symptom in the acute stage, but how much to be preferred is this method over the administration of a drug. Under the head of objections naturally come the elements of time, expense, and convenience.

As to time, there are few who would not freely devote time unlimited where there was any possibility of relief from pain. Where a chronic condition is being treated, and a full-body exposure is necessary, the time consumed in getting to the place where the bath is given, the necessity for special clothing, and the actual time consumed in the bath, with the possibility of subsequent chilling after it, all very properly enter as factors in considering this as a method of treatment.

The *expense*, in the event of a full-body bath, with the addition of attendant and massage, is a considerable item. In the treatment of joint affections, the Betz apparatus is very satisfactory, is easily moved from place to place, and should not be a serious monetary consideration.

As to convenience, after a few intelligent observations on the part of those seeking treatment, hot air in almost every case can be administered with no difficulty whatever. There are few people who will not make treatment a matter of duty if the chance of improvement is held out and, with the prospect of relief at hand, gladly follow a prescribed course of instructions.

To sum up the advantages, then:

1. Dry heat is a valuable pain-reliever without any of the depressent effects common to drugs.
2. In connection with constitutional and medicinal treatment, we have in it a positive curative agent.
3. It is a stimulant to rapid repair and absorption.
4. It is one of the most valuable eliminative agents we possess.
5. Where indicated, it possesses a sedative action on the nervous system obtained by no other means.

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111 WEST SEVENTY-EIGHTH STREET.

DYSENTERY IN THE PHILIPPINES.

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The article of Dr. Cruikshank in the *New York Medical Journal* for March 9th and 16th regarding the treatment of acute dysentery impels me to give the *Journal* some observations on dysentery in the American army of occupation. If the "specific treatment of acute dysentery" has been discovered at last, it is one of the greatest boons which have ever fallen to nations. The mortality from this disease during the civil war was probably not greater than it is under similar conditions at the present time. Witness its frightful mortality for the last twenty years in Japan and the report just published by Assistant Surgeon R. P. Strong: "Of 1,830 cases of dysentery admitted into the First Reserve Hospital in sixteen months, not more than one third (621) have been returned to duty." It would be interesting to learn the subsequent history of this gallant remnant as to how many have had relapse, since it is notorious that the amœbic form is prone to recur time and again after apparent recovery. The researches of Assistant Surgeon Strong, president of the Board of Investigation of Tropical Diseases in the Philippines, have been of such a character that it can be said:

1. Dysentery as it is seen here is not a single, but two distinct and separate diseases.
2. Acute dysentery is caused by the bacillus of Shiga.
3. Acute dysentery does not produce abscess of the liver, nor does it produce ulceration of the colon. Its fatal result is due to inflammation of the bowel, rapid elimination of the watery fluids of the body, toxæmia, and exhaustion, much after the manner of cholera, though requiring four, six, and twelve days before its termination or crisis.
4. Amœbic dysentery differs from acute dysentery anatomically, pathologically, and ætiologically. The only similarity between them is, the colon is the locus minoris resistentiæ for both the bacillus of

Shiga and the amœba. Here all similarity ends. The bacillus of Shiga leaves no other lesion behind, save its effect upon the mucous membrane of the colon and enlargement of the adjacent glands. The amœba of dysentery invades the three layers of the colon, producing punched-out ulcers or ulcers with undermined edges. It also passes to the liver and produces characteristic lesions. There are two varieties of the amœba which differ in no respect save as to size. The pathogenic variety is somewhat larger than the non-pathogenic. These two varieties of amœba have been the cause of all the confusion regarding the amœba as an ætiological factor in amœbic dysentery. After the publication of the work of Councilman and Laffleur, observers discovered amœbæ in non-dysenteric cases, and at once cast doubt upon the correctness of the above-named observers. The researches of Lieutenant Strong have been of very great value in clearing the troubled waters of doubt about these amœbæ. Until very recently the trend of medical thought has been toward the conclusion that the ætiology of dysentery was due to no one micro-organism in particular, but the resultant energy of a combined attack, that the amœbæ were accidental factors in the disease, and not an ætiological one.

At times amœbæ have been found in liver abscesses; again, they have been absent while various other micro-organisms were present, which only added to the general confusion and doubt. The liver abscess is not a true abscess. In no sense does it resemble an abscess produced by pus-producing organisms. Hence it is an abscess from which all pus-forming bacteria may be excluded as an ætiological factor. In his experiments upon cats, animals very susceptible to amœbic dysentery, Strong found that amœbæ from non-dysenteric cases produced no effects upon them, while the amœba from dysenteric liver abscesses, in pure culture, invariably produced the characteristic colon lesions of amœbic dysentery. These observations have been previously made by other investigators. The chief value of Lieutenant Strong's observations has been to separate the amœbæ into the pathogenic and non-pathogenic, eliminating the confusion which had grown up about the amœba in non-dysenteric cases. He has also confirmed Shiga's observation regarding the *Bacillus dysenteriae*.

To sum up the difference between acute and amœbic dysentery: Acute dysentery is caused by the bacillus of Shiga, a bacillus belonging to the typhoid group. It is constantly present in acute dysentery, and is the only persistent organism present. The bacillus of Shiga has produced typical acute dysentery in man, given in free culture, by the mouth, and been recovered from the stools. The bacillus of Shiga is not pathogenic to any of

the lower animals, whether given by the mouth or injected *per rectum*. It is pathogenic, when injected subcutaneously or intraperitoneally into mice, rats, and guinea-pigs, and causes death by toxæmia. The blood serum of those attacked with acute dysentery almost invariably agglutinates the bacillus of Shiga. The period of incubation is forty-eight hours. The onset of the attack is sudden and fulminating in character. The brunt of the attack is on the colon. It never produces ulceration of the colon or of the liver. Its fatal result is due to infection of the mucous membrane of the colon, rapid elimination of the fluids of the body, toxæmia, and exhaustion. The bacillus of Shiga is not found in amœbic cases of dysentery. The brunt of the attack may be at the hepatic flexure, the splenic flexure, or the sigmoid flexure of the colon, or the whole extent of the colon may be filled with ulcers like a sieve. These varied locations have often been observed by the writer while doing post-mortem work in China. The abscess of the liver may be single or multiple. I have observed them more frequently multiple than otherwise. The blood serum of those attacked with amœbic dysentery does not agglutinate the Shiga bacillus. As to just what part the accessory bacteria play in both the acute and amœbic forms of dysentery it is impossible to form a conjecture. It is equally difficult to estimate the rôle of the colon bacillus and the staphylococcus in a case of typhoid fever. But we accept the typhoid bacillus as the main factor in this affection. It is also as clearly proved that the bacillus of Shiga and the amœbæ are the fundamental factors in the production of their respective lesions in dysentery. Acute amœbic cases of dysentery often run a rapid course. Symptomatically, it is difficult to distinguish between this and acute dysentery, but microscopically, the amœbæ are found often in great abundance. In these cases it is surprising with what rapidity the amœbæ burrow into and produce large patches of multiple abscesses of the colon, of the size of the hand or half its length. In these areas there may be a patch of the size of a dollar or many times larger of broken-down gangrenous intestine with one or more perforations. There is another picture of this disease which is seen particularly in the robust and strong men, those in whom we least expect to find serious trouble. They usually come on sick report for a trifling diarrhœa, and the usual treatment is given. In a few days they return to duty, feeling perfectly well. They do not lose flesh, and they have not the appearance of being sick. There are alternately a diarrhœa of a few days' duration and a variable period of normal condition or, rather, of constipation. A brief history of one of these cases will show the insidious character of this form of amœbic dysentery, from which a

very large percentage of the men are disabled and have to return to America:

Private B., Company E, Sixth U. S. Infantry, arrived in Negros from the United States in July, 1899. In July, 1900, was in hospital one month for diarrhœa, returned to hospital in November, 1900, for diarrhœa, in February, 1901, was again in hospital for diarrhœa, returned to duty in a week, and came to hospital May 26, 1901, for diarrhœa. This is the history given by the patient, and not the diagnosis from hospital records. He weighed 160 pounds, had a good color, had lost no flesh, and from outward appearances was in the best of health. Physical examination showed the left lobe of the liver decidedly enlarged. The abdomen was normal, with no pain or tenderness on pressure. The stools were disagreeable, foul-smelling, with considerable blood and mucus. Microscopical examination showed large numbers of amœbæ. Some of the amœbæ contained as many as fifteen red blood-corpuscles. The temperature was subnormal in the morning, with an elevation of from a half to one degree in the evening.

During the periods of constipation there is likely to be jaundice; especially is the icteric tint observed in the eyes. The digestion does not suffer until late in the disease. When digestive disturbances supervene the patient fails rapidly. This is the common history of a very large percentage of those who are attacked with amœbic dysentery. A rigid examination of the stools in every case of diarrhœa is the only possible way to detect these latent and insidious forms of amœbic dysentery.

With the evidence here before us of the unquestioned duality of the disease proved beyond cavil by the anatomical lesions, the experimental work with the bacillus of Shiga and with the amœba, as well as therapeutical experience, it is something of a surprise to read Dr. Cruikshank's insistence upon the unity of the disease and the specificity of treatment. The citation of Dr. Buchanan Smith and Dr. Dickey's experience with the sulphate of magnesium treatment affords little ground upon which to base an argument; 555 cases treated with magnesium sulphate, with only six deaths, looks well in print. In none of these cases was there a microscopical examination or were cultural growths taken. The so-called catarrhal form of dysentery is often mistaken for acute dysentery. In this catarrhal form the patient usually recovers, whether he is treated or not. The 555 cases cited were probably of this nature. At most, it is hardly fair to insist upon our accepting them all as acute dysentery upon the evidence submitted. The recovery from acute dysentery depends upon three important factors: 1. The virulence of the bacillus of Shiga. 2. The physical condition, susceptibility or non-susceptibility of the individual. 3. Nursing, nourishment, and rest.

If the bacillus is particularly virulent, the patient will as surely succumb as if he had a virulent type of cholera. If it is not so virulent, and the patient is in poor physical condition, he will hardly sustain the attack, but if he is in fair physical condition and properly cared for, his chances for recovery are good. There are undoubted degrees of susceptibility among the soldiers, as well as degrees of virulence of the organism itself. We owe much to this fact.

Medicine in no way seems to influence the course of the disease. It runs its course to the end. We have no power as yet to abort the disease. To sustain the patient through the attack seems to be the only rational treatment. To aid in depleting his system of all the fluids of the body, as the disease itself is doing, is no more rational than to make use of the same means in the treatment of cholera. Hypodermoclysis and rectal enemata of mild astringents and sedatives are of unquestioned value. Amœbic dysentery, on the other hand, presents to us both a darker and a brighter prospect than the acute form. If it is recognized in its early stages, before the amœbæ have penetrated deep into the tissue of the intestine, and possibly entered the circulating channels and reached the liver, it offers much hope, but if rapid ulceration is forming, it is a question whether we can reach the amœbæ and arrest their progress before perforation or necrosis takes place. If the amœba invades the liver, few patients recover from the almost necessary operation which sooner or later must follow. In this form of dysentery magnesium sulphate is not indicated. Quinine solution effectually destroys the amœba. If the attack is severe, the condition of the intestine is such that it can scarcely retain the solution, the remedy proves useless. Many cases, however, are on record in which quinine solution proved highly efficacious, and its therapeutic action is unquestioned. In contrast with this gloomy prognosis comes the reassuring note from Dr. Cruikshank about the aperient sulphates. In what way can the sulphates affect the amœba or the bacillus of Shiga?

Beneath the adherent mucous exudate upon the surface of the colon, in acute dysentery, the bacillus of Shiga can never be removed or influenced by aperients or purgatives. In the amœbic form the amœbæ bury themselves in the submucous and muscular tissue of the colon, and are as little influenced by aperients as is the typhoid bacillus which, having entered the walls of the intestine, has passed on to the mesenteric glands and spleen. It is agreed, I infer, that the intestinal canal cannot be disinfected. It would be a grievous mistake to make use of this remedy in cholera, yet the condition of the colon in the acute dysenteries contraindicates the use of the

sulphates more decidedly than it does in cholera. Since the colon is pathologically more gravely affected than the intestines in the latter disease, they the more loudly call for rest. Finally, the aperient sulphates have been tried time and again and found wanting in every particular. Regarding the dysenteries produced by the Shiga bacillus and amœbæ, I submit the following considerations:

1. The duality of dysentery is proved.
2. Acute dysentery is the result of infection with the bacillus of Shiga.
3. It is infectious in the same way that the bacillus of typhoid fever is infectious.
4. Amœbic dysentery is caused by an amœba.
5. There are both a pathogenic and a non-pathogenic amœba, which fact has produced much confusion regarding the amœbæ as an ætiological factor.
6. The lesions of amœbic dysentery differ from those produced by the bacillus of Shiga.
7. The therapeutic agents generally used for the treatment of acute dysentery are in no way curative.
8. Magnesium sulphate should be included in this list.
9. Quinine solution is a specific for the amœbic dysentery, but its employment in rapid, acute, ulcerating cases is fraught with danger, and from the nature of the lesions it cannot be retained for a sufficient length of time to produce beneficial effects.

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SAN CARLOS, ISLA DE NEGROS, JUNE 20, 1901.

ANTISEPSIS IN THROAT AND NOSE SURGERY.

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It seems hardly necessary to note in preface that one of the prime conditions which has made modern surgery possible is the great combined principles of asepsis and antiseptis.

That the necessity for surgically clean work in special practice should be brought before the profession, and especially before those who have not had the advantages of a general surgical training, together with the desire to point out some technical methods in the performance of this class of work, is the object of this article.

That the conditions existing in general surgery are vastly different from those found in the specialty under consideration, none will contradict. That much may be done, however, to raise the standard of surgical cleanliness in this field is also a fact. Probably but few throat and nose surgeons have been unfortunate enough to have sepsis occur after operations, yet some months ago such a case having been brought to my attention by its occurrence in the practice of one of my professional acquaintances, led me to investigate very thoroughly my own method to find wherein its technics could be improved.

From the standpoint of surgical asepsis and antiseptis, to make a perfect chain, three links must be brought to the highest possible standard of technical strength. These same principles should be applied to fit as accurately as possible the changed conditions found in special surgery.

That the nasal mucous membrane rarely takes on infection after operation, is certainly true, even where the smallest attention has been given to surgical cleanliness. This we explain satisfactorily by remembering that the nasal mucous membrane has undoubtedly bactericidal action. This action is strongest, of course, when the membrane is in a normal state. The three technical links referred to will be described under the following headings and with all possible conciseness:

1. The preparation of the patient and his surroundings.
2. The preparation of the instruments.
3. The preparation of the hands of the surgeon and his assistants, including the anæsthetist.

The *first link* is undoubtedly the most difficult to apply, and, from the standpoint of perfect technics, practically impossible. We cannot treat the mucous membrane of the throat and nose as we do the skin surfaces. We cannot scrub it with green soap and hot water, with bichloride solution and alcohol; still there is much that can and should be done in imitation of this routine. It is perfectly possible to institute a preparatory course of treatment for some time before the proposed operation. We should ourselves endeavor to get the mucous membrane into as healthy a condition as possible, and instruct our patient how to use the atomizer intelligently, to clean the nasal and post-nasal spaces. For this purpose, there is nothing better than some one of the many alkaline and antiseptic washes now on the market, Dobell's solution or a wash made from the now well-known Seiler's tablets.

Where a post-nasal operation is contemplated it is well to instruct the patient or parents of a child that more than ordinary attention should be paid to the toilet of the mouth, the frequent and thorough use of the tooth-brush and mouth wash being insisted upon for several days before the date of op-

eration. Diluted hydrogen peroxide has been advocated for this purpose by the chief of the throat clinic with which I am connected. As to the preparation of the room it is hardly necessary to strip it of its hangings, to scrub down the walls, and to collect dust on hanging damp sheets, as surgeons strict in the antiseptic practice are accustomed to do in house-to-house operating; still it is well to spread a clean sheet upon the floor of the operating room, to cover all furniture not needed during the operation in like manner, and to cover all tables on which instruments or sponges are to be laid with sterile towels, or such as have been wrung out in an antiseptic solution. These preparations simply make our chain the stronger and help to counterbalance links which are unavoidably weak.

As to the preparation of the patient in the operating chamber. He should be wrapped in a clean sheet covering a rubber one. This should be free at the neck to prevent constriction, especially in operations performed in the upright position, where from time to time it is necessary to tip the chair forward and to flex the neck, to facilitate drainage from the nose and throat.

Over this sheet are placed sterile towels, which are changed from time to time during the progress of the operation.

To prevent the hands of the operator from coming in contact with the patient's scalp, and, in the case of a female, to keep the hair away from the field of operation, I have made use of an ordinary pure-gum ladies' bathing cap. This may be made surgically clean by immersion in a bichloride solution, and, in my experience, is less likely to drop off than the usual antiseptic towel-cap of the general surgeon. This cap covers in very nicely the patient's scalp from the brow to the nucha, including the ears. It has one further advantage, and that is that we sometimes find it convenient, in operating in the upright position, to steady the child's head by a firm grasp of its scalp; this is easy to perform with the loose-fitting rubber cap, but well nigh impossible with the ordinary close-fitting towel cap.

The *second link* in the chain, the preparation of the instruments, is easily disposed of, sterilization being secured by boiling for several minutes in a one-per-cent. soda solution. The instruments should not, of course, be touched until the hands have been sterilized, and should then simply be laid upon the towel in which they were wrapped while being boiled; or they may be rinsed in sterile water and laid upon a dry sterile towel.

Even in apparently trivial sæptal cases, these same precautions should be followed, the extra time being well spent, and conducive to a feeling of extra security as to a good result.

The *third link*, the preparation of the surgeon's

hands, deserves more than passing notice. It may be said that the hands of the throat and nose surgeon do not come in contact with his wound of operation to the same extent as do those of the general surgeon; still, he must handle the instruments, absorbent cotton used as sponges, and, in post-nasal work, the most skilful operator cannot be sure that the totality of the growth has been removed without digital examination. Some operators are in the habit of using the fingernail as a curette, which they keep long for this purpose. No good surgeon will tolerate long nails, for he knows the difficulty of rendering them sterile.

It is unnecessary to enter into the full details of the technics of hand-cleaning, surgical cleanliness in this particular being almost entirely a matter of thoroughness in carrying out the methods well known to surgeons. Great attention should be given to the ungual region of the nails, which should be well trimmed, and at least ten minutes spent with handbrush, green soap, and hot water, to be followed by prolonged soaking in a bichloride solution of the strength of 1-2000. The anæsthetist, also, should prepare himself in this manner and his ether cone should be wrapped in a sterile towel. Operator, nurse, and assistant should wear gowns, and, unless these have been passed through the sterilizer, the hands must not be brought in contact with them. This principle applies with equal force to any unsterilized article.

In post-nasal work performed in hospitals, although there are more hands at work there is possibly not the same danger of infection as in house-to-house operating. In the latter class of cases where the number of assistants is necessarily less, it seems almost a necessity, at times, for the operator to assist in the placing of the patient in the chair for the upright position.

Now, if he has to take time after this to sterilize or resterilize his hands, much valuable time will be lost. This emergency is easily overcome by nurse and operator slipping on long sterilized towelling mittens. This procedure was adapted from the usual operating room technics by my colleague, Dr. W. F. Dudley. The time thus saved is especially valuable in cases where the anæsthetic is not well taken by reason of the upper air passages being occluded by large tonsillar or adenoid growths. Some may contend that a good deal of this might be termed "fussiness," but I believe that whatever is worth doing at all is worth doing well. Moreover, should sepsis occur subsequently, and it is of course a possibility in any case, as we have a wound exposed to a greater or less degree to the atmosphere, the operator may have a clear conscience as to the part he has played in the case and may feel that he has left nothing undone to prevent infection, and that in all probability the

hostile germs have found entrance at a time other than that of the operation.

The after-treatment of these cases from a surgical standpoint can consist only in a continuance of care as to cleanliness by the use of the spray, and, in nasal cases, it is wise to use a soft pledget of cotton placed at the entrance to the nares, to act as a filter of the inspired air.

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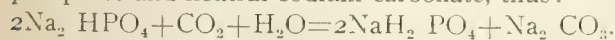
SOME OBSERVATIONS ON THE RELATION OF THE ALKALESCENCE OF THE BLOOD TO THE URINARY REACTION.*

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The hypothetical filtrate of the blood—the uron¹—differs in its chemical reaction from the unfiltered substance. The dissimilarity in the reaction may be due in part to a conversion of the monohydric phosphate of the blood, $\text{Na}_2 \text{HPO}_4$, into the dihydric phosphate, $\text{NaH}_2 \text{PO}_4$, of the urine. It has been assumed that uric acid contributes toward this conversion, combining with a portion of the sodium of the monohydric phosphate, thus forming a sodium urate and leaving a dihydric, that is, the monobasic, phosphate. Though it is possible that this transformation is due to the presence of tartronyl-cyanamide of nucleinar origin, the rather insignificant amounts of the latter normally produced do not let it appear probable.

The production of $\text{NaH}_2 \text{PO}_4$, the chief acid principle of human urine, from the neutral $\text{Na}_2 \text{HPO}_4$ of the blood plasma, I account for in this way. The blood becomes charged with an excess of carbonic anhydride during normal tissue respiration. The greater part of this CO_2 immediately diffuses through the alveoli of the lungs, while a portion of it remains in the blood, combining with the neutral dibasic sodium phosphate and forming acid sodium phosphate and neutral sodium carbonate, thus:



Subsequently the dihydric phosphate finds its way into the uron, by the medium of which it is eliminated from the system.

Primarily, therefore, the respiratory processes may be responsible for the conversion of a neutral into an acid phosphate. Moreover, the chemistry of respiration tends to disclose the causes and the significance of the variations in the chemical reaction of urine during the twenty-four hours.

The night urine, for instance, possesses a greater degree of acidity than the uron of any other period of the twenty-four hours. The respiratory activity is lowered during sleep. Less oxygen is carried into the circulation, and tissue-dissociation by combustion—that is, the production of CO_2 and heat, is diminished. Only a relatively small amount of the carbonic anhydride formed during this period is discharged by the lungs; an appreciable quantity of the carbon dioxide is exhaled by the skin, whose blood-vessels dilate and whose sweat glands are stimulated during sleep. However, the CO_2 discharge by the skin plus that by the lungs during the night does not apparently represent the total CO_2 production; evidently the CO_2 retention is relatively larger during the hours of sleep than during those of wakefulness. This rather decreased CO_2 elimination has to be ascribed to the loss in CO_2 tension arising from the diminished amount of oxygen admitted into the blood. Carbon dioxide—though produced in absolutely smaller quantities during the night—remains in relatively larger amounts in the blood, where a great part of it apparently effects the conversion of $\text{Na}_2 \text{HPO}_4$ into $\text{NaH}_2 \text{PO}_4$.

The lesser acidity of the urine, or its alkalescence during certain periods of the twenty-four hours, has been ascribed to the influence of certain substances which are yielded or produced by certain food-stuff constituents during the process of digestion. Researches conducted by the writer² have demonstrated that, though the nutritive material is apt to influence to some extent the chemical reaction of urine and to convey to it an additional amount of acid or alkaline principles, it does so as an accidental modifier only, and that the lessened degree of acidity or the frequent alkalescence of the uron during certain hours of the day is an inherent characteristic, occurring independently of the ingesta, and is more or less pronounced in every phase of life, in normal as well as in pathological conditions. This innate and unfailing characteristic of the uron is, I conclude, the inevitable consequence of vital processes in connection with respiration.

The respiratory functions are at their maximum during, or shortly after, active exercise or work, or during digestive activity. More oxygen is admitted to the blood, with the ultimate result that all the systemic processes are accelerated. One would surmise that the increased production of CO_2 possibly assisted in the conversion of larger amounts of $\text{Na}_2 \text{HPO}_4$ into $\text{NaH}_2 \text{PO}_4$. However, the increased amounts of oxygen in the blood accomplish the comparatively rapid exit of the newly formed CO_2 , partially preventing this gas during this state

*Read at the meeting of the Medical Society of the County of New York, May 27, 1901.

¹The author uses the term uron to designate the fluid separated from the blood, prior to its passage through the kidney. Thereafter the usual term urine is applied.

²Some observations on the Chemical Reaction of Human Urine, *Medical Record*, October 29, 1898.

from combining with a sodium molecule of the dibasic phosphate.

The uron attains its normal degree of acidity again when the systemic equilibrium depending upon the quantities of oxygen admitted and of carbon dioxide eliminated is reestablished.

The alkaline carbonates derived from the ingested material contribute toward the reduction of the acidity of the urine or toward the production of the latter's alkalescence. However, as stated above, the nutritive substances or certain of their constituents have to be regarded as mere accidental modifiers, and it might be surmised that these carbonates, in part at least, are possibly formed *extra sanguinem*—that is, prior to resorption, and that they are conveyed to the urinary fluid without the medium of the blood.

FIRST SERIES OF OBSERVATIONS.

To ascertain the eventual relationship between the chemical reaction of the urine and the degree of blood alkalescence I made studies on my own person for four consecutive days. Incidentally, observations were made regarding the influence of the ingestar upon the alkalinity of the blood.

Methods Employed.—All methods devised for blood-alkalimetry are in a measure inexact, which is proved by the fact that blood obtained from one person and subjected to different processes of alkali determination at the same time will generally show varying amounts of alkalinity.

One of the sources of this divergency may be found in the fact that albuminous bodies in general, as well as those of the blood, combine with acids, and this in a varying degree according to the nature and the strength of the acid principle.

Every alkalimetric method of the blood or serum should have as its main object the determination of the alkalescence depending upon the acid-combining salts contained in the former.

The alkalimetric process which I deem the most trustworthy one, comparatively speaking, is a modification of the Loewy-Kuntz method. This procedure, employed for alkalimetric titration of the blood *in toto*, is applied as follows:

A large drop of fresh blood is drawn into a capillary pipette to the mark 0.05 (cubic centimetres); distilled water is then drawn until the blood mixture has reached the mark 5.0 (cubic centimetres). After this, the whole contents of the pipette are thoroughly shaken and the blood, now uniformly diluted in the proportion of 1:100, is allowed to flow into a beaker glass. A small drop of the diluted blood must be placed on a strip of lacmoid paper with a glass rod before the $\frac{n}{7.5} \text{C}_{14} \text{H}_{10} \text{O}_9$ V. S. is admitted into the beaker. This should be repeated after the addition of every single drop of the

volumetric solution. The titration must be continued until a distinct and well-defined red line is formed around the drop of blood taken up by the lacmoid paper. This red line generally appears after the addition of from 7 to 9 drops of the $\frac{n}{7.5} \text{C}_{14} \text{H}_{10} \text{O}_9$ V. S. The titrated alkali is afterward calculated as NaHO.

The one objection which may be raised against this method is that every drop of the $\frac{n}{7.5} \text{C}_{14} \text{H}_{10} \text{O}_9$ V. S. (if 10 drops = 0.5 cubic centimetres which is mostly the case) corresponds to an alkalinity of 53.3 milligrammes NaHO. Thus, the more minute variations in the alkalescence of the blood cannot be demonstrated, as the addition of a single drop of the reagent shows an increase of alkalinity equal to 53.3 milligrammes NaHO in 100 cubic centimetres of blood.

Urinary acidimetry and alkalimetry were performed according to my method, and the acidity or alkalinity expressed in degrees. The neutralization of 1 cubic centimetre of acid urine by 1 cubic centimetre $\frac{n}{10} \text{KHO}$ V. S. is the acidimetric, and that of 1 cubic centimetre of alkaline urine by 1 cubic centimetre of $\frac{n}{10} \text{C}_2 \text{H}_2 \text{O}_4$ V. S. the alkalimetric, unit employed in the calculations.

As exactly the same amounts of fluid ingesta were taken for every day of the time of observation, and as it was my object to obtain rather figures for comparison than absolute values, the degree calculation was resorted to.

A perusal of Table I will show that on November 20, 1898, at 7 a. m., before breakfast, the degree of urinary acidity amounted to 0.62, while the blood alkalescence calculated in milligrammes of sodium hydrate to 100 cubic centimetres of blood was 320. The urine voided after a breakfast the caloric value of which was determined to be 606 possessed an acidity of 0.54 degree, about the same degree as did the urine excreted just prior to the midday repast. The urine obtained about two hours and a half after the ingestion of a meal abundant in proteids and hydrocarbons exhibited an acid degree of 0.22. The alkalescence of the blood, determined at the same time, became increased to 0.373.

Later in the afternoon, the degree of urinary acidity declined to 0.19, but was raised again to 0.27 and 0.35 on two occasions in the evening.

We have here an apparent relationship between the acid degree of the urine and the alkalinity of the blood. The higher degree of the urine's acidity corresponds to the lowered blood alkalescence, and the lesser urinary acidity to an increased alkalescence of the blood. Whether these are only accidental circumstances, or whether the blood alkalinity stands in causative and permanent relationship to the degree of urinary acidity, may be seen from the following observations:

TABLE I.

Time: Nov. 20, 1898.	Ingesta.	Food Value Calories.	URINE.						Alkalescence of Blood in milligrammes of Na HO to 100 ccm. blood.
			Quantity, ccm.	Specific gravity.	Solids, grammes.	Carbamide, grammes.	Na Cl, grammes.	Degree of Acidity.	
Until 7.00 A. M.			275	1020	12.94	4.13	2.4	0.62	0.320
At 8.30 A. M.	Albumins.....	62							
	Carbohydrates.....	228							
	Hydrocarbons.....	310							
At 10.15 A. M.			70	1021.5	3.5	1.80	0.48	0.54	
At 1.00 P. M.			185	1020.5	8.85	3.52	1.5	0.52	
At 1.15 P. M.	Albumins.....	525							
	Carbohydrates.....	435							
	Hydrocarbons.....	809							
At 3.45 P. M.			180	1022	9.32	4.68	2.85	0.22	0.373
At 6.00 P. M.			210	1018.5	9.1	5.88	2.3	0.10	
At 6.15 P. M.	Albumins.....	377							
	Carbohydrates.....	586							
	Hydrocarbons.....	428							
At 8.30 P. M.			225	1020	10.5	6.75	2.65	0.27	
At 11.45 P. M.			240	1018.5	10.36	6.72	2.1	0.35	
	1200 ccm. H ₂ O.....	Total. 3766	1385		64.57	33.57	14.28	Mean de- gree of acidity, 0.30.	

Table II records the acid degree of the night's urine as 0.57, and the alkalinity of the blood, determined thirty minutes later, but still before the ingestion of any food-material, as equivalent to 0.267 grammes of NaHO to 100 cubic centimetres of blood. The blood alkalinity was less than at the corresponding hour on the previous day and the degree of acidity was also perceptibly diminished. The ratio of the urine's acid degree to the alkalescence of the blood was, therefore, a different one from that in which it occurred on the previous day.

The caloric value of the food-stuffs ingested on November 21, 1898, was about half of that of the

day before, and the mean degree of urinary acidity was 0.38, while that of the twenty-four hours previous was 0.39. At 10 p. m., the urine's acidity amounted to 0.33 degree and the blood alkalescence to 0.373.

Table I records a similar blood alkalinity concurring with a urinary acidity of 0.22 degree after a meal rich in albuminous matter and hydrocarbons. The observations on Table II are in accordance with those on Table I, inasmuch as the higher degree of urinary acidity and its lesser degree correspond to the diminished and the increased blood alkalescence respectively. They further tend to demonstrate

TABLE II.

Time: Nov. 21st, 1898.	Ingesta.	Food Value-Calories.	URINE.						Alkalescence of Blood. In milligrammes Na HO to 100 ccm. blood.
			Quantity, ccm.	Specific gravity.	Solids, grammes.	Carbamide, grammes.	Na Cl, grammes.	Degree of acidity.	
Until 6.30 A. M.			300	1016	11.18	5.1	1.8	0.57	0.267
At 7.00 A. M.									
At 8.00 A. M.	Albumins.....	39							
	Carbohydrates.....	45							
	Hydrocarbons.....	93							
At 9.30 A. M.			140	1017.5	5.71	2.1	1.22	0.40	
At 11.30 A. M.			95	1021.5	4.77	1.8	0.95	0.45	
At 12.00 M....	Albumins.....	119							
	Carbohydrates.....	258							
	Hydrocarbons.....	377							
At 3.00 P. M.			220	1023.5	12.1	5.06	3.74	0.31	
At 6.45 P. M.			175	1022	8.98	3.33	2.63	0.22	
At 7 P. M....	Albumins.....	170							
	Carbohydrates.....	406							
	Hydrocarbons.....	395							
At 10.00 P. M.			250	1024	13.98	6.25	4.50	0.33	0.373
At 12.00 Mid...			135	1022.5	7.1	3.78	1.49	0.36	
	1200 ccm. H ₂ O.....	Total. 1902	1315		63.82	27.42	16.33	Mean de- gree of acidity, 0.38.	

TABLE III.

Time.	Ingesta.	Food value, Calories.	URINE.						Alkalescence of Blood. In milligrammes, NaHO to 100 ccm. blood.
			Quantity, ccm.	Specific gravity.	Solids, grammes.	Urbamide, grammes.	NaCl, grammes.	Degree of acidity.	
Until 7 A. M.			21	1023	11.26	4.83	2.1	.41	0.373
At 8.15 A. M.	Albumins	39							
	Carbohydrates	78							
	Hydrocarbons	93							
At 10.30 A. M.			110	1021.5	5.5	4	0.66	.44	
At 12.30 A. M.	Albumins	176							
	Carbohydrates	674							
	Hydrocarbons	393							
At 2.30 P. M.			227	1019.5	10.3	3.82	2.7	0.38	0.373
At 3.30 P. M.			79	1023	3.75	1.9	1.05	.33	0.42
At 4.30 P. M.			100	1026	6.66	2.9	1.	0.15	0.426
At 7.00 P. M.	Albumins	254							
	Carbohydrates	517							
	Hydrocarbons	597							
At 7.45 P. M.			185	1022	5.4	2.78	1.48	0.38	
At 9.30 P. M.			120	1023.5	8.33	2.76	2.16	0.42	
At 11.45 P. M.			145	1024	6.9	3.3	1.6	0.37	
	100 ccm. H ₂ O.	Total	27.61	1105	57.56	23.99	12.75	Mean degree of acidity, 0.37	

that there is no constant and well-defined ratio between the alkalinity of blood and the urine's acidity.

On November 22, 1898, as recorded in Table III, four blood examinations were made, two of which revealed the same alkalescence—0.373—as on the two occasions of the preceding days; though in these instances this alkalinity occurred together with a degree of urinary acidity of 0.41 and 0.38 respectively. This confirms my assumption of the non-existence of a fixed ratio between blood alkalescence and urinary acidity.

Table III further confirms the observations made on the two preceding days, *viz.*, that the higher degree of urinary acidity corresponds to a lessened blood alkalinity; and, vice versa, that the increased

alkalescence of the blood concurs with the decrease in urinary acidity, although there is no permanent or absolute ratio between the amount of alkalies in the blood and the acid salts in the urine.

The same table twice records a blood alkalescence for the afternoon hours equivalent to 0.426 gramme NaHO to 100 cubic centimetres of blood. Concurring therewith we have diverse degrees of urinary acidity; at 3.30 p. m. 0.33, and an hour later 0.15. There is evidently no permanent proportion between the acid degree on the one side and the amount of alkalinity on the other. This is again confirmed in Table IV, where, at 10 o'clock in the forenoon, the same amount of alkalescence—0.426—concurs with an acidity of 0.42 degree. The diversity in the acid

TABLE IV.

Time.	Ingesta.	Food value, Calories.	URINE.						Alkalescence of Blood. In milligrammes, NaHO to 100 ccm. blood.
			Quantity, ccm.	Specific gravity.	Solids, grammes.	Urbamide, grammes.	NaCl, grammes.	Degree of acidity.	
Until 8.00 A. M.			265	1018	11.12	4.24	2.05	0.55	
At 8.00 A. M.	Albumins	30							
	Carbohydrates	78							
	Hydrocarbons	93							
At 10.00 A. M.			180	1017.5	7.37	3.78	1.26	0.42	0.426
At 12.30 P. M.	Albumins	256							
	Carbohydrates	554							
	Hydrocarbons	495							
At 1.30 P. M.			185	1021	9.1	4.26	2.59	0.39	
At 4.30 P. M.			150	1002	7.7	3.75	1.05	0.2	
At 7.00 P. M.	Albumins	334							
	Carbohydrates	299							
	Hydrocarbons	372							
At 8.00 P. M.			225	1020	10.5	4.5	2.7	0.31	
At 11.00 P. M.			270	1021.5	13.5	7.	1.62	0.38	
	100 ccm. H ₂ O.	Total	2490	1275	59.29	27.53	12.47	Mean degree of acidity, 0.38	

degrees—0.33; 0.15; 0.42—tends to show that the acidity of the urine does not depend solely upon the condition of the blood, but that there must be other factors, neither influencing, nor being constituents of, the latter, which determine the ultimate degree of the urine's acidity.

Observations made as to the relationship of the ingesta to the blood alkalinity show, for the first day, after a heavy meal consisting of

Proteid matter equivalent to....	525 calories;
Carbohydrates equivalent to. . .	435 "
Hydrocarbons equivalent to.....	809 "

—

A total of. 1,769 calories;

an alkalinity of 0.373.

The same amount of blood alkalinescence was found in the evening of the second day, after a diet of

Albumins, caloric value.	170
Carbohydrates, caloric value.	406
Hydrocarbons, caloric value.	395

—

Total caloric value. 971

On the third day the same alkalinity was again met with after the following repast:

Albumins calculated as.	176 calories
Carbohydrates calculated as. . . .	674 "
Hydrocarbons calculated as. . . .	363 "

—

A total of. 1,213 calories

The same amount of liquid—1,200 cubic centimetres of water—was ingested every day during the period of observation.

The cited data at once tend to demonstrate that the degree of blood alkalinity in the healthy organism is not altered by the quantity of ingested food, and that the quality of the nutriment apparently exerts only a limited influence upon the eventual variations of the blood's alkalinescence.

The blood, for instance, after a diet valued at 1,769 calories, offered exactly the same amount of alkalinity as after a meal whose caloric value was calculated as 971, somewhat more than half of the former. We may infer from this fact—assuming the correctness of the theories of physiological absorption and anabolism—that the blood in a certain organism can normally convey a rather limited quantity of nutritive elements only, and that this amount is dependent upon the quantity and constitution of the blood, upon the demand for nutrition of the different tissues and organs, upon the character of the nutrient molecule and upon the external influences in general.

A portion of the substances elaborated from the ingesta will, therefore, not be introduced into the blood vessels, or may even not become absorbed by the lymphatics of the small intestines, and will leave the organism without having been utilized for anabolic purposes.

Concerning the influence of the different groups or types of nutrients upon the alkalinescence of the blood, we notice that the caloric value of a diet consisting of 75.4 per cent. of proteids and hydrocarbons and of 24.6 per cent. of carbohydrates was followed by the same degree of blood alkalinescence as was a meal whose caloric value of albumins and hydrocarbons formed only 44.4 per cent. of the total matter ingested.

Turning to the proteid substances which, as a general rule, prove to be decisive accidental modifiers and increasers of urinary acidity, we fail to notice in these particular instances any but inherent alterations in the urinary reaction after their ingestion. Furthermore, ingested albumins equivalent to 525 calories on the one occasion did not bring about a blood alkalinity different from that induced by 170 albumin calories on the following day.

The following inferences may be drawn from the first series of these observations:

(a) The higher degree of urinary acidity concurs with a lessened blood alkalinity and the increased alkalinescence of the blood with a decline of the urine's acidity.

(b) There is no permanent and absolute ratio between blood alkalinescence and urinary acidity.

(c) The blood, under normal conditions, possesses a certain inherent alkalinity. The degree of alkalinescence possibly varies slightly for certain periods of the twenty-four hours, but the influence of the ingesta upon these variations is neither a material one nor always determinable.

(d) The degree of blood alkalinity is normally not affected by the *quantity* of the ingesta. The *quality* of the nutritives may normally contribute toward the rise and fall of the blood's alkalinity, but only to a very limited extent.

(e) A portion of the substances elaborated from the nutriment will be egested without having been conveyed to the blood.

(f) Some of the nutritive material, isolated and not utilized in anabolism, may be transferred into the uron in a more direct manner, and thus the accidental variations in the urinary reaction may be partly explained.

SECOND SERIES OF OBSERVATIONS.

On November 30, December 1, and December 2, 1898, divers drugs were taken with the object of rendering the urine alkaline and of studying the

TABLE V.

Time: Nov. 30, 1898.	Ingesta.		Drug employed and its dose.	Amount of urine, ccm.	Urinary reaction: degree of acidity or alkalinity.	Alkalescence of Blood: Milli- grammes Na HO to 100 ccm blood.
	Solid form, grammes.	Fluid form, ccm.				
Until 7 A. M.				35	0.57 acid.	0.32
At 8.00 A. M.	45	250	{ Sodium salicylate 1.0 gramme Dimethyl Xanthin 0.15 gramme			
At 8.30 A. M.		50				
At 9.30 A. M.				130	0.31 acid.	0.32
At 11.00 A. M.				170	0.28 acid.	
At 12.30 P. M.	305	370	{ Sodium salicylate, 1.0 gramme Dimethyl Xanthin, 0.15 gramme			
At 1.00 P. M.		50				
At 2.00 P. M.				280	0.16 acid.	0.373
At 4.30 P. M.		250	Potassium bitartrate, 3.0 grammes.		{ 0.08 alkal.	0.373
At 5.00 P. M.		50		220		
At 6.00 P. M.				180	0.06 alkal.	
At 6.30 P. M.		250	Potassium bitartrate, 3.0 grammes.			
At 7.00 P. M.	670	400		325	0.14 alkal.	0.373
At 8.00 P. M.						
At 9.00 P. M.		250	Potassium bitartrate, 1.5 grammes.	230	0.12 alkal.	
At 10.00 P. M.				190	0.12 alkal.	
At 11.00 P. M.		250	Potassium bitartrate, 3.0 grammes.			
At 12.00 P. M.				200	0.16 alkal.	
Total	1020	2170		2260		

eventual relationship between urinary alkalinity and the concurring degree of blood alkalescence.

Tables V, VI and VII record these observations, which were made by the same methods as those of the preceding series.

Tables 5, 6, 7 to go in here

The reaction of the urine voided until 7 a. m. on November 30, 1898 (Table V), that is, before any medicine was taken, amounted to 0.57 degree of acidity. The corresponding alkalinity of the blood was calculated to be equivalent to 320 milligrammes of NaHO to 100 cubic centimetres of blood. At 8.30 a. m., sodium salicylate 1.0 gramme and dimethyl-xanthin 0.15 gramme were taken. At 9.30 a. m., an acidity of 0.31 concurred with an alkalinity

like that of 7 a. m. At 1 p. m., the dose of the drugs was repeated, and at 2 p. m. the acidity diminished to 0.16 degree while the alkalescence increased to 0.373. At 5 p. m., following the introduction of three grammes of potassium bitartrate, the urinary reaction showed an alkalinity of 0.08 degree, to which corresponded a blood alkalinity of 0.373. The same dose of potassium bitartrate was again taken at 6.30 p. m. and the reaction of the urine one hour and a half alterward showed 0.14 degree alkalinity. Concurring therewith, a blood alkalescence of 0.373 was determined. Additional doses of cream of tartar maintained the alkalinity of the urine for the rest of the day.

A persual of the observations recorded in Table

TABLE VI.

Time: Dec. 1, 1898.	Ingesta.		Drug employed and its dose.	Amount of urine, ccm.	Urinary reaction: degree of acidity or alkalinity.	Alkalescence of Blood: Milli- grammes Na HO to 100 ccm blood.
	Solid form, grammes.	Fluid form, ccm.				
Until 7 A. M.		400		530	0.2 acidity.	0.320
At 8.00 A. M.	45	370	Potassium bitartrate, 5 grammes.			
At 9.00 A. M.		50		150	0.18 acidity.	
At 10.00 A. M.				240	0.02 alkal.	0.320
At 10.30 A. M.				200	0.06 alkal.	
At 11.30 A. M.		250	Potassium bitartrate, 5 grammes.	120	0.05 alkal.	
At 12.00 A. M.		100				
At 12.30 P. M.	340	250				
At 1.00 P. M.				310	0.11 alkal.	0.320
At 3.00 P. M.		100	Potassium bitartrate, 5 grammes.	225	0.15 alkal.	
At 4.00 P. M.		100		230	0.22 alkal.	
At 5.00 P. M.		100		100	0.1 alkal.	0.426
At 6.30 P. M.	800	150		180	0.08 alkal.	
At 7.00 P. M.				250	0.04 alkal.	
At 8.30 P. M.				180	0.03 alkal.	
At 10.30 P. M.				75	0.01 alkal.	
At 11.30 P. M.		250	Potassium bitartrate, 5 grammes.			
Total	1165	250		2790		

TABLE VII.

Time: Dec. 2, 1898	Ingesta.		Drug employed and its dose.	Amount of urine, ccm.	Urinary reaction. Degree of acidity or alkalinity.	Alkalescence of Blood. Milli- grammes, NaHO to 100 ccm. blood
	Solid form, grammes.	Fluid form, ccm.				
Until 7 A. M.		200		310	0.15 acid.	0.426
At 8.00 A. M.	45	320	Sodium acetate, 2 grammes.....	125	0.05 acid.	
At 9.00 A. M.				265	0.02 acid.	0.373
At 10.30 A. M.		150	{ Sodium acetate.....			
At 11.30 A. M.			{ Sodium phosphatum, 2 grammes.....	90	0.05 alk.	
At 12.00 A. M.	375	350		240	0.03 alk.	
At 12.30 P. M.			{ Sodium acetate.....			
At 2.00 P. M.		250	{ Potass. bitart. an 2.5 grammes.....	245	0.11 alk.	0.373
At 2.30 P. M.				260	0.16 alk.	
At 3.00 P. M.	760	375	{ Sodium acetate, 2 grammes.....	105	0.24 alk.	
At 4.00 P. M.			{ Potass. citrate, 1.5 grammes.....	315	0.07 alk.	
At 5.30 P. M.		100		150	0.1 acid.	
At 6.00 P. M.				110	0.18 acid.	0.373
At 7.00 P. M.						
At 8.30 P. M.						
At 10.00 P. M.						
At 11.30 P. M.						
Total.	1180	1895		2305		

V makes it evident that the employed agencies effected a pronounced alkalization of the urine, but no corresponding increase in the alkalinity of the blood.

It is true that the blood alkalinity became somewhat augmented in the afternoon and evening hours, but this can hardly be attributed to the ingested drugs, on account of the small discrepancy between the blood alkalescence of the afternoon and that of the early morning when no medicines were as yet taken.³

As expected, a most potent influence was exerted by these drugs upon the urinary reaction, which attained in one instance an alkalinity of 0.16 degree. Compared with this alteration—from 0.57 degree acidity at 7 A. M. to 0.16 degree alkalinity at 12 P. M.—the slight augmentation of the blood's alkalescence appears rather insignificant. Moreover, a similar rise in blood alkalinity was also demonstrated on those days (Tables I, II, III, and IV) when no medicinal agents were taken.

Consequently, there is nothing left but to assume that the small increase in the alkalinity of the blood was due to another, apparently a physiological factor.

On the second day of observation (Table VI), the acidity of urine of the preceding night was determined to be 0.2 degree, with which concurred a blood alkalescence equal to 320 milligrammes of NaHO per 100 cubic centimetres of blood. At 10 a. m., after the ingestion of five grammes of potassium bitartrate, the urinary reaction had turned alkaline (0.02 degree). The blood alkalescence,

ascertained at the same time, remained unaltered (320 milligrammes).

The degree of urinary alkalinity was raised to 0.11 in the early afternoon, one hour and a half after the dose of potassium bitartrate was repeated. Alkalimetry of the blood, performed at the same hours, demonstrated the ineffectiveness of the ingested alkalies toward augmentation of the blood alkalescence. At 4 p. m., after another dose of potassium bitartrate, the alkalinity of the urine reached 0.22 degree, and declined an hour later to 0.1 degree. Concurring with the latter, a blood alkalescence corresponding to 0.426 gramme of NaHO per 100 cubic centimetre of blood was demonstrated.

The data obtained on this day of observation also confirm the conclusions drawn from the records of the previous day, viz., that the ingested medicinal modifiers exerted a most potent influence upon the uron, calling forth pronounced alkalescence, but that they were apparently inactive as regards simultaneous augmentation of the alkalinity of the blood, and that the normal increase of the latter is an inherent characteristic.

On the following day of observation (Table VII), a night urine of 0.15 degree acidity coincided with a blood alkalinity equivalent to 426 milligrammes of NaHO to 100 cubic centimetres of blood. Later in the forenoon, after the administration of two grammes of sodium acetate, the urine's degree of acidity declined to 0.02. Concurring with this, a blood alkalinity of 0.373 was found. These two observations tend to show—apart from the effects of the ingested alkaline upon the uron and the apparent non-influence of the same upon the blood—that a higher degree of urinary acidity may coexist with a more pronounced alkaline state of the

³We must remember that each drop of the $\frac{N}{7.5}$ $C_{14}H_{10}O_9$ V. S. neutralizes an alkalinity equal to 53.3 milligrammes of NaHO. The increased alkalescence of the afternoon, therefore, was determined by just one additional drop of the test solution to the blood.

blood, and that a lesser acidity of the urine may concur with a diminished degree of blood alkalescence.

Two grammes of both acetate and phosphate of a sodium were taken shortly before noon with the result of rendering the urine slightly alkaline.

The alkalescence increased in the afternoon to 0.11 degree after the ingestion of 2.5 grammes each of sodium acetate and potassium bitartrate. The degree of blood alkalinity, ascertained at the same hour, was found to be unchanged since the last determination. The alkaline degree of the urine rose to 0.16 at 4 p. m. and reached its point of culmination, 0.24, two hours later, after two grammes of sodium acetate and one gramme and a half of potassium citrate had been taken. From thence, the urinary alkalinity declined gradually, the reaction turning slightly acid at 10 p. m. and more pronouncedly so later on. At 11.30 p. m. an acidity of 0.18 degree was found to concur with a blood alkalescence of 0.373.

The data obtained from the second series of observations may be recapitulated, thus:

(a) A number of drugs effect the alkalization of the urine without causing a corresponding increase in the degree of blood alkalinity.

(b) The transitory augmentation of blood-alkalinity, recurring mostly during certain hours of the afternoon, seems to be the result of certain innate processes, which apparently proceed independently of the ingestion of food or drugs.

(c) While a higher degree of urinary acidity may concur with a more marked alkaline condition of the blood, a lower degree of urinary acidity, called forth by the introduction of a drug, may coincide with a lower degree of blood alkalinity on one and the same day.

Therapeutical Notes.

Chaulmoogra Oil in Cutaneous Tuberculosis.—

According to the *Journal de médecine de Paris* for May 19th, Chaulmoogra oil may be given in doses of from thirty to forty drops for adults, and three drops in milk for children. Externally the pure oil may be used to paint the affected parts. Or the following liniment may be used:

R Alcohol 3 parts;
Chaulmoogra oil. 4 "

M.

Vidal recommends the following ointment:

R Chaulmoogra oil..... 2 parts;
Vaseline 5 "
Paraffin 1 part.

M.

The Treatment of Warts.—M. Courtin (*Gaz. Lebel. de Bordeaux*, 1900; *Quarterly Medical Journal*, May) reports cases treated as follows: The skin of the part is carefully disinfected, the base of the wart is transfixd by two needles (previously rendered aseptic) at right angles to each other. A piece of aseptic silk is then tied tightly round the base of the wart below the needles; the tightening of the ligature constricts the wart, forming a pedicle, and an antiseptic powder is dusted on. At the end of eight days the dressing is removed, when the wart, needles, and silk come away, leaving a small simple wound which soon heals.

Brocq's Treatment for Acne in the Young.—Brocq (*Archives de thérapeutique: Journal des praticiens*, May 18th) recommends:

1. Total abstinence from coffee, with or without milk, tea, cordials, spirits, wine, pork meats, fish, shellfish, game, truffles, pastry, cheese, spiced foods, sorrel, tomatoes, etc. Not to eat too much butter or fats.

2. To take at the beginning of each meal one of the following cachets:

R Sodium bicarbonate. 4½ grains;
Calcined magnesia. 3 "
Powdered cascara sagrada. 2¼ "
Benzonaphthol. 2¼ "

M. For one cachet.

3. To cleanse the face with pledgets of absorbent cotton and water as hot as can be borne, in which has been boiled two teaspoonfuls of bran and a soup-spoonful of sodium biborate to the quart.

4. In the evening to wash the affected parts with naphthol soap and touch them with camphorated spirit.

5. Then to apply to the spots for the night the following ointment, in which the quality of vaseline is to be diminished or increased according to the effect produced:

R Naphthol B, camphorated. 4½ grains;
Resorcin. 3 "
Black soap. 3 "
Prepared chalk. 7½ "
Precipitated sulphur. 22½ "
Pure vaseline. 3 "

M.

6. In the morning, after washing, apply to the face the following:

R Sodium borate. 150 grains;
Camphorated sulphuric ether. 600 minims;
Distilled rose-water. 1,500 "
Distilled water. 2,250 "

M.

For Passive Hepatic Congestions of Cardiac or Pericardiac Origin.—Dr. Bommier (*Nord médical*, July 15th) says that the cardiac tonics, digitalis, caffeine, or strophanthus-sparteine, should be employed, or Huchard's pills having the following formula:

R Aqueous extract of ergot. 60 grains;
Powdered squill. 45 "
Calomel. 30 "
Powdered digitalis. 15 "

M. Make into forty pills, of which three may be taken daily during thirty days.

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THE NEW ARMY CIRCULAR ON TROPICAL DISEASES.

The whole medical world has long recognized that the good work of the medical corps of the United States army was not confined to the immediate care of the troops. It has worked faithfully and most efficiently for the benefit of posterity. It is unnecessary to specify the achievements of that little corps, for they are known and appreciated wherever the study of medicine is pursued. Such a creditable record has the corps, indeed, that we have come to expect frequent manifestations of its continued activity as a matter of course. It is none the less gratifying to note these manifestations as they occur. The most recent one that has come to our notice is the third of the series of *Circulars on Tropical Diseases* issued, under the authority of Surgeon-General Sternberg, by Colonel and Assistant Surgeon-General Charles R. Greenleaf, chief surgeon of the Division of the Philippines. These circulars are required to be filed as a part of the medical records of each post to which they are sent. Consequently they are at all times available to every medical officer of the army; in addition, they are liberally furnished to medical libraries, so that they are practically within the reach of the profession throughout the world.

The third circular is on the subject of the bubonic plague. It has been prepared by Lieutenant and Assistant Surgeon W. J. Calvert, U. S. A., who has based it upon his own personal observation and upon a number of authoritative writings on the plague, on the diseases of tropical countries, and on the history of medicine. Assisted by Major and Surgeon Charles Lynch, U. S. V., and Lieutenant E. W.

Pinkham, U. S. A., who aided in the revision of the manuscript, Dr. Calvert has furnished us with a condensed encyclopædic article dealing with the history of the disease from the third century before the Christian era, with its ætiology, including a minute description of Kitasato's *Bacillus pestis bubonica*, with the general and special pathological phenomena, with the modes in which the plague is spread, with its behavior in the lower animals, with its climatology, with its relations to age, sex, race, and occupation, with its mortality, with its prevention, and with its diagnosis, prognosis, and treatment.

The circular makes more than thirty large and closely printed octavo pages, and every one of them is replete with information. Naturally, therefore, we cannot enter upon a detailed analysis of it. We may, however, make cursory mention of a few matters that have particularly attracted our attention. As to the portal by which the micro-organism enters the system, it may be an abrasion of the skin, even so insignificant as to be imperceptible to the naked eye, it may be the alimentary canal, especially when cold food is used, or it may be the respiratory tract, infected dust or pulverulent dried sputum being inhaled. It is quite possible, says Dr. Calvert, to contract the disease by sexual intercourse, and in one of his cases that mode of infection seemed the most probable. When the plague is introduced into a new place, it does not make rapid progress at first; usually considerable time elapses between the early cases, and the disease may linger for a year or two years or more with practically no manifestation. The prevalence of the plague in an active form rarely lasts more than six months in any one year, but it is kept alive by mild cases and infected fabrics, houses, etc., for an indefinite time, with an occasional intermission of a year.

From the earliest times, says Dr. Calvert, writers have noted the susceptibility of rats and mice to the plague. In the Bible it is mentioned as existing among the Philistines, and the pollution of the fields by mice is spoken of. "To counteract this pollution, the Philistines made gold images of mice to appease the gods." Avicenna is cited as saying that when rats are affected with the plague they come out of their holes and act as if they were drunk. In recent years it has been noticed in numerous instances that a recognized outbreak of the disease has been pre-

ceded by the discovery of unusual numbers of dead rats in the streets and elsewhere. During a severe epidemic the rats of the affected district generally migrate, evidently, Dr. Calvert thinks, to escape the sickness, and in this way they spread the disease from place to place. "From time immemorial," he adds, "insects, fleas, mosquitoes, etc., have been believed to play an active part in spreading plague, and only recently has the opinion been advanced that fleas are the active agents in spreading the disease from rat to rat and from rat to man."

In the treatment, Yersin's serum, as obtained from the Marine-Hospital Service, has been found useless in Manila, but recently a small quantity of serum brought from Tokyo was used on three patients, and two of them recovered. The patient who died was too far gone with the disease to admit of any hope of recovery. So much of this serum has to be employed, however, that the quantity necessary for its general use could not be produced, but inoculation with small quantities confers temporary immunity. As regards protective inoculation, Dr. Calvert expresses his opinion as follows: "Protective inoculations are not practical, for the following reasons: Enormous plant necessary to produce the material; working force needed to inoculate the inhabitants; opposition of the people to the inoculation; temporary benefit derived. While statistics are favorable to protective inoculation, study of the epidemiological features of the disease throws considerable doubt on its real value."

THE FUTURE OF MEDICAL PRACTICE.

A few years ago a young woman came to New York to pursue a course of study which would oblige her to stay here most of the time for rather a long period. Being a prudent person, she sought to insure her happiness as much as possible during her sojourn in a strange place; with this end in view, she asked her family physician for advice as to whom she should have recourse to in case of illness. He gave her the names of a number of eminent specialists, but not that of a single general practitioner. Shortly after the girl arrived, when she had made a few acquaintances, she said to one of them: "My doctor has recommended a number of specialists to me, so that I know whom to go to if there's anything the matter with my eyes, with my skin, with

my throat, with my nose, and so on, but the question I should like to have answered is, Whom shall I call in when I'm *sick*?"

This little tale represents rather accurately the perplexity into which the growth of specialism has cast many members of the community, but there is another side to the matter, that, namely, which involves the question of what is to become of the general practitioner. This problem has been discussed not a little, but by nobody so well, it strikes us, as by Dr. George E. Francis, of Worcester, in his recent annual discourse before the Massachusetts Medical Society, entitled *Medical Prospects*. Dr. Francis is no pessimist, but while, like all the rest of us, he appreciates the work of the specialist in advancing medicine as a whole, he clearly recognizes the peril of the family doctor from the florid development of specialism—peril both from the educational point of view and from that of making a living. In the medical schools, he says, the division of the curriculum is constantly growing more and more minute; every endeavor is made by each instructor to render his own field so interesting in itself that, in the plenitude of attractive subjects of study, few of the students are likely to bear in mind that the main object of the study of medicine is not the microscopic investigation of some or all of the component parts, but that study of the separate departments is preliminary and subsidiary to that of medicine as a whole and to that of man as a whole. "Medicine," he continues, "viewed as a science or as an art, is something far higher than a patchwork of its separate departments, precisely as man is far more than the joining together of a certain number of organs." It is, therefore, to be regretted that the increasing numerical preponderance in the teaching staff of specialists over men trained to view things broadly is making it every year more nearly impossible to so educate the student and so stock him with knowledge as to fit him for the general practice of medicine.

Dr. Francis takes a new view of the proposition that a student who intends to become a specialist ultimately should first spend some years in general practice; at least he sheds a new light on it. He admits its excellence from the theoretical point of view, but he throws great doubt upon its general practicability. The point he makes is this: An absolute wall divides specialism from general practice.

Over that wall nobody can climb gradually; if he is to pass it at all, he must vault over it. In other words, if a man in general practice attempts to glide slowly into a specialty, his fellow-practitioners will at once detect the effort, and, in self-defense, decline to send him patients as a specialist so long as he does any general practice, and specialists, as we all know, are largely dependent on practice sent to them by the family doctors.

As to the effect of predominant specialism upon the general physician's means of making a livelihood, Dr. Francis entertains the common forebodings, and he even suggests that the time is not far away when the family doctor's advice will no longer be asked as to the choice of a specialist. This omission, he intimates, will first be made by the wealthy, and the example will soon be followed by the large class of those who are neither rich nor so very poor as to depend on the hospitals and dispensaries, but these latter will probably find exclusive dependence on specialists too expensive and return to the present order of things. However, there is a silver lining to the cloud depicted by Dr. Francis. "Very probably," he says, "the family doctor is about to be eclipsed for a time, perhaps to reappear later in a more glorified aspect."

THE LEGAL STATUS OF THE UNBORN CHILD.

Under this heading, in our issue for July 27th, we made some remarks upon the question of the *locus standi* of the legal representative of a child killed before its birth by violence for which a certain person might be held responsible, in case such representative sought to recover damages by an action at law. Another aspect of the legal status of the unborn child—one not essentially novel, although the writer who calls forth our present comment has added to it a collateral light which does strike us as new—has been set forth by Dr. C. Zalackas, formerly an interne of the hospitals of Oran, in the *Progrès médical* for June 29th, which had not reached us when our previous article was written. Dr. Zalackas's theme is the duty of the physician in attendance in a case of labor in which it is probable that the child cannot be born alive without intervention which may prove fatal to the mother. Before considering that topic we will mention the point of

novelty, as it seems to us, which he brings out. It is this: If we have no right to kill an unborn child for the sake of saving its mother's life, we have no right to bring on premature labor in a case of contracted pelvis, for the reason that we have no more right to restrict a child's chances of survival, even if we secure its birth alive, than we have to kill it outright. As a bald proposition, this may perhaps receive the assent of logicians; nevertheless, as it seems to us, it is hair-splitting, for what the physician aims at in bringing on premature labor in such a case is to save two lives, that of the mother and that of the child. The mere fact that some unusual obstacle is necessarily added to the child's chance for continued life does not, we believe, counterbalance that of the greater and more immediate danger to the mother's life involved in the Cæsarean operation.

Now, as to the main point, the old, old point of the choice between the life of the mother and that of the child. In the first place, Dr. Zalackas contends that the father is entitled to no voice in the matter. To this we agree without reserve, and we believe that the profession in general will agree to it. He goes further, however, and says that the physician must decide the question in case the mother refuses to undergo an operation designed to save the child's life while somewhat endangering her own. Although we do not hold guiltless the mother who so refuses, we cannot admit that the physician's duty is that of overruling her and cutting her open against her will; nevertheless, we do hold that with all his power of argument he should try to induce her to submit to a procedure which, as he can conscientiously assure her, involves hardly any danger to herself, and almost assures the safety of her child.

CURIOUS CONTENTS OF A HERNIAL SAC.

Varied as are the structures that have occasionally been found in herniæ, one can hardly fail to be astonished at the findings in a case lately reported to the Brussels Medical Circle by M. Derveau (*Gazette hebdomadaire de médecine et de chirurgie*, August 1st). The patient was a person sixty-nine years old with a congenital inguinal hernia. Within the hernial sac there were found a uterus, Fallopian tubes, and a vagina. The scrotum was empty, but in each of the broad ligaments there was a normal testicle. The subject was the parent of six children. This is said to be the third case of the kind on record

THE DIAGNOSIS OF HERNIA OF THE VERMIFORM APPENDIX.

Professor Kölliker, of Leipsic (*Centralblatt für Chirurgie*, August 3d), reports a case in which, on operating for the radical cure of a femoral hernia, he found the extremity of the vermiform appendix contained within the hernial sac and adherent to it. Before the operation, the patient, a woman sixty-nine years old, kept the thigh flexed on the pelvis, and any attempt to extend it was productive of great pain, owing, as Kölliker thinks, to increased tension on the appendix. He is probably right as to the cause of the pain on extension, but flexion of the thigh on the pelvis can hardly be diagnostic of inclusion of the appendix in a hernia, for it has been observed in appendicular inflammation unaccompanied by hernia.

AN INSTITUTION FOR THE CORRECTION OF MINOR MENTAL AND MORAL DEFECTS IN CHILDREN.

We learn that a school mainly intended for the treatment of such abnormalities in children, *pari passu* with such ordinary instruction as they are capable of receiving, has recently been established in New York under the direction of Maximilian P. E. Groszmann, Pæd. D. We can readily see that such an institution may serve as a means of reclaiming many a subject born with mental or moral defects, and thus prove of great value to society.

INVASION OF THE LIVER BY ASCARIDES.

Disastrous results from the migration of intestinal worms to the liver are mentioned in our literature, but seldom with the detailed circumstances recorded by Dr. S. Saltykow, of Prague (*Prager Zeitschrift für Heilkunde*, 1900, No. 11; *Centralblatt für innere Medizin*, June 22d), who reports two cases of multiple abscess of the liver in which, in the abscess cavities, the ova of ascarides, partly destroyed by the pus corpuscles, were found. The large biliary passages were perfectly normal.

AN ALLEGED EARLY SIGN OF INFLUENZA.

Kolipinsky (*Semaine médicale*, No. 202; *Lyon médical*, July 7th) attributes pathognomonic significance to an eruption on the velum palati, the vault of the palate, and the pillars of the fauces. It consists of transparent or dull-white elevations seated each on a red field. It is described as brighter in hue in smokers and drinkers and as of a waxy pallor in tuberculous and cachectic persons. Early throat manifestations of certain infectious diseases seem to be accumulating. May they not, after all, be simply signs of *some* infection, and not sharply distinctive of a particular infection?

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general, during the week ending August 10, 1901:

Smallpox—United States and Insular.

		July 26-31	Present
Alaska	Kluckwan	July 26-31	2 cases.
California	San Francisco	July 21-28	1 case.
New Jersey	Newark	July 27-Aug. 3	1 case.
New York	Buffalo	July 22-29	1 case.
	Elmira	July 17-Aug. 3	2 cases.
	Gowanus	July 28	7 cases.
	New York	July 27-Aug. 3	47 cases.
No. Dakota	Bismarck	July 13-20	1 case.
	Large	July 6-13	1 case.
	Fisher	July 6-13	1 case.
	Kensal	July 6-13	1 case.
	Mayville	July 13-20	1 case.
Ohio	Cincinnati	July 26-Aug. 2	2 cases.
Penna.	Philadelphia	July 27-Aug. 3	4 cases.
Tennessee	Memphis	July 27-Aug. 3	2 cases.
Washington	Tacoma	July 21-28	1 case.
Philippines	Manila	June 15-22	1 case.

Smallpox—Foreign.

Austria	Prague	July 13-20	1 case.
Belgium	Antwerp	July 13-20	4 cases.
Brazil	Rio de Janeiro	June 30-July 14	88 cases.
Colombia	Panama	July 19-26	6 cases.
France	Paris	July 13-20	5 cases.
Great Britain	Dundee	July 13-20	3 cases.
	Glasgow	July 19-26	1 case.
	Liverpool	July 6-13	26 cases.
	London	July 6-20	5 deaths.
India	Bombay	July 2-9	6 deaths.
	Calcutta	June 29-July 6	13 deaths.
	Madras	June 22-July 5	3 deaths.
Italy	Messina	July 13-20	9 cases.
Netherlands	Rotterdam	July 20-27	2 cases.
Russia	Moscow	July 6-13	3 cases.
	Odessa	July 13-20	1 case.
	St. Petersburg	July 6-13	3 cases.
	Warsaw	July 6-13	1 death.
Uruguay	Montevideo	June 8-15	35 cases.

Yellow Fever.

Brazil	Rio de Janeiro	June 30-July 14	6 deaths.
Cuba	Havana	July 29-27	3 cases.
Mexico	Vera Cruz	July 28-Aug. 3	1 death.

Cholera.

India	Bombay	July 2-9	2 deaths.
	Calcutta	June 30-July 6	17 deaths.
	Madras	June 22-July 6	4 deaths.
Java	Batavia	June 22-29	30 cases.

Plague—Insular.

Philippines	Manila	June 15-22	9 cases.
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Plague—Foreign.

India	Bombay	July 2-9	68 deaths.
	Calcutta	June 30-July 6	15 deaths.
	Karachi	June 30-July 7	1 case.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending August 10, 1901:

DISEASES.	Week end'g Aug. 3		Week end'g Aug. 10	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	68	13	67	15
Scarlet fever	136	11	128	11
Cerebro-spinal meningitis	7	7	0	3
Measles	127	21	100	13
Diphtheria and croup	153	28	131	22
Small pox	41	14	36	13
Tuberculosis	249	152	230	144

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending August 10, 1901:

CORDEIRO, F. J. B., Surgeon. Ordered to the Pensacola Navy Yard, Florida.

MORGAN, D. H., Passed Assistant Surgeon. Detached from the Navy Yard, Pensacola, Florida, and ordered to the Naval Hospital, Norfolk, Virginia.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army from August 3 to August 10, 1901:

CORBUSIER, WILLIAM H., Major and Surgeon, is detailed as a member of the board of officers appointed to meet at the Army Building, New York, for the examination of officers for transfer to the Corps of Engineers.

KOERPER, CONRAD E., First Lieutenant and Assistant Surgeon, is relieved from duty at Washington Barracks, D. C., and will report to the commanding officer of the United States General Hospital at that post for temporary duty.

KULP, JOHN S., Captain and Assistant Surgeon, is detailed as a member of the board of officers appointed to meet at the Army Building, New York, for the examination of officers for transfer to the Corps of Engineers.

O'REILLY, ROBERT M., Lieutenant Colonel and Deputy Surgeon-General, is granted leave of absence for fifteen days.

REBERT, MICHAEL A., Captain and Assistant Surgeon, United States Volunteers, will proceed to San Francisco for transportation to Manila.

SCHREINER, EDWARD R., First Lieutenant and Assistant Surgeon, is granted leave of absence for one month.

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the seven days ending August 8, 1901:

GASSAWAY, J. M., Surgeon. Relieved from duty at San Francisco and directed to proceed to St. Louis, and assume command of the service, relieving W. G. STIMPSON, Passed Assistant Surgeon.

HALLETT, E. B., Acting Assistant Surgeon. Granted leave of absence for seven days from August 10th.

HOLT, J. M., Assistant Surgeon. Granted leave of absence for one month from August 15th.

MCINTOSH, W. P., Surgeon. To proceed to Jasper, Georgia, for special temporary duty. Granted leave of absence for thirty days from August 24th.

MORRIS, G. A., Hospital Steward. Relieved from duty at New York and directed to proceed to Havana, Cuba, and report to the chief quarantine officer for duty.

NYDEGGER, J. A., Passed Assistant Surgeon. Granted extension of leave of absence, on account of sickness, for thirty days, from August 10th.

PHILLIPS, W. C., Hospital Steward. Relieved from duty at Chicago and directed to proceed to the Mullet Key Quarantine Station, Florida, and report to the medical officer in command for duty and assignment to quarters.

SCOTT, E. P., Hospital Steward. Granted leave of absence for six days from August 5th.

SLOUGH, CHARLES, Hospital Steward. Granted leave of absence for fourteen days from August 6th.

STIMPSON, W. G., Passed Assistant Surgeon. Upon being relieved by J. M. GASSAWAY, Surgeon, he will proceed to San Francisco and assume command of the service.

Changes of Address.—Dr. Edward R. Williams, to No. 1069 Boylston Street, Boston.

A Football Physician.—The University Graduate Athletic Advisory Committee has appointed Dr. A. K. MacDonald, of Princeton, N. J., regular physician to the football team, *vice* Dr. H. E. Wright.

A Brooklyn Physician Starts for Duty as a Surgeon in the Philippines.—Dr. Fred Asserson, of Brooklyn, left the East for Manila on August 10th for a three-year appointment as surgeon in the United States army.

A Physician to Visit the Orient to Investigate Bubonic Plague.—Dr. J. J. Kinyoun, formerly quarantine officer at San Francisco, has announced his intention of going to China with an expedition to find a genuine case of bubonic plague.

Danish Scientific Prizes Awarded.—Two of the Nobel Institute's scientific prizes, each worth 20,000 Danish kroner, have been awarded, one to Professor Finsen, the originator of light treatment for lupus, and the other to Dr. Pavloff, a Russian physiologist, for his researches in nutrition.

Knightly Honors for Medical Men.—King Edward VII. conferred, on July 16th, the following honors upon prominent English medical men: Knight Commander of the Royal Victorian Order on Sir Thomas Smith, Bart., F. R. C. S., Deputy Surgeon-General Henry Julius Blanc, and Mr. William Henry Bennett, F. R. C. S.; Commander of the Royal Victorian Order on Dr. Donald W. C. Hood, Mr. John Hammond Morgan, F. R. C. S., and Mr. Charles Arthur Morris, F. R. C. S.

Cincinnati to Enforce Tuberculosis Fumigation Laws.—The health authorities of Cincinnati, O., are preparing to wage warfare on tuberculosis such as has never been waged in the West. The efforts of the department are now to be directed toward the prevention of the spread of the disease. Among the regulations is one that provides for the disinfection of every room where a death from tuberculosis occurs. This has only been an enabling regulation heretofore. The department has, however, announced that it will be mandatory hereafter. Every room where a consumptive dies will be fumigated and disinfected after the most approved modern methods.

The "Tipping" of Undertakers at Bellevue Hospital to be Abolished.—War has been declared by Dr. George Taylor Stewart, superintendent of Bellevue Hospital, upon "undertakers' tipsters," as certain employees of the hospital are termed, who, without authority, notify undertakers of deaths in the public institutions and for so doing are said to receive a percentage of the undertakers' fees. As a first attack in his campaign Dr. Stewart has dismissed one of the clerks in the registrar's office. He was accused of selling information to undertakers who thrive by burying patients who have died in the hospital. Their remuneration is said to be large and the extent of gain to the employee who "tips" the undertaker is dependent upon the burial fees. The rate at one time was said to be fifty per cent.

A Policeman-Doctor Appointed Demonstrator of Clinical Medicine at the Baltimore University Medical School.—Dr. John Roth, the night telephone man at the Eastern Police Station, Baltimore, Md., has been appointed demonstrator of clinical medicine at the Baltimore University Medical School, from which he graduated in 1894. Dr. Roth was appointed on the police force in

1879. He took a fancy to medicine and decided to make it his profession. He studied hard, and, though he had his police duties to perform at the same time, attained a creditable average in his class examination. He is attached to his police duties, with which his new position will not interfere, as he will be required to give only about two hours a week to his class.

The Crusade against Mosquitoes in Staten Island.—Dr. Doty has found that the most dangerous colonies of anopheles are to be found in cisterns or mire holes near houses in which are cases of malaria, and that they can be got rid of by dosing the cisterns and sloughs with oil and cutting down all rank vegetation that harbors the gnats during the day. Acting on this conviction, a gang of sprinklers and mowers were taken to a dozen places where malaria could be associated with anopheles, and each place was given a thorough dosing with petroleum and weed cutting.

The most interesting operations from a scientific and hygienic standpoint were at the southwest corner of De Kalb Street and Oder Avenue. In three cottages were several acute cases of malarial fever. One cottage, which was found to be a typical home of anopheles, was treated with Lima oil on Thursday, and a cordon of oil was made around the two other cottages by the men who had the watering cans pouring it on grass and weeds ten feet from the dwellings. The result was told by one of the residents:

"For the first time in ten weeks," she said, "all of us slept well last night. We are too poor to buy mosquito netting for our windows, so that there can be no doubt that the relief came through what has been done here. And last night, for the first time this summer, we had a lamp in our sitting room. We never dared do this before."

Another resident testified in like terms to a marked abatement of suffering from mosquitoes. A subsequent cordon was formed by oil sprinkling around each of their houses.

The Medical Society of the Borough of the Bronx will hold its next regular meeting on Wednesday, September 11th, at 8 p. m. Patients will be presented and new instruments will be exhibited.

The Muldraugh Hill (Ky.) Medical Society.—The midsummer meeting of the Muldraugh Hill Medical Society was held at Elizabethtown, Ky., on August 8th. Dr. Blincoe, of Bardstown, was elected president for the ensuing year, and Dr. Willmoth, of Louisville, was chosen secretary.

Diphtheria.—An epidemic of this disease is reported to be raging at Knox, Ind., and at Williamsport, Pa.

Typhoid.—Typhoid fever is raging at Riga, N. Y., and the outbreak at Pittsburgh, Pa., has not yet abated.

Small-pox.—In New York the disease is still epidemic, four or more new cases being reported daily.—Several cases have been noted at Newark, N. J., and the appearance of a patient in the

military hospital at Fort Hancock has resulted in a rigid quarantine there.—The disease is on the increase again at Lansing, Mich., and in the Province of Ontario, Canada.—A peculiar disease resembling small-pox is reported to have made its appearance at Middletown, N. Y.



Births, Marriages, and Deaths.

Married.

BROWN.—In Falmouth, Maine, on Monday, August 5th, Dr. George S. Derby, of Boston, and Miss Mary B. Brown.

PEERS—STEWART.—In San Francisco, on Saturday, July 20th, Dr. Robert A. Peers, of Colfax, California, and Miss Lula Fitzgerald Stewart, of Toronto, Canada.

PORTER—KILGOUR.—In Potomac, Maryland, on Wednesday, August 7th, Dr. Ralph S. Porter, United States Army, and Miss Lydia Kilgour.

SLATTERY—BOBB.—In Washington, on Wednesday, August 7th, Dr. Daniel Francis Slattery and Miss Nannie D. Bobb.

SMITH—BEALL.—In New London, Connecticut, on Wednesday, August 7th, Dr. George Tucker Smith, United States Navy, and Miss Ethel Grubb Beall.

STARR—ZEIGLER.—In San Francisco, on Saturday, August 3d, Dr. Frederick R. Starr and Mrs. Stella H. M. Zeigler.

ZACHARIE—WESTCOTT.—In Windsor Terrace, Canada, on Friday, August 2d, Dr. Charles C. Zacharie, of White Plains, N. Y., and Miss Gladys Westcott.

Died.

ARMGARDT.—In Hamburg, Germany, on Thursday, August 8th, Dr. Herman Armgardt, of Brooklyn, in the fifty-second year of his age.

CLEVELAND.—In Jacksonville, Florida, on Thursday, August 8th, Dr. Martin C. Cleveland, in the sixty-sixth year of his age.

EVERSOLE.—In St. Louis, on Sunday, August 4th, Dr. F. R. Eversole, in the forty-sixth year of his age.

FIELD.—In Alameda, California, on Tuesday, August 6th, Dr. Charles Hampden Field, formerly of the United States Army.

FISH.—In Wolcott, N. Y., on Friday, August 9th, Dr. Timothy S. Fish, in the fifty-first year of his age.

HAWES.—In Greeley, Colorado, on Sunday, August 4th, Dr. Jesse Hawes, in the fifty-seventh year of his age.

INGERSOLL.—In Weatherfield Springs, N. Y., on Thursday, August 8th, Dr. W. K. Ingersoll, in the forty-second year of his age.

JONES.—In Cleveland, on Thursday, August 1st, Dr. Nathaniel M. Jones.

LONG.—In Liverpool, England, on Sunday, July 28th, Dr. Albert L. Long, of Robert College, Constantinople.

NEWELL.—In Allentown, N. J., on Thursday, August 8th, Dr. William A. Newell.

NOLAN.—In Kansas City, Kansas, on Sunday, August 4th, Dr. Helen J. Nolan.

OGLESBY.—In Louisville, on Sunday, August 4th, Dr. Benjamin Asbury Oglesby, in the thirty-fourth year of his age.

RHETT.—In Charleston, S. C., on Wednesday, August 7th, Dr. Robert Barnwell Rhett, Jr., in the forty-eighth year of his age.

SAPPINGTON.—In Baltimore, on Monday, August 12th, Dr. Thomas Sappington, in the eighty-fifth year of his age.

WARE.—In Cazadero, California, on Friday, July 26th, Dr. I. P. Ware, United States Army.

WATKINS.—In Moscow, Idaho, on Sunday, August 4th, Dr. W. W. Watkins, formerly of St. Louis, in the fifty-fifth year of his age.

Pith of Current Literature.

*Journal of the American Medical Association,
August 10, 1901.*

Results of Ovarian Surgery, with Further Reports upon Intra-implantation of Ovarian Tissue. By Dr. A. Palmer Dudley.—Since his first published report, the author has modified his method of operation in that, instead of severing the ovarian tissue completely from its ligamentous attachment and planting it in the centre of the fundus, after removal of the Fallopian tube, he splits the horn of the uterus and implants the ovarian structure, reduced in size to suit the occasion, but still attached to its own ligament. By this method the ovarian tissue is nourished by its own circulation until such time as collateral circulation shall give it a better supply. The proper nervous supply to the ovary is not cut off, and, should the ovarian tissue subsequently give trouble, it is within the cavity of the uterus where it can be quickly reached with a sharp curette and removed without danger to the patient.

Elimination of Peritoneal Infection and Prevention of Surgical Peritonitis. By Dr. John G. Clark.—The peritonæum has an enormous absorbing function, being capable of taking up from three to eight per cent. of the entire body weight in an hour. Minute solid particles are carried in an incredibly short time into the blood circulation by which they are quickly distributed to the abdominal organs and to the bone marrow. After the introduction of micro-organisms into the peritoneal cavity, there is a great decrease in their number within the first hour, both through their intraperitoneal destruction and through their rapid absorption into the general system where they are dealt with. There is, therefore, no possibility of limiting free infectious material to any part of the peritoneal cavity by mechanical means. The author believes that drainage as ordinarily employed is superfluous, or even dangerous, and that the rational method is to remove all possible débris and infectious matter by thorough irrigation, and then to leave one litre of a six-per-cent. salt solution in the abdominal cavity. To promote and hasten natural drainage this should be supplemented by an enema of a litre of salt solution given while the patient is well under anæsthesia and in the Trendelenburg posture. Under this plan the patient is greatly stimulated, shock is minimized or averted, the urinary excretion is greatly increased, and toxic matters are thus more easily eliminated without irritation to the kidneys or bladder, peritoneal infection is quickly eliminated while yet minimum in amount, thirst is alleviated or entirely prevented, intestinal peristalsis is promoted, and consequently tympanites is of less frequent occurrence, and the early action of the intestines evacuates infectious matter thrown out into this canal by the blood-vessels of the villi.

Primary Carcinoma of the Nasopharynx. A Table of Cases. By Dr. Chevalier Jackson.—The author seeks the wherefore of the rarity of this affection. Has its infrequency any bearing upon

the subject of irritation in the ætiology of cancer? Is radical operation ever justifiable?

Case of Nasal Sarcoma, with Remarks. By Dr. Dunbar Roy.

Report on a Case of "Epithelioma" Involving Tonsil, Faucial Pillar, Tongue, and Buccal Surface, with Treatment and Apparent Cure. By Dr. S. A. Oren.

American Medicine, August 10, 1901.

Expectant Treatment. By Dr. A. Jacobi.—The author writes of reliance on Nature, and of the importance of observing her work in the human frame.

Fusel-oil Poisoning, with Special Reference to the Copper-reducing Substances Eliminated in the Urine. By Dr. Thomas B. Fletcher.—From the study of the effects of the administration of fusel oil to dogs, and from the observations on two cases of fusel-oil poisoning, the author draws the following conclusions: (1) Fusel oil, when administered to animals, causes the elimination in the urine of combined glycuronic acid which reduces alkaline, copper, and bismuth solutions, and acts as a levorotator to polarized rays. (2) When taken by men it acts as a profound intoxicant, causing unconsciousness of several hours' duration. (3) In one of the cases it was followed by symptoms of hemiplegia. (4) In certain cases fusel oil is a profound blood destroyer and causes methæmoglobinuria. (5) In both cases it caused transitory nephritis. (6) In both patients a glycosuria lasting two or three days was produced. (7) In the two cases reported there was fairly conclusive evidence that combined glycuronic acid was present in addition to glucose.

Acute Dilation of the Stomach. By Dr. Julius Friedenwald.—In the author's case the acute dilatation took its origin in an attack of acute dyspepsia. In general, the ætiology of this affection is somewhat obscure, though Pepper and Stengel suggest that the immediate cause, in many cases, is spasm of the pylorus, due to an irritation of the gastric contents. The symptoms are the sudden and rapid distention of the stomach; pain, and absence of peristaltic movements; absence of vomiting and diarrhœa in the early stage, followed by intense and constant vomiting of very large quantities of greenish fluid, accompanied by great exhaustion. It is well to remember the possibility of the occurrence of acute dilatation in all cases of acute dyspepsia, and thus to empty the stomach quickly, either by means of some brisk emetic or by means of the stomach tube.

Two Cases of Vicious Circle, after Gastro-enterostomy. By Dr. Theodore A. McGraw.—The author asserts that the "vicious circle" may occur whenever the duodenum becomes permanently distended, even though the efferent limb of the jejunum offers an open passage to the ingesta. In all operations of this kind, therefore, an enterostomy should be added to the gastro-enterostomy in order that the duodenum may discharge its contents into the efferent portion of the jejunum. The "vicious circle" may also occur

from obstruction due to spurs, twists, bends, or other entanglements of the intestine. As the orifices of communication may, if made too small, contract and become obliterated, the opening should be made at least five centimetres in length. The effects of any resulting spur formation will be obviated by the entero-enterostomy. The safest and best way of operating is that by elastic suture.

Medical Notes, August 10, 1901.

The Condition of the Kidneys with Reference to the Employment of Diuretics. By Dr. Arthur R. Elliott.—Except in the case of the irritant epithelial diuretics, the entire class of diuretics may be said to exert their effect upon the urine by acting indirectly through the circulation. Owing to the necessity for sparing the kidneys all irritation, drugs given for diuretic purposes should act indirectly rather than directly, consequently the secretory diuretics are contraindicated in irritative and inflammatory renal conditions. In functional urinary disorders diuretics are mainly useful to overcome concentration and hyperacidity of the urine. To accomplish this, simple diluents and salines are best adapted. In acute nephritis saline diuretics are permissible throughout the entire course of the disease and exert a beneficial influence by increasing elimination and clearing the tubules of inflammatory débris. Subcutaneous saline infusion constitutes our most powerful eliminant in desperate cases. In chronic nephritis the cardiovascular diuretics are the most useful, owing to the fact that oliguria and dropsy are usually the result of circulatory failure. The dropsy under such circumstances, being of cardiac origin, may be benefited by cardiovascular stimulants provided the kidneys are not too badly damaged. Dropsy of purely renal origin is not amenable to favorable influence by diuretics. Although the morbid process in the kidneys may furnish us with our primary inspiration to diuretic medication, it is the condition of the heart and circulatory apparatus in most cases that determines the choice of an agent.

The Therapeutics of Subacute and Chronic Heart Diseases. By Dr. Thomas E. Satterthwaite.—In this paper the author endeavors to show that the idea of complete rest has given way to rest alternating with bodily activity; venesection to determination of the blood to the surface through resistant exercises and carbonated baths; hydrogogue cathartics have been replaced by stomachics, mild laxatives, and diuretics; heart stimulants by general nerve stimulants or sedatives, and nutrients, while drugs of the digitalis group are utilized chiefly for their diuretic action in renal complications, mainly parenchymatous nephritis or abdominal dropsy. Drugs of the digitalis group, including strophanthus, convallaria, and adonis, are always uncertain and, therefore, always dangerous, and should only be employed either when other remedies are inadvisable or in kidney or liver complications, or where we are merely endeavoring to prolong life.

Gouty Affections of the Kidneys. By Dr. Richard K. Macalester.

Uræmia and Its Differential Diagnosis. By Dr. S. D. Hopkins.

Medical Record, August 10, 1901.

The Propagation of Yellow Fever; Observations Based on Recent Researches. By Dr. Walter Reed.—The author does not believe that the enforcement of the most rigid hygienic regulations, such as we have heretofore known them, will prevent the propagation of this grave epidemic disease, provided it should again be imported into this country. He seriously doubts if we can longer class yellow fever with the "filth diseases." The author's valuable observations strengthen his belief that, substituting culex for anopheles, we have to deal with the same source of infection as that to which we now trace the malarial fevers—the mosquito.

Emphysema of the Antrum of Highmore in Young Infants. By Dr. Emil Mayer.—That so few cases of this affection are noted in the living is, in all probability, due to the fact that the mortality is greatest when this complication occurs, and also that, in the very young, the presence of localized pain is difficult to establish, as the little sufferer cannot indicate it. In all the reported cases the symptoms are the same, namely, fistula under the eye, usually discharging pus, ectropion, one-sided purulent discharge from the nose with foul odor, and eroded bone. Careful observation, especially in nasal diphtheria when the bacilli are persistent, may enable us to discover these cases and, by prompt attention, bring about recovery. Regarding treatment: incision, curetting, and thorough drainage will be followed by complete cure in the vast majority of cases.

The Selection and Sterilization of Muriate of Cocaine for Spinal Anæsthesia. By Dr. William C. Riley.—The author recommends that in the choice of cocaine hydrochloride one should select that form occurring in anhydrous, rather large, well defined, colorless, and nearly odorless crystals. As for sterilization, he recommends that sufficient of this salt be put into graduated vials or glass tubes as will make a two-per-cent. solution when the vials are filled to a given mark; the tubes are then to be maintained at a temperature between 145° C. and 150° C., in a dry sterilizer for from ten to sixty minutes. After this, the tubes are closed with sterilized rubber stoppers and kept until ready for use.

A Case of Primary Epithelioma of the Uvula. By Dr. Seymour Oppenheimer.—This case is interesting because of its rarity. Although the prognosis is necessarily grave, in the few cases that have been recognized early, and in which all the diseased tissues were removed, the favorable result of operation, for a time at least, would warrant a brighter outlook than has heretofore been given.

Multilocular Cyst of the Inferior Maxilla; Operation; Recovery. By Dr. J. A. Otte.

Boston Medical and Surgical Journal, August 8, 1901.

Scientific Research: The Indispensable Basis of all Medical and Material Progress. By Dr.

George Bagot Ferguson.—Noted in the *New York Medical Journal* of August 3d.

A Critical Note upon Clinical Methods of Measuring Blood Pressure. By Dr. William H. Howell and Mr. C. E. Brush, Jr.—The mean blood pressure as usually determined by means of the mercury manometer, corresponds with fair accuracy to the arithmetical means of the maximum and minimum pressures. A rise of blood pressure occasioned by an increased heart beat affects the diastolic pressure to a greater extent than the systolic pressure. A fall of blood pressure occasioned by vascular dilatation affects systolic and diastolic pressures equally. It is possible for the systolic and diastolic pressure to be affected in opposite directions. When using the Mosso apparatus, the authors recommend that all connections between the manometer and the sphygmomanometer be made rigid and inextensible. The fingers should be warmed before placing them in the apparatus, and, if the heart beats be so rapidly as to give an uncertain maximum, it is necessary to employ a spring recorder of some kind. The first results upon any individual are usually too high, owing to the psychical factor. In comparative observations the hands should always be at the same height to equalize the hydrostatic factor. It should be remembered that, in both men and women, there are periodical oscillations of arterial pressure.

The Relation of Bodily Mutilations to Longevity. By Dr. John Homans.—The author expresses surprise that so little has been written upon this subject. From his own experience, however, and from what has been written by others, the author concludes that, as a class, persons who have suffered amputations or other mutilations are not so likely to be long-lived as those who are healthy and have not been mutilated. By careful selection, however, many of the mutilated persons might be picked out who would be good subjects for life insurance.

The General Character of the Problems of Public Health Bacteriology. By Dr. Hibbert W. Hill.—In a very interesting article the author points out that the problems of the public health laboratory, in relation to disease, are essentially epidemiological and preventive. While primarily of the nature of applied science, they call for investigations, the scope of which is very wide, and which involves peculiarly the study of the sciences as well as of the art of bacteriology.

Intracranial Pressure after Head Injuries. By Dr. Walter B. Cannon.

Philadelphia Medical Journal, August 10, 1901.

The Bucco-antral Route in Neurectomy for the Relief of Tic Douloureux. By Dr. A. Rose.—The author modifies the method advocated by Fraenkel, in that, after incising the mucous membrane and periosteum covering the anterior wall of the antrum, he elevates the periosteum as high up as the infraorbital foramen, divides the nerve at this point, and opens the entire canal into the antrum. He enters a plea in favor of the extra-cranial resection of the nerve trunks in cases of

obstinate trifacial neuralgia, to be proposed as a test treatment always before such dangerous operations as are required for resection of the Gasserian ganglion are attempted. Permanent, or at least temporary, relief is obtained by this simpler and less dangerous method.

A Case of Tic Douloureux, with Successful Removal of the Gasserian Ganglion—with Photograph of the Patient. By Dr. Henry T. Williams.

Diagnosis and Prognosis of Heart Disease. By Dr. M. H. Fussell.—The author points out that while heart murmurs are signs of cardiac lesions that are never to be ignored, the mere presence or absence of an adventitious heart sound is of relatively small value in the diagnosis, prognosis, or treatment of heart disease. No accurate diagnosis or prognosis, and, consequently, no proper or efficient course of treatment can be arrived at unless the observer has availed himself of inspection, palpation, percussion, and auscultation. The diagnosis of a heart lesion must be based upon the size of the heart, upon its rhythm, upon the character of the first sound, and in some cases upon the pressure or absence of a murmur.

General Remarks upon Painful Affections of the Feet. By Dr. Frank E. Peckham.—The author mentions the good results which have followed the use of hot air and massage done by the patient himself, or by some member of the family who has been taught how to do it.

Report of a Case of Raynaud's Disease. By Dr. Benjamin F. Lyle and Dr. John E. Griewe.—The authors believe that there are two classes of cases: (1) Those cases in which the exciting cause acts temporarily, and in which, with the cessation of the cause, the symptoms likewise disappear; (2) those cases in which the cause (as yet of an unknown character) acts upon the peripheral vessels and causes changes in the calibre of the vessels, by a proliferation of the endothelium. Not only may Raynaud's disease show lesions of the extremities, but serious changes may occur in the internal organs as well.

The Lancet, August 3, 1901.

Address in Medicine. At the Annual Meeting of the British Medical Association. By James F. Goodhart, M. D., LL. D., F. R. C. P.

Some Surgical Lessons from the Campaign in South Africa. Address in Surgery, at the Annual Meeting of the British Medical Association. By Sir William Thomson, C. B., M. D., R. U. I., F. R. C. S. Irel.

Tubercle Bacilli in Cow's Milk as a Possible Source of Tuberculous Disease in Man. By Professor John McFadyean, M. B. Edin., M. R. C. V. S.—The author states that until he heard Professor Koch's paper he supposed that it was universally conceded that bovine and human tuberculosis were identical. In fact, he had thought Koch determined this point himself when he discovered that the human and bovine lesions contained bacilli that were identical in morphological, tinctorial, and cultural characters, and showed that the artificial cultures from both sources produced indistinguishable effects when

they were employed to infect a variety of animals.

Also the fact that tuberculin produced a specific reaction in tuberculous cattle, whether it was prepared from human or bovine bacilli, had seemed to him to establish the identity of the two organisms. He felt he must differ from the distinguished author of the paper, on the ground that one of the premises in his argument was not well founded and the others had little or no bearing on the question. The fact that human bacilli possessed low virulence for cattle, did not prove that the converse was true, since bovine bacilli had been shown to be highly virulent, not only to cattle, but to rabbits, horses, dogs, pigs, and sheep; and it was, therefore, reasonable to conclude that they were dangerous to man.

The second point, that there was such a fixed and constant difference in the virulence of bovine and human bacilli for cattle that the test could be relied upon to distinguish one from the other, had not been proved.

Moreover, the post-mortem examinations upon children by Dr. G. F. Sill and Dr. T. Shennan, at the Hospital for Sick Children in London and the Royal Hospital for Sick Children in Edinburgh, comprising in all 547 cases, showed that primary tuberculous infection of the intestines was not so rare, in England at least, as might be supposed from the statistics quoted by Professor Koch. In the one institution 29.1 per cent. and in the other 28.1 per cent., of all the cases of tuberculosis in children were primary infections of the alimentary canal. While direct proof of infection by milk containing tubercle bacilli in any given case was almost impossible, yet the fact that a great deal of milk sold did contain tubercle bacilli made it probable that milk was a very fruitful source for the spread of the disease. His experience and observation led him to believe that fully thirty per cent. of the milch cows in England were suffering from tuberculosis, but he did not believe that the milk from such cows contained bacilli unless the udder was diseased. The ratio of cows with diseased udders, he thought, was about two per cent. In the present state of public opinion on this subject, especially among farmers and dairymen, it would be impossible to stamp out the disease in cattle without greater expense than would be warranted, and he therefore advised that all milk should be heated to the point of destruction of tubercle bacilli before it was used.

What Administrative Measures are Necessary for Preventing the Sale to the Public of Tuberculous Meat? By Shirley T. Murphy, M. R. C. S. Eng., L. S. A.—After stating the extent of the tuberculous disease which different countries permit in cattle whose flesh may be sold for food, the author states that the establishment of public slaughter-houses, where all meat and cattle killed shall be subjected to inspection by a public officer before being sold, is the only real safeguard against the sale of meat unfit for food. This has been tried with success in several countries.

The Veterinary Work Done under the Milk Clauses in Manchester and the Difficulties Met with. By J. S. Lloyd, M. R. C. V. S.

The Relation of Alcoholism to Tuberculosis.

By T. N. Kelynack, M. D. Vict., M. R. C. P. Lond.—It may be stated that the relationship between alcoholism and tuberculosis has long been a disputed question.

It may be considered under three heads: (1) That alcoholism is antagonistic to tuberculosis; (2) that alcoholism bears no special relationship to tuberculosis; (3) that alcoholism definitely predisposes to tuberculosis.

The theory that alcohol is antagonistic to tuberculosis is based upon the old theories of the nature and origin of the disease, and now has very little support.

The second proposition, that alcoholism bears no special relationship to tuberculosis, and only exerts an indirect influence by lowering the vitality of the individual and placing him under conditions favorable to infection, has many adherents.

The view that alcoholism definitely predisposes to tuberculosis has in recent years received much support. In fact, it is believed by many that alcohol is an agent which renders the tissues specially prone to tuberculous infection, independently of its general effect upon vitality, surroundings, etc.

Experiments upon animals have shown that the alcoholized were more readily infected by organisms than the non-alcoholized.

The author analyzed ten fatal cases of alcoholic neuritis and found that eight, or eighty per cent., had evidences of pulmonary tuberculosis. Among 121 examples of common cirrhosis of the liver, doubtful and complicated cases being omitted, he found that in 28, or 25 per cent., tuberculosis had positively been present.

Legislation Suggested for Controlling and Eradicating Tuberculosis in Animals. By Professor Duncan McEachran.—The following suggestions are made in this paper:

I. Tuberculosis should be included in the list of contagious diseases. Tuberculous animals should consequently come under the provisions of the Contagious Diseases (Animals) Act; but the local authorities should have the power to allow the sale and movement of such parts of the carcass as are known not to carry contagion, such as hides, hoofs, horns, and hair.

II. All foreign animals admitted for breeding or dairy purposes, should be tested by the tuberculin test. Tuberculous animals should be prohibited from entering the country.

III. Tuberculin should be controlled, and none but qualified veterinarians should be allowed to use it, and all reacting animals should be reported, marked, and quarantined.

IV. All animals showing clinical symptoms of tuberculosis, especially disease of the udder, lungs, uterus, or bowels, should be killed at once, and all scrub and grade animals reacting should be killed within six months. Pure bred animals reacting may be bred from under Professor Bang's system, in quarantine for life.

V. All testing of other than imported animals should be by voluntary application for a test of the entire herd and the expense should be borne by the State. A reaction of 2° F. to be under-

stood to indicate tuberculosis, of 1.5° F. to be suspicious. Suspicious animals to be quarantined and re-tested in three months, unless clinical symptoms develop, when they should be at once condemned. The government to have the right to order a re-testing when considered necessary.

VI. Disinfection of premises should be ordered by special regulations, the carrying out of which should be superintended by government officials.

Tuberculosis Among Australian Stock. By G. Pentland.—The author reports that the number of cows killed in Australia for tuberculosis has decreased from 591, in 1894, to 229, in 1900, though the inspections have been about the same. The owners of tuberculous stock generally are pleased to get rid of the diseased stock without delay and without compensation.

On the Mortality Among Rats at the Cape Town Docks, which Preceded the Present Epidemic of Plague. By Alexander Edington, M. D., F. R. S. Edin.

Journal des praticiens, July 13, 1901.

Suppuration in the Upper Extremity.—M. Maclaure considers all the various forms of septic inflammation and suppuration from the fingers to the shoulder. A superficial panaritium is to be incised. If this measure is refused, warm antiseptic compresses are to be applied. Motion must be begun early to avoid ankylosis. Deep panaritias are to be incised early to avoid osteomyelitis. Osteomyelitis, primary or secondary, are to be laid wide open and sequestra removed. Antiseptic rather than aseptic measures are to be followed.

Therapeutic Use of Lecithin.—M. Huchard finds that lecithin increases weight, diminishes sugar in glycosuria, and fosters nutrition in cases of anæmia, chlorosis, tuberculosis, neurasthenia and in convalescence from serious disease. He gives five centigrammes (about three quarters of a grain) five times daily by the mouth.

Presse médicale, July 24, 1901.

Case of Intense Globinuria.—M. A. Chauffard and M. F. X. Gouraud report the case of a woman who showed, on urinary examination, the excretion of an enormous quantity of globulin. No casts, red, or white blood cells, were to be found on microscopic examination. The blood was normal in its relation of red and white cells, so the globulin did not arise from the hæmoglobin. The authors conclude that the case was one of hyperglobinæmia, the globulin in the urine coming direct from the plasma.

Gazette hebdomadaire de médecine et de chirurgie, July 11 and 14, 1901.

Clinical Observations upon a Case of Cerebral Syphilis. By M. Mantegazza.

Surgical Treatment of Cirrhosis of the Liver.—M. C. Mongour shows in his paper that the contentions of Chauffard and Hanot are undoubtedly correct, that hypertrophic cirrhosis of the liver is a form of defence of the organisms, an indication of a possible cure. The ascites of these

cases has a natural tendency toward cure. In the atrophic form of the disease, however, the ascites does not tend to disappear, and it is in these cases, that fixation of the omentum is advisable. The author's statistics embrace seventeen cases, which terminated as follows:

Death in a few hours or a few days, five cases; not ameliorated, three cases; some improvement, four cases; cure, five cases.

July 25, 1901.

Tuberculous Rheumatism.—M. Antonin Poncet describes under this name, and that of pseudo-rheumatism of bacillary origin, these cases of tuberculous arthritis in which tuberculosis of other organs can be demonstrated. In all his cases, inoculation experiments made from the fluids in the joints, were positive in their reactions.

Centralblatt für Gynäkologie, June 29, 1901.

The Treatment of Pruritus Vulvæ.—Dr. L. Siebourg says the patient must be instructed above all to stop scratching, and to assist in the enforcement of this rule; her nails must be kept short. The affected part must be washed at least twice daily, for five minutes each time, with soap and cold water, preferably after each urination. A salve is given the patients, who are instructed to keep it with them always to avoid the necessity of scratching.

Rhagades are touched with the silver nitrate stick. Chronic cases should be treated with salicylic acid and resorcin in ointment.

July 6, 1901.

On Zestocausis.—Dr. H. Fuchs thinks that steaming of the uterine cavity is useful in hæmorrhages at the menopause; and yet he regards it as somewhat dangerous for other bleedings and believes that it could be spared from the armamentarium.

Radical Operation for Utero-vaginal Cancer.—Dr. A. Mackenrodt describes a new operation which involves the clearing out of the entire pelvic contents. The operation is performed entirely by way of the abdomen, or by the combined route. It can be performed extraperitoneally. It has been shown to be not incompatible with life; but it is a terrifying operation. The author describes the specimens thus secured as "monstrous."

Centralblatt für Chirurgie, July 6, 1901.

Topography of the Vermiform Appendix.—Dr. P. Müller finds that the appendix arises from the cæcum at the point where the three longitudinal bands of the colon (the tæniæ) meet the cæcum. It is so constant that, despite all adhesions or exudates, it can always be found by taking the broadest of the three bands as a guide and following it down to the cæcum. The appendix can thus always be removed if it is deemed advisable or necessary.

July 20, 1901.

Retrograde Œsophagoscopy.—Dr. C. Hofmann speaks in the most encouraging manner of the use of the Œsophagoscope. In doubtful cases

of carcinoma, bits of the tumor can be removed by a suitable forceps for the microscopic examination. In cases in which a gastrostomy has been performed, the use of the instrument by passage through the stomach into the œsophagus is specially valuable.

[The remainder of the number is taken up by the report of the Thirtieth Congress of the *Deutsche Gesellschaft für Chirurgie*.]

Münchener medizinische Wochenschrift, July 16, 1901.

A Crystalline Product of Immunity. By Dr. H. Büchner and Dr. L. Geret.—A preliminary communication.

Experiences in Infant Feeding. By Dr. F. Siebert.

Tenacity of Scarlatinal Infection.—Dr. Felix Lommell reports an instance in which a second child acquired scarlet fever 133 days after the formalin disinfection of a room which had been occupied by a child ill with the disease.

Combined Empyema of the Accessory Facial Cavities. By Dr. P. Braunschweig.

Case of Congenital Sternal Luxation of the Clavicle. By Dr. Klaussner.

Redressement of Severe Kyphoses. By Dr. A. Schanz.

Deutsche Medizinal-Zeitung, July 1, 1901.

Treatment of Nervous Insomnia.—Dr. Müller de la Fuente advises a meal two hours before retiring, preceded by a light, digestible supper. Coffee and tea are not allowed in the evening, but beer is to be given. Plenty of exercise in the open air is to be advised, bicycling, tennis, etc. Sleeping during the day is forbidden. Books may be read in the evening, but none of an exciting or erotic character. The bedroom must be cool, the bedclothes light, and the pillows must be preferably hard. A Preissnitz pack may be given and sulphonal may be administered if necessary.

July 4, 1901.

Treitz's Hernia and Its Significance.—Dr. E. Herszky reports a case of hernia by means of Treitz's muscle (so-called) in which the patient also suffered from an acute and severe diabetes. The author accounts for the latter circumstance by the assumption that the hernial mass pressed upon the solar plexus and the pancreas and thus evoked a disturbance of the latter organ, ending in a diabetes. [The case is interesting, as the duodenojejunal fossa is a rare seat of a hernia.]

Electric Resistance. By Dr. Graüpner.

Riforma medica, June 25, 1901.

The Determination of Glucose in the Urine by Means of Orthonitrophenylpropionic Acid. By Guglielmo Ruini.—The author has used this reaction with success for two years, and recommends its adoption in clinical laboratories. The reagent used is a five-tenths-per-cent. solution of orthonitrophenylpropionic acid in ten-per-cent. soda solution. Five cubic centimetres of this reagent are boiled with ten drops of the urine to be tested; if the liquid becomes dark blue, the urine contains at least five

tenths per cent. of glucose, or an equivalent quantity of reducing agents. The reagent is said to remain unchanged, though kept indefinitely, and the presence of albumin has no influence on the reaction. Smaller quantities of glucose give a green color, and excessively large quantities give a bright red color. It is usually necessary to boil the reagent for over half a minute, according to the color changes observed. In order to define the reaction more sharply the author added chloroform to the cooled green liquid, and shook the test tube well. On standing the chloroform separated as a beautifully colored pale to deep-violet layer, while the supernatant liquid remained slightly green or returned to yellow.

By comparing the color reaction obtained with this test, with the quantitative results of Fehling's and of the fermentation tests, this author was able to construct a table which showed the number of drops of urine necessary to obtain a certain shade of violet in the chloroform. In this manner he established a rapid clinical method for estimating the amount of glucose in the urine.

June 26, 1901.

The Technique of Deviation of the Portal Blood. By Dr. Schiassi.—On the day before the operation, the abdomen is tapped to allow the accumulated ascitic fluid to escape. After rigorous disinfection of the skin of the abdomen, an incision 15 to 20 centimetres long is made along the prolongation of the right mid-clavicular line, beginning with the border of the ribs and extending toward the iliac fossa. A second incision, at right angles to the first, begins at the middle third of the first, and extends toward the epigastrium to within a few centimetres of the linea alba. The skin and muscles are divided and a large triangular flap of skin, muscles, and fasciæ, with its base to the umbilicus, is separated from the peritonæum. This flap is temporarily reflected down and held in place by artery clamps. The peritonæum is now incised in the usual way between two forceps, and the liquid allowed to escape. The opening is then enlarged along the lines of the skin incisions; the abdominal organs are now examined to determine the indications for further intervention. The bulk of omentum is then drawn out extraperitoneally and sutured to the parietal peritonæum by sero-serous interrupted sutures, avoiding compression of the omental vessels. The bulk of the omentum is allowed to remain extraperitoneal, and is covered with gauze saturated in bichloride solution, in order to destroy the endothelium and to favor adhesions. The omental margin is then distended over the surface of the peritonæum and fixed here and there by a suture. The muscle-skin flap is then replaced and the wound sutured without leaving drains. Drains in these patients are frequent means of infection as seen in a case reported by Weir. The author emphasizes the advantages of placing the omentum between the muscles and the peritonæum, not between the muscles and the skin, as has been done by some. The latter method favors the occurrence of herniæ, while the former is anatomically better, for the omental vessels can easily anastomose with the mammary and epigastric veins which originate principally in the submuscular layers. In addition an

anastomosis may be secured with the veins of the gall-bladder by suturing this organ to the parietes when possible.

July 1, 2 and 3, 1901.

A New Method for the Radical Cure of Umbilical Hernia. By Dr. Ferdinando Gangitano.—The incision is made vertically about 2 to 3 centimetres to the left of the circumference of the navel and penetrates through the fibres of the left rectus abdominis. The peritonæum is opened along the incision, and a pellet of gauze is introduced to protect the intestines. The sac is then turned into the peritoneal cavity like the finger of a glove, in such a way that the inner surface of the protrusion comes into the wound. Adhesions between sac and contents are separated with the fingers. The umbilical ring is then closed as follows: With a needle threaded with a stout silk ligature he transfixes the right superior quadrant of the margin of the ring, at a distance of one centimetre from its edge, then passes the needle through the peritoneal coat at the apex of the introverted sac, and then through the ring at its opposite quadrant. Half a centimetre from this point a second suture is inserted, then a third and a fourth. While the sac is held introverted by the index finger an assistant draws and ties the sutures in the ring, one by one, gradually displacing the finger in the sac, and finally closing the ring hermetically. Three tiers of sutures are now used to close the abdominal wound. The author has used this method in eleven cases with very good results. The herniæ were of small or moderate size.

Vratch, June 23 (July 5, New Style), 1901.

In Memory of V. A. Manasseine. By Dr. M. O. Schaikevitch.—A memorial address.

On the Origin and Serum Treatment of Malignant New Growths. By Dr. G. M. Vlaieff.—The results of modern investigation point toward the infectious origin of new growths. The testimony, which is gradually accumulating, and supports the infectious theory of malignant new growths, includes cases of inoculation during autopsies and operations, the development of tumors in animals into which small pieces of malignant growth have been introduced, and the presence of degenerative changes in the internal organs of patients suffering from cancer. Other, clinical, evidences also bear out the infectious theory, for in patients with cancer one notes frequently a rise of temperature and an increased pulse rate, increase in the size of the liver and spleen, and the appearance of albumin in the urine—a train of signs that corresponds to the conditions observed in most infectious diseases.

The specific micro-organism of malignant tumors is as yet not known, but the bulk of evidence seems to show that certain blastomycetes are the cause of these formations. A number of observers have succeeded in obtaining pure cultures of these blastomycetes from tumors, and some have even produced new growths of epithelial or endothelial character in animals inoculated with these cultures. The author performed a series of experiments with pure cultures from cancer patients upon a number of guinea-pigs. He found that, histologically, the tumors thus

produced resembled granulomatous growths. In addition, he obtained as the result of a series of experimental inoculations in about five hundred animals of various species, a serum which he used to protect inoculated rats and monkeys. He found that the serum thus obtained exercised a protective influence against cancer. The animals that received an occasional injection of protective serum died three or four months later than the unprotected, when the same dose of pure culture of blastomycetes was injected. The autopsies showed the development of adenoma of the cylindrical type in these animals. Rats and monkeys that were treated with the protective serum in a systematic manner not only did not develop any tumors after inoculation, but gained in weight and increased in strength. The serum must be used before the infection has begun to localize in the lymphatics. (*To be continued.*)

The Histological Changes in the Post-partum Uterus in Cases of Acute Streptococcus Septicæmia with and without the Use of Antistreptococcus Serum. By Dr. I. I. Klitine.—Experiments on rabbits showed that the changes in the uterus were identical whether the streptococcus culture was introduced directly into the cavity of the organ or into the animal's blood. They consisted in the formation of areas of necrosis in the uterine mucous membrane, the areas being filled with streptococci. The reaction of the tissues in the shape of granulation was but weakly expressed. In cases of early post-partum infection the areas of necrosis were small and isolated. In cases where the infection occurred later, there were areas of glassy degeneration of the muscle fibres. When antistreptococcus serum had been used the subinvolution of the uterus took place much more rapidly and regularly. The granulation reaction took place more strongly, and very few streptococci were seen in the tissues. The germs presented the so-called involution forms and lost their original virulence. These effects of the serum were observed in both early and late puerperal infection. The author concludes that the serum renders the cells of the body more resistant to infection by streptococci.

The Therapeutic Effects of Blue Electric Light. By Dr. A. V. Minine.—The chief advantage of blue electric light lies in its action on the vasomotor nerves. The action of blue electric light is diametrically opposite to that of white light from ordinary incandescent bulbs. Blue light produces an anæmia of the parts exposed, while white light causes the tissues to be filled with blood. Blue light has a very marked anæsthetic effect, and the author even employed it instead of cocaine in suturing wounds and in incising abscesses, etc. Not only does blue light produce complete painlessness of the parts, but it also favors the healing of wounds by first intention. The removal of stitches can be accomplished without any pain under blue electric light. If a contusion is exposed to this light, the occurrence of ecchymosis, or of a hæmatoma, is prevented. Burns and scalds are very advantageously treated with blue light, for under its influence the lesions heal rapidly and painlessly with the for-

mation of dry scabs, without the use of any local applications. In peliosis rheumatica white electric light produces certain changes in the eruption. The margins of the spots grow paler and the centre, which rises in the form of a minute cone, becomes yellow. This yellow color seems to depend upon the presence of pus; if so, this would be another fact in favor of the infectious theory of purpuric diseases. Blue light causes the spots to wrinkle and grow smaller; to turn red for a short time, and finally to pale and disappear. The general condition, the appetite, sleep, etc., are also markedly improved by this treatment in purpuric patients. The best combination for cases of purpura and peliosis is, first, a fifty-candle white lamp, to be followed in a few minutes by a twenty-five-candle blue one. This treatment does not prevent recurrences of the eruption, but it shortens all the stages of the disease.

A Case of Hysteria in a Man. By S. I. Syrkine-Schklovsky.—The author reports a typical case of hysteria, characterized chiefly by attacks of hemiplegia and hemianæsthesia, together with aphasia and dysphagia.

The patient was a strong and healthy-looking peasant boy, aged eighteen years. Recovery took place under the usual methods of treatment. The patient was one who had not come under the influences of civilization, and the cause of the malady could not be attributed to this factor as is so often done.

June 30 (July 12, New Style), 1901.

On the Origin and Serumtherapy of Malignant New Growths. By Dr. G. M. Vlaieff (*concluded*).—The author's investigations, which included experimental inoculation of animals with cancer and the preparation of immunizing serum against malignant growths, led him to attempt in man the cure of cancer with serum. He used this serum in sixty cases of cancer, including carcinomas of the breast, cheek, nose, tongue, brain, lungs, liver, peritonæum, ovaries, uterus, etc. He divides the patients into three classes: (1) Those in whom the tumor has not yet become ulcerated, but where the neighboring lymph-nodes have become enlarged; (2) patients with large tumors and metastases in the neighboring organs and lymph-nodes; (3) patients with severe cachexia and metastases in various parts of the body. He quotes a number of illustrative histories, and concludes that serum treatment gives a means of combating cancer only in those instances where it is applied at the very outset of the disease, when the blood-forming organs have not yet been affected, and when there is not as yet a general infection. In such cases complete cure may be hoped for, if surgical treatment is at the same time applied wherever possible. In cases in which the disease has progressed too far, the serum diminishes the patient's suffering, improves his general condition, and prolongs his life.

The author usually injected at first ten cubic centimetres of a serum prepared by immunizing geese and asses by injecting into these animals successive doses of pure culture of blastomycetes

obtained from malignant tumors in man. At the site of the injection, usually the skin of the thigh, there appeared at first a swelling which spread so as to increase the diameter of the limb by from five to ten centimetres. The reaction lasted for about forty-eight hours, and then the swelling disappeared. At the time of the local reaction the growth itself grew larger and the skin over it became reddened, but all these signs disappeared at the close of the reaction, and the tumor grew smaller from that time on. Lymph-nodes that were merely enlarged and not yet affected by metastatic growth became normal in size, and those that were already affected became smaller. A slight rise of temperature was noted at the time of injection; usually not more than 1° C. The injections were repeated at intervals of about six days, and the dose ranged from five to ten cubic centimetres. If the tumor is not large, not ulcerated, and has not yet spread by metastases, it grows smaller and its growth is arrested completely, or it becomes cystic or calcified. In other cases, where the tumor is larger, etc., the growth is impeded by the serum. The general condition improves and the hæmorrhages cease, for the serum increases the coagulability of the blood. In three cases the serum of geese produced an urticarial rash.

As the result of his studies, the author concludes that blastomycetes (*Saccharomyces hominis*) play a rôle in the production of malignant tumors, and that serum obtained from immunized animals that have received injections of pure cultures of these organisms, acts as a curative agent in cancer when the disease is localized and when ulceration has not yet taken place.

On the Question of the Differentiation of True and False Diphtheria Bacilli. By Dr. I. A. Schwab.—The author's experiments have convinced him that in addition to morphology and to virulence in animals, the reaction of the culture medium in which the germs grow and their behavior with Neisser's stain are the most important diagnostic features of the true diphtheria bacillus. He recommends that the reaction of the medium be tested with titration, using phenolphthalein as indicator, about forty-eight hours after inoculation of the culture. The reaction of the medium must, of course, be tested quantitatively each time before the culture is made. True diphtheria bacilli produce a considerable increase in the acidity of the medium, while pseudodiphtheria bacilli produce either alkali, or very small quantities of acids. Thus the increase in acidity on the second day in cultures of Klebs-Loeffler bacilli is given as 10.8, while the increase in cultures of the false diphtheria germ under the same condition is given as 1.3 in the author's table. He emphasizes the distinction between pseudodiphtheria bacilli and the non-virulent true bacilli, the latter being, except as regards virulence, perfectly identical with the true germ. It is to the confusion of these two varieties that the deviations from the rule in the titration test and in Neisser's test-stain are attributable.

Staraya Roossa. By Dr. I. I. Michailoff.—An account of hydrotherapeutic treatment in Staraya Roossa. (*To be continued.*)

Letters to the Editor.

NODULAR CANCER OF THE LIVER SECONDARY TO CANCER OF THE DUCTUS COMMUNIS CHOLEDOCHUS.

1227 O STREET, N. W.,
WASHINGTON, July 19, 1901.

To the Editor of the New York Medical Journal:

SIR: The following interesting case I should like to put on record for the benefit of the bibliographers: The patient was admitted into the Metropolitan Hospital, Blackwell's Island, New York, in a state of unquestionable impending *exitus letalis*. It was positively determined by physical examination that the liver was very much enlarged and the patient very much jaundiced, but, as is often the case, no unevenness of the liver surface was observed. A brother of the patient had died from a similar condition, and this fact would make one suspicious of hereditary neoplasm. Cachexia, etc., were sufficient, however to warrant a diagnosis of cancer of the liver.

It is interesting to note, especially in consideration of the subsequent autopsy findings, that a colleague "believed" that he obtained a "hydatid fremitus." It is true that the colleague had never yet experienced a hydatid fremitus, and, although I was enthusiastically looking for a case of echinococcus, of which fact the colleague was aware, I did not recognize a hydatid fremitus; in fact, I distinctly negatived his belief, which had probably been suggested by his palpating one of the cysts found on autopsy, which, to his credit and to my discredit (?), I did not diagnosticate *ante mortem*. The symptomatic previous history of the case could not be obtained.

External examination at the autopsy revealed pronounced jaundice. The whites of the eyes were very yellow. On the surface of the abdomen was a black ink line, intended evidently as an outline of the liver. Its curve began on the left, one inch to the right of the nipple line, and extended to within an inch and a half from and above the umbilicus, passing farther to the right as a slight arc whose chord was about at right angles to the median line, and then upward to the border of the lowest rib.

Section of the liver showed that it was decidedly yellow in color. All over its surface were nodules measuring from half an inch to four inches and three quarters in diameter, which were elevated above the surface about an eighth of an inch. Some were reddish in color and some were yellowish; there were also some greenish cystic bodies. On section of these nodules, some were seen to be pale yellow inside, while others were vermilion. They were firm in consistence and were covered with a smooth fatty gloss on the cut surfaces. On opening the superficial green cysts, there exuded a greenish fluid, very offensive in odor and of almost viscid consistence. Examination of this fluid revealed cancerous tissue in particles. The gall-bladder contents were also of a greenish color.

Examination of the kidneys showed the presence of icterus; they contained some very small nodules that were not examined microscopically.

Examination of the small intestine and of the ductus communis choledochus revealed a tumor, firm

in consistence, which, on incision, presented a yellowish appearance and some reddish streaks, and corresponded in general, macroscopically, to the nodules found in the liver. The tumor was of about the size of a man's fist and was enclosed in a capsulated cover. It involved the ductus communis choledochus, the ductus pancreaticus, and the common duodenal orifice, as well as a portion of the pancreas, and it obliterated the normal anatomical conditions to such an extent as to make the ducts scarcely recognizable by probes, etc. There was not even a sign of echinococcus complicating the condition, although, on account of my colleague's enthusiasm, I made an exhaustive examination of his cysts.

It is interesting to quote Strümpell in this connection: "If we are dealing with numerous cancer nodules of the liver without being able to find the primary lesion in some other organ, primary cancer of the gall-bladder or of the gall-duct comes into consideration. Especially in those cases of liver cancer with marked early and long-lasting icterus, without determinable cancerous formation in other organs, we should think of primary cancer of the bile-ducts."

It is also interesting to note that the literature on the subject shows few cases in which verified echinococcus fremitus was to be found. I intentionally avoid the less descriptive term "hydatid fremitus."

I take this opportunity to add that, during a period of eighteen months (between June, 1897, and December, 1898), in spite of the fact that careful supervision was exercised in several hundred autopsies done by myself and colleagues at the Metropolitan Hospital, not one case of echinococcus of any organ was found, a substantiation of its rarity from a hitherto unpublished source, I believe.

H. O. H. SOMMER, M. D.

SEXUAL INTEMPERANCE.

GLOVERSVILLE, N. Y., July 22, 1901.

To the Editor of the New York Medical Journal:

SIR: I think Dr. Drennan and her critics all miss making a proper definition of what constitutes abuse of the sexual function. It is not fair to compare man with animals, for there is added to men animality, the thing we call love, and only mankind love with both soul and body. To forbid the sexual act except as a means of propagating the species would indeed be to lower man to the level of the brutes, and, on the other hand, to perform the act for mere self-gratification is only a moral and mental onanism.

I would define the proper use of the sexual act as a mutual expression of holy and all-absorbing love and affection "when face to face and heart to heart are pressed," when both husband and wife yield to each other because it is the crowning act of love for each other, and just so far as the act departs from this ideal it tends toward abuse.

The man who but once in his life approaches a woman with the sole view of propagating his species is acting as do the beasts of the field. The man who indulges at the expense of his wife's health or comfort or with her passive endurance is guilty of abuse such as Dr. Drennan correctly imagines, but concerning which she incorrectly argues. Given *love*

and *mutual* enjoyment, and there will be no abuse, for the same love that draws husband and wife irresistibly together will hold them apart at improper times and for good reasons.

I think Dr. Drennan will agree that I have drawn a sufficiently strict line of demarcation between a proper gratification of a natural desire and its unseemly use.

WILLIAM C. WOOD, M. D.

WOMEN PHYSICIANS IN TEXAS.

Galveston, Texas, August 3, 1901.

To the Editor of the New York Medical Journal:

SIR: In your April 27, 1901, number I note a communication from Dr. Helen MacMurchy on Hospital Appointments; Are they Open to Women? In the Medical Department of the University of Texas women are admitted on the same terms as men. There are now two women holding appointments in the school and hospital—Dr. Charlotte M. Schaeffer, last year pathologist to the John Sealy Hospital, now demonstrator of histology and embryology; the other, Dr. Ella Devlin, resident interne in the John Sealy Hospital.

JOHN T. MOORE, M. D.

Book Notices.

Infant Feeding in its Relation to Health and Disease. By LOUIS FISCHER, M. D., Attending Physician to the Children's Service of the New York German Poliklinik, etc. Containing 52 Illustrations, with 23 Charts and Tables, mostly Original. Philadelphia: F. A. Davis Company, 1901. Pp. viii-359.

As the people of Thebes hoped for a solution of the riddle of the Sphinx, so the pædiatrists, and with them the host of general practitioners, are working and praying, watching and waiting for an Œdipus who shall solve the problem of infant feeding. And, yet, it is not the terrifying gaze of a mythic monster that greets these workers—nothing but the appealing, inquiring eyes of babyhood and motherhood.

The history of the science and art of infant feeding, like that of most other arts, may be traced to the remotest antiquity, but it is only since the concentration of the population of the world in cities and since the era of "strenuous life" that artificial feeding has become a problem of vast importance for the human race. It is strange that more manuals of this kind have not appeared.

The modern history of infant feeding is usually said to begin with the mixtures of Biedert and Meigs. The first attempts at preparing an infant food resembling as nearly as possible the milk of a healthy mother were simple mixtures of cream, whey, milk, cereals, etc. Later came sterilization, pasteurization, the more elaborate percentage systems, the laboratory milk with its "centrifuged" products, and the flood of proprietary infant foods. Finally, within a year or two, a reaction has set in against the ultra-elaborate and artificial methods of milk modification, and a movement has arisen for simpler and more natural products.

The volume before us was written by a man whose

years of experience and study in this field give him a right to speak with authority on the subject of infant feeding. The opening chapters are devoted to a brief sketch of the anatomy, physiology, and chemistry of the infantile digestive tract. The chemistry of milk and the bacteriology of the infant's intestine are next considered, and the theoretical portion of the book closes with a brief chapter on colostrum, "witch's milk" (the secretion of milk from the mammary glands of newly born infants), and lactation in men. Immunity from contagious diseases in breast-fed infants, as compared with bottle-fed babies, is emphasized by references to the latest researches on this question. The subject of breast milk is next dealt with in all the bearings of this theme, including the diet of the nursing mother, wet-nurses, and weaning. The importance of the infant's weight as a standard of comparison and as a test for the efficiency of any method of feeding is properly brought out. The tables throughout the book show a great deal of care and ingenuity in summing up facts and figures, and the table of properties of human and cow's milk impresses us as the best tabulated statement of the subject we have ever seen.

In the chapter entitled Raw Cow's Milk the author gives his personal views on the mooted questions of infant feeding. These may be summarized as follows: The unfavorable results (scurvy, rickets, etc.) obtained by the use of sterilized or pasteurized milk and of all kinds of artificial concoctions imitating breast milk are due to the lack of certain elements which can only exist in raw fresh milk, and are destroyed by boiling. "On boiling, the change taking place is simply due to the coagulation of the globulin, or proteid molecule, which splits away from the inorganic molecule, and thus renders it, as to iron and fluorine, unabsorbable, and, as to the phosphatic molecule, unassimilable. This is the change that is so vital, and this only takes place when milk is boiled. It is evident that children require phosphatic and ferric proteids in a living form, which are only contained in raw milk." The author concludes that raw cow's milk, properly diluted according to age and digestive capacity, is the ideal substitute for mother's milk, provided it is uncontaminated by germs. The only way to secure this freedom from bacteria is to look after every detail of milking and transportation, so that an aseptic milk is obtained. That this is possible has been shown by Baginsky, of Berlin, and by a number of dairies in this country. The author does not advise the dextrinization of food for healthy children, but only for feeble, ill-nourished, and weakened infants.

The remaining chapters are devoted to cow's milk and the various methods of modifying the same; to various methods of feeding, including the diet of children confined in incubators; to analyses and modes of employment of various infant foods; to feeding in intubation cases, to the stools as indices of the effect of particular forms of diet in infants; and to such pathological conditions as result from improper feeding. The appendix contains a very serviceable dietary consisting of about seventy-five formulas for the preparation of various foods, drinks, etc. for infants.

The book is full of practical information and gives a thorough review of the entire subject of infant

feeding from the modern point of view. It should be in the hands of every one who supervises the feeding of babies.

First Aid to the Injured Ambulance Drill. By H. DRINKWATER, M. D. Pp. 104. New York: Macmillan Company, 1901.

The appearance of a booklet on first aid to the injured is always welcome and commendable, when the efforts of the author have resulted in tersely presenting this subject, as in the compendium before us. So eminently practical is the book in all other respects, that we regret to note the ever-recurring error of according pressure the third place among means of arresting hæmorrhage, whereas in actual good professional or lay practice, it should always be first.

By the addition of essential anatomical and physiological data, elucidated by the simplest of illustrations, the narration of otherwise barren facts has resulted in the creation of a useful, readable booklet.

Urinary Diagnosis and Treatment. By JOHN W. WAINWRIGHT, M. D., Member of the American Medical Association, etc. Chicago: G. P. Engelhard & Company, 1901. Pp. 140. [Price, \$1.]

In this little volume the author gives a good synopsis of the methods of urinary examination and adds to this the data necessary to make a diagnosis from the abnormal elements found. A few words as to treatment are also added. While what the author says is correct enough, and will not be denied by competent authority, it is nevertheless true that improving the urine does not alone cure the patient. Not that the contrary is stated by the author, but this impression is occasionally given. We cannot see that the book serves a very vital purpose except as a time-saver. It is well illustrated, but the paper and printing are not above the average.

Hygiene and Public Health. By LOUIS PARKES, M. D., D. P. H. (Lond.), Lecturer on Public Health at St. George's Hospital Medical School, etc., and HENRY KENWOOD, M. B., D. P. H., F. C. S., Assistant Professor of Public Health at University College, London, etc. With Illustrations. London: H. K. Lewis. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. xix-732. [Price, \$3.]

It is with pleasure that we note the appearance of the sixth edition of Parkes's "Practical Hygiene," the authorship, however, having been augmented by the addition of Mr. Henry Kenwood. But we observe with regret that, in the authors' preface, they state that "the book is more especially designed for those members of the medical profession who are studying for the various public health diplomas." Even Sir William Crookes deprecates this aim of so many authors of scientific books of genuine merit, and it seems rather a pity that works of a wide scope cannot be constructed without this end in view. The chapter on sanitary law and administration, although much condensed, is especially adaptable to the class included in the foregoing quotation, for therein embodied we find most of the important laws of the local government boards, and some of these

acts make interesting reading, although many of them, it is safe to say, are not carried out to the letter.

In the chapter on water the authors draw particular attention to the fact that a water cannot be judged alone by its chemical analysis, but must be compared with the natural water of the same district. The chapters on sewage disposal, air, and ventilation are most complete. The same can be said of the disposition of the subjects of climate, clothing, food, etc.

It is gratifying to note that cancer is ascribed to a parasite, which Bra's work and the work at the Buffalo laboratory have so lately confirmed. The chapter on disinfection contains many points of interest, and in the chapter on statistics the authors point out the errors prevalent in many of the data obtained, and further insist that "spot maps are not often of much value for the purpose which they are designed to subserve."

The volume, although distinctly adapted to English purposes, embodies a most complete treatise on the subject of hygiene.

Leitfaden der Therapie der inneren Krankheiten mit besonderer Berücksichtigung der therapeutischen Begründung und Technik. Ein Handbuch für praktische Aerzte. Von Dr. J. LIPOWSKI. Berlin: Julius Springer, 1901. Pp. xxii-236.

This book was written as a manual for practising physicians. It presents nothing novel, but it is conservative in its suggestions, and has the additional value of instructing its readers in various methods of preparing certain foods for the sick. The reviewer believes that special booklets like this on therapeutics have no reason for their existence, because the question of the treatment of disease is usually well presented in almost all text-books on general medicine, and in some much more in detail than in this book. In fact, the fault of this book is its incompleteness, which should not be found in a work on a special subject.

A Treatise on Appendicitis. By GEORGE RYERSON FOWLER, M. D., Professor of Surgery in the New York Polyclinic, etc. Second Edition, Revised and Enlarged. Philadelphia and London: J. B. Lippincott Company, 1901. Pp. 7 to 235. [Price, \$2.50.]

The appearance of a second edition of this treatise is most acceptable, for the original volume was a pioneer in its field and received extensive perusal in America. A further tribute to its value was reflected by its subsequent translation into German, concerning which the author is modestly silent.

The additions embrace two chapters bearing on newer pathological data and technical improvements. In the latter there is evinced a liberal consideration of the merits of various operations, yet we note the omission of two worthy innovations, Weir's addition to McBurney's incision and the incision of Kammerer.

Essentially surgical, as the author rightly views appendicular inflammation, yet he offers to the practitioner in Chapter IX, on differential diagnosis, much needed aid and criteria in interpreting the kaleidoscopic features of the disease. Thus rein-

forced, this work is once more in a position to compete with its numerous contemporaries.

Atlas and Epitome of Ophthalmoscopic Diagnosis.

By Professor Dr. O. HAAB, of Zurich. Authorized Translation from the Third Revised and Enlarged German Edition. Edited by G. E. DE SCHWEINITZ, A. M., M. D., Professor of Ophthalmology in the Jefferson Medical College, Philadelphia, etc. With 152 Colored Lithographic Illustrations. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 3 to 85.

An English translation of the first edition of Haab's *Atlas* appeared in 1895, and during the following spring received in these columns warm commendation, together with some friendly criticism of the coloring of the lithographic illustrations as compared with those of the German edition. It is a pleasure to note in the book now at hand that the criticisms then made are no longer applicable, but that the pictures present brilliancy and life-likeness of coloring.

Several changes may be noticed. The translation of the German text into English has been made by a different writer and, while it is less terse and concise, it is much smoother and pleasanter reading. Occasional interjected comments by the American editor have also been freely made. The number of illustrations has been considerably increased, and several of those in the first edition have been advantageously replaced by others which depict the same subject. In the second German edition a notable departure was made in the introduction of a number of plates to depict normal and pathological conditions as seen under the microscope, with the intent that they might be explanatory of the clinical pictures presented. These have been retained in the present edition, to which have been added several new pictures of pathological conditions of the fundus, each one of which is well chosen and delineated. Dr. de Schweinitz has also inserted two additional plates in the American edition, showing angioid streaks in the retina and the ophthalmoscopic appearances in arteriosclerosis, but by some oversight mention of them has been omitted in the list of illustrations.

These additions have made this atlas more than ever a meritorious work of art, which compares favorably with other atlases devoted to the same subject, and it is more valuable than many of the others because it is of a size better fitted for common use.

An Index of Symptoms as a Clue to Diagnosis. By RALPH WINNINGTON LEFTWICH, M. D., Late Assistant Physician to the East London Children's Hospital. Second Edition. New York: William Wood & Company, 1901. Pp. xvi-267.

The new edition of this book shows considerable revision and enlargement of the original. The book is unique, useful, and of convenient size and form. Its purpose is well indicated in the author's preface: "The physician, in endeavoring to make a diagnosis, seizes first upon a few prominent symptoms . . . he then looks carefully for further symptoms . . . Should he conclude that no disease with which he is familiar is consistent with the particular grouping of symptoms in the case before him, he naturally refers

to his books. Here he meets with a fresh difficulty, for . . . he finds, with rare exceptions, that diseases, not symptoms, form the headings, the order being, therefore, the exact reverse of that which takes place in his own brain. He has consequently to wade through page after page and book after book before he succeeds . . . in the object of his search. The author felt this inconvenience very acutely in his earlier years of practice and made . . . a classification of symptoms from Niemeyer's *Text-book of Medicine*. This has been slowly extended . . . to about four times its original bulk."

With the exception of some signs in surgical, skin, throat, and pelvic diseases, elicitable chiefly by expert examination, this little book deals in logical arrangement, with almost all known morbid symptoms and signs (physical, chemical, and electrical). Under the name of each sign or symptom is given, in column form, the diseases and disorders in which that symptom or sign may be found. By typographical devices there are indicated with each symptom the condition of which it is characteristic, the disease in which it appears frequently, those in which it is rare, and the stage of the morbid process in which it usually presents itself. In addition, there are frequent notes (in fine print, not interfering with the column arrangement of the titles) giving important points of distinction, anatomical and histological landmarks, etc. A table of synonyms, a concise chapter on methods of diagnosis, and an index to the contents add to the completeness of the work.

Though the book is small, it represents an immense amount of tedious work in extracting data from standard text-books. It will prove a dignified contribution to any medical library and a valuable aid in perplexing cases.

Manual of the Diseases of Children. By JOHN MADISON TAYLOR, A. M., M. D., Professor of Diseases of Children, Philadelphia Polyclinic, etc., and WILLIAM H. WELLS, M. D., Adjunct Professor of Obstetrics and Diseases of Infancy in the Philadelphia Polyclinic, etc. Second Edition, thoroughly Revised and Enlarged. Illustrated. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. xvi-17 to 859. [Price, \$4.50.]

The second edition of this book is on quite a different scale from the one which appeared three years ago. Many of the articles have been thoroughly revised and a considerable amount of new material has been added; the result of this is that the present edition is almost a new book. Special improvement is noticed in the article on infant feeding, which has been entirely rewritten and now represents fairly well our knowledge on this subject. Improvement has also been made in the articles on the diseases of the nervous system, the skin, and the heart. The article on the blood is practically a new one. The authors are to be congratulated on their work, which will be useful both to the student and the practitioner of medicine.

CHARLES M. OUGHTON, M. D. Chicago: E. H. Colegrove, 1901. Pp. 0 to 121. [Price, \$1.]

The aim of this excellent little work may, perhaps,

be best exemplified by the following quotation from the preface: "If the worshippers of these strange idols" [Divine Healing, Phrenopathy, Divine Breathing or Zoism, Christian Science, Natural Healing, Mental Science, etc.] "which have been set up in lieu of old-fashioned religions, of God, and of rational science, included only those who are already hopelessly neurotic, the queer people, the morbid, the mystical, words would be wasted in an appeal to common sense and sanity. But there are many people otherwise of perfectly normal trend, of intelligence and sincerity, who, recognizing a certain basis of truth founded in well-known principles of suggestive therapeutics and psychological research—the great influence of mind for good or for evil upon deranged nerves and functions, etc.—also show a disposition to swallow with the little kernel of wheat, a large bushelful of unwholesome chaff." It is to such as these "who, through lack of perspective, have already subscribed to the creed," and to "the thoughtful, conservative and well-balanced of all degrees of intelligence" who "are diligently seeking light, and groping for ammunition with which to defend a healthful and sane course," that the author addresses himself. He has acquitted himself well. There is much calm reasoning, much critical examination, and much comparative study, but no mere abuse in this little book.

The history of mental crazes and deliriums from the crusades, the flagellants, and the dancing mania, the South Sea Bubble, to New England witchcraft, Schlatter and the Franklin syndicate, is briefly but succinctly related, and drawn upon to illustrate the contagion of example and the influence of suggestion, and to establish their essential unity in a diversity of manifestations. Religious manias in general are considered, and Christian Science, especially, receives a closely reasoned exegesis, the *ipsissima verba* of its authoritative writings being employed, and its degenerate origin being fairly established. To those physicians who are thrown in any degree in contact with this peculiar and dangerous manifestation of mental perverseness, this little work will prove of great value, while to all who are interested in mental problems it may be highly recommended as a primer of "comparative craziology," if such an expression may be allowed. The book is well found, also, and both publisher and author may congratulate themselves on the service each has rendered to the other.

Truly Heroic Measures.—The *Medical Press and Circular* for July 10th says: In a recent number of the *St. Mary's Hospital Gazette* we find the following story told *à propos* the resignation of Mr. Critchett: A man having been jammed in a traction engine was brought to the hospital and admitted. As he was suffering from diplopia, Mr. Critchett's advice was sought. Discovering a paralysis of one of the ocular muscles, he gave him large doses of iodide of potassium. The house surgeon wished to try galvanism. After a few weeks the paralysis was cured, and the diplopia had vanished. The house surgeon asked Mr. Critchett which treatment he thought had cured the diplopia. Mr. Critchett said, "I think we might cry, 'honors easy,' for I took him by assault and you by battery.'"

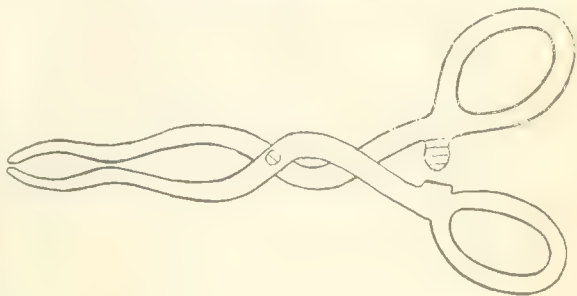
New Inventions.

AN INSTRUMENT TO HOLD THE PENIS.

By FREDERIC GRIFFITH, M. D.,

NEW YORK.

SURGEON TO GUTHRIE'S DISPENSARY

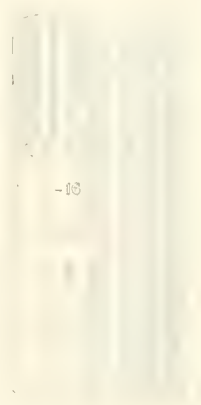


This instrument is devised to fill a small want, yet becomes of value in operative work upon the penis in public clinics. Surgeons know how difficult it is to hold the students' attention in small operations, especially when the field is hidden from sight by the bands of the operator or his assistants. The instrument may be called a view forceps, and is modeled to conform to the urethra, near the meatus; it would have therefore an additional use as a dilator after a meatotomy.

Made with handles three inches long, it can be readily inserted after lubrication. When the instrument is held by an assistant, the operator will find his work facilitated (neater and more staying dressings can be applied), and the student, that there is something as worthy of his attention in the deft manipulations of his teacher when performing a circumcision as in the more spectacular work of a dinner-plate breast amputation.

805 MADISON AVENUE.

NASOPHARYNGEAL IRRIGATION.



The accompanying illustration shows a new device which has recently been placed upon the market for use in washing out the nasal cavity. The nose cup, as it is called, was made with a view to carrying out a suggestion by a rhinologist that the best and most satisfactory method of cleansing the nares was

by "drinking through the nose." This feat is quite difficult to perform with the use of an ordinary tumbler, but is rendered easy by the use of this nose cup. The fluid is placed in the cup, the higher curve adjusted beneath the nostrils, and the cup tilted until the liquid enters the nostrils, and then, with the mouth closed, the breath is drawn in gently through the nose. This causes the liquid to pass up through the nose and nasopharynx, and it may either be expelled through the nose or allowed to pass to the back of the throat and be expelled through the mouth. By a little lateral pressure on the cup, so as to occlude one nostril, the liquid may be made to pass exclusively through the other. The simplicity and cheapness of the cup will undoubtedly commend it to the patient as well as to the physician.

Miscellany.

Vaccination.—Dr. Joseph Grindon (*St. Louis Courier of Medicine*, June), in a paper read before the Medical Society of City Hospital Alumni, St. Louis, discusses the subject very fully.

Bryce's test for successful vaccination is described as consisting in the reinsertion of the virus on the fourth, fifth, or sixth day after primary vaccination, when, if the first has been successful, the vesicles of the second insertion are hurried forward so that all come to maturity on the same day. The vesicles and areola of the second insertion are much smaller than those of the first. If there is no acceleration of the second lot, the first is supposed to have failed, and then the second is to be regarded as the initial vaccination and to be tested by a third, and so on.

Of *spurious vaccinia*, it is important that one should be informed as to the existence and clinical characters of its several forms. It is unnecessary to dwell upon the possible sinister effects of an error of diagnosis here, through which an individual may suppose himself protected when in reality his susceptibility to small-pox is as great as ever. The various forms are:

1. Red tubercles, the size of peas, which afterward suppurate. This form was very common in St. Louis some years ago and has been observed by the author within the last year. The little tumors may persist for weeks.
2. A non-umbilicated, but acuminate or conoidal vesicle, commencing with much irritation and itching, containing straw-colored or opaque, instead of clear, lymph. The areola is completed on the fifth or sixth day, beginning to decline on the eighth day and the scab falls off by the tenth.
3. Instead of the usual vesicle, a bleb sometimes forms, followed by troublesome ulceration.
4. A crop of herpetic vesicles, preceded by shivering and accompanied by intolerable itching and enlargement of axillary glands. The bursting of the vesicles is followed by an eczematous inflammation.
5. Occasionally vesicles which have apparently run a normal course up to the eighth or tenth day, suddenly rupture and are followed by ulceration which extends both in depth and peripherally; three such cases the author has observed recently. These cause much local and constitutional disturbance.

Of course, any of these events calls for revaccination.

Among the possible complications are inflammation and supuration of neighboring and even of distant lymphatic ganglia, which the author considers always due to a filthy vaccination.

The author enumerates the various cutaneous manifestations that may accompany the constitutional disturbance of vaccinia, and mentions specially vesicular and bulbous eruptions resembling those of dermatitis herpetiformis. Purpuric spots occasionally occur, which later become gangrenous, constituting the "*vaccinia gangræna*" of Hutchinson and Stokes. The superiority of bovine virus is dwelt upon, but the author considers that in cases of insusceptibility there are fewer failures with humanized lymph.

As to contraindications, the author says that cutaneous and intestinal affections contraindicate vaccination; chronic diseases—such as syphilis and struma—offer no impediment, neither does pregnancy.

[In our opinion this latter statement requires some qualification. Fully developed and recognized syphilis may offer no impediment, but we think that in cases where hereditary syphilis is to be in the least suspected, vaccination should be withheld until the case is clear beyond doubt, for we are convinced that in numberless instances where vaccination has been accused of transmitting disease, the operation has merely acted as a traumatic excitant bringing into play a latent taint, which might equally well have followed on any other traumatism.]

The author emphatically enforces the desirability of vaccinating even where the subject has already been exposed to small-pox contagion.

No Secret Remedies Allowed in Austria.—According to a special to the *New York Times* for August 5th, the United States consul-general at Vienna in a report to the State Department at Washington says:

"In consequence of many inquiries addressed to this consulate general in the matter of the government regulations in Austria regarding the importation and sale of patented medicinal and chemical preparations, I would report that the sale of 'arcana,' or secret remedies, has always been strictly forbidden in this monarchy. Trade in such medicines and advertisements of the same are under strict surveillance of the law. Further, those medicinal preparations of which the prescriptions are not open to inspection by physicians, or in the prescription of which the substance of the medicinal ingredients cannot be definitely recognized as to kind and quantity, may not be kept for sale in apothecaries. Only those manufactures may be considered as pharmaceutical specialties that contain drugs acknowledged to be medicinal remedies, as, for instance, balsam copaiba, oleum santali, and the like.

"Every new medicinal preparation intended for use by the public must be reported to the authorities, and its sale may not be begun until said authorities have found no reason to prohibit the same. Prescriptions of foreign medicines must be accompanied by precise directions for their preparation from the foreign manufacturer, and be provided with his signature and business stamp. Altogether excluded

are cosmetics that by their labels, wrappers, and advertisements are affirmed to be efficacious in the removal of personal blemishes—impure skin, freckles, liver spots, and baldness—and are, therefore, qualified as remedies.

"The regulations in Austria in regard to the advertisement of patent medicines are likewise strict. All laudatory notices in local publications of cures and remedies coming from abroad constitute a transgression of the trade laws, and, under certain circumstances, foundation for complaint of unlicensed medical practice."

Consul Hossfeld, of Trieste, says the *Times*, transmits, under date of July 12th a report covering the same information. He adds:

"The Austrian law also undertakes to regulate the prices to be charged for patent medicines, for it provides that whenever the reasonableness of the price of such a remedy is questioned, it shall be rated on the basis of the official tariff promulgated in the *Pharmacopœia Austriaca*.

"Those of our manufacturing chemists who are disposed to take the Austrian public or sanitary authorities into their confidence will probably not find it very difficult to obtain the necessary permission for the sale of their products, but I doubt whether any business which they may do in this country will ever prove a source of great profit to them."

The Relation Between Gonorrhœa and Certain Mental Conditions.—Professor S. Venturi (*Hospitals-Tidende; Woman's Medical Journal*, February) calls attention to the relation between gonorrhœa and certain abnormal mental conditions. Among twenty-two patients with hebephrenia in his institution, there were twelve with a gonorrhœal discharge, and in contrast with true hebephrenia the disease was cured in from four to eight months after the infection was cured—a shorter or longer time after the gonorrhœa was cured. The disease would appear from one to six months after infection and be characterized by stupor, with anxious hallucinations, intermittent delirium, attempts at suicide, insomnia, general hyperæsthesia, and augmented skin reflexes. No fever. In occasional cases there were cataleptic and catatonic states, choreiform movements, and maniacal excitement of longer or shorter duration. He assumes an infection of the meninges by the gonococcus. Balsamics are indicated in the treatment.

A Curious Case of Unilateral Clubbing of the Fingers.—According to the *Lancet* for May 18th, Dr. Bécélère recently described, at the meeting of the Société Médicale des Hôpitaux, a case in which the curious condition of clubbing of the fingers of only one hand was present. The left hand was normal; the right had the appearance shown in the third stage of pulmonary tuberculosis; the terminal phalanges were much enlarged and the nails were convex longitudinally as well as transversely. Skiagraphs showed that this enlargement was confined to the soft parts and that the bones were not affected—the usual condition in clubbed fingers. The patient was a man, aged sixty-five years, who had a pulsatile swelling of the size of a large egg in the right subclavicular region—no doubt a sub-

clavian aneurysm. He could not state the time of the onset of the swelling, but he was very definite as to that of the deformity of the fingers; it began a year previously, a little after the appearance of severe pains in the right shoulder, which radiated into the neck and hand. At this time, according to the patient, the hand was swollen and violaceous and the subclavicular region more voluminous than when he came under observation. Dr. Bécélère thought that the subclavian artery, and probably the vein, had been the seat of acute inflammation which led to permanent narrowing of the latter. This hypothesis was confirmed by the fact that while at rest the hands were of the same color, but on exertion the right became slightly cyanosed. The right radial pulse was only a very little weaker than the left. Dr. Bécélère showed that the pathogenesis of this unilateral clubbing of the fingers was comparable to that present in congenital cyanosis due to stenosis of the pulmonary artery. In the latter condition the vessel which carries all the blood from the tissues of the body to the lungs is narrowed. As a consequence of the prolonged retention of substances to be eliminated by the lungs, principally carbon dioxide, a chemical modification of the plasma which bathes the tissues of the periphery is produced. In the present case, the obstruction to the venous circulation was local instead of general, and therefore produced a local result. Dr. Bécélère further suggested that in a similar manner the clubbing of the fingers in pulmonary diseases—phthisis, sclerosis of the lungs, and pleural effusion—was due to the narrowing or obliteration of some of the divisions of the pulmonary artery, which produced the same mechanical effect as narrowing of the artery itself.

The Hereditary Arthritic Forms of Tuberculous Disease.—At the recent British Congress on Tuberculosis, Dr. G. E. Papillon, consulting physician to the Hôpital Lariboisière, Paris, contributed a paper on this subject. Bearing in mind the "law of pretuberculous hereditary reaction," which he enunciated at the Thirteenth International Medical Congress (Paris, 1900), the author applies that law to arthritic heredity. The existence of an arthritic diathesis, though to some extent disputed to-day, is shown by the hereditary marks it produces, which are bequeathed to the descendants by the victims of any forms of that diathesis: diabetes, gout, rheumatism, asthma, etc. And if, in those descendants, any individual seems, during a part of his life, to have escaped this inheritance, the hereditary tendency will appear under the influence of any slow and hidden infection, such, for instance, as the pretuberculous infection.

In heredo-arthritic people, the pretuberculous stage may be indicated by any arthritic manifestations, such as fits of asthma, attacks of subacute rheumatism, or the late appearance of what the French call "stigmatte de l'arthritisme." These are not manifestations of localized tubercles, as in the case of the "tuberculous rheumatism" described ten years ago by Poncet, but only effects of the bacillary toxins.

These fits of asthma, rheumatic attacks, arthritic deviations, etc., are the symptoms of disordered function, either of the contractility of the bronchial muscles, or of the secretion of the articular synovia,

of the nutrition of the extremities of the bone, cartilages, and articular muscles, disorders all belonging to the great class of "sympathetic reactions to the tuberculous intoxication," which was the subject of a paper read by Dr. Papillon to the Congress of Naples (1900).

The author argues that the toxines introduced into the organism by a tuberculous centre may produce the "stigmata de l'arthritisme" in predisposed individuals, as in others (otherwise predisposed by a different heredity) they may create Papillon's "pretuberculous neurasthenia" or pretuberculous anæmia, etc.

Musical Sensations as an Aid in Anæsthesia.—

According to the *Interstate Medical Journal* for July, a Parisian dentist, M. Drossner, has adopted a very simple but ingenious method to get rid of the unpleasant auditory sensations which accompany nitrous oxide anæsthesia, generally partaking of the character of the street noises. The dentist conceived the idea of arranging a musical phonograph with a receiver for each ear so that during the progress of the anæsthesia the patient heard nothing but the music. On awaking, the patient was free from the distressing sounds which are a source of great annoyance to many impressionable people. Professor Laborde, to whom the dentist communicated his plan, recently suggested to the Paris Academy of Medicine that general anæsthesia for surgical operations might with advantage be begun with nitrous oxide and the use of the musical phonograph, the anæsthesia being subsequently kept up with ether or chloroform.

The Arrest of Uterine Hæmorrhages Other than those Incident to the Puerperal State.—

Professor Dubar and Dr. G. Potel (*Echo médical du Nord*, July 7th) deal with the urgent question, the arrest of hæmorrhage. The measures adopted are local and general. Local measures include (a) irrigation with very hot water, and (b) tamponing. The irrigations should be given to the patient lying across the bed in the dorsal decubitus, with the nates slightly projecting over the mattress. Six, eight, or even ten quarts of water at 113° to 122° F. Repeat the injections twice or three times daily and for several days in succession. These irrigations contract the small vessels. They are specially suitable where the tissues are friable. They always suffice to modify the flow so as to permit of tamponing. For this purpose a speculum is essential, otherwise the first tampons will wipe away the mucus, and by drying the vagina render it difficult and painful to pass the others. Then haste will ensue and the work be badly done. Charpie makes the best tampon, but it should have been baked in an oven, if no sterilizer is at hand, until it begins to redden. When the tampons are ready and a vaginal injection has been given, the speculum should be passed and the tampons inserted, first in the cul-de-sac, then progressively in the vagina, pressing them in gently. The patient must be sedulously watched, and the tampon should not be left in place for more than forty-eight hours at most; for it must be borne in mind that tamponing has its inconveniences. It facilitates ulceration of inflamed or cancerous tissues, the blood may accumulate

above the tampon and lead to internal hæmorrhage; the tampons rapidly become septic; moreover, it almost always leads to urinary and fecal retention.

A third local measure is the application of ice or cold water to the abdomen. This measure is indicated as an auxiliary in certain cases of internal hæmorrhages. Cases accompanied by high tension of the pulse, arterial pulsations in the vagina, and sensations of ardor, heat or erethism in the pelvis, indicate sthenic inflammation and call for the employment of cold as a preferential method. If the hæmorrhage persists in spite of treatment, one should not have recourse to Emmet's procedure, say the authors, which consists in placing a temporary suture in the cervix, at the risk of having a hæmatometra or an intraperitoneal hæmorrhage; nor should the ligature of the uterine arteries, lauded by Martin, be practised. These measures constitute a veritable surgical intervention, and it would be much better at once to perform a radical operation and treat the source of the hæmorrhage. What ought to be done, in the author's opinion, is dilatation of the cervix either by sponge tents, if there is no urgency, or immediately by incision of the cervix, without the use of Hegar's bougies, which are specially obnoxious here. The incision has the further advantage of allowing us to extirpate a fibrous polypus, if presenting. It also permits us to employ an intrauterine tampon or hæmostatics to the source of the hæmorrhage, such, for instance, as

R Antipyrine. 75 grains,
Distilled water. 150 minims,

which will often succeed where tamponing and vaginal injections have failed.

General Measures.—The horizontal decubitus with elevation of the pelvis is insisted on, together with absolute quietude of body and mind. *The patient must keep her bed for at least forty-eight hours after the complete cessation of the hæmorrhage.*

Among medicinal remedies, the authors mention the following: Opium in the following forms—

R Wine of opium. 10 drops;
Decoction of marshmallow. 8 ounces.

M. For use as a vaginal injection—or suppositories of

R Extract of opium. $\frac{3}{4}$ of a grain;
Cacao butter. 60 grains.

Ergot of rye is recommended in doses of 22 grains of the dry powder divided into two or three packets and taken at intervals during the day; or ergotinine by hypodermic injection. The following formula is given:

R Cherry laurel water. 600 minims;
Lactic acid. $\frac{3.0}{100}$ ths of a grain;
Tanret's ergotin. $\frac{1.5}{100}$ ths of a grain.

M. One cubic centimetre (16 minims) contains a quarter of a milligramme (about $\frac{1}{40}$ th of a grain) of this very active preparation.

Where there is arterial hyperdistention with vascular erethism the following may be prescribed:

R Powdered digitalis leaves. 1½ grains;
Water for infusion. 1 quart.

M. To be taken in the twenty-four hours.

Hydrastis canadensis, from twenty to thirty

drops of the tincture during the day, and cannabis indica, thirty drops daily of the fluid extract, appear to exercise an influence on the circulations of the uterine mucosa.

Finally in cases where passive hæmorrhages, induced by hepatic congestion and constipation, are suspected, the digestive tract must be attended to and purgatives administered.

Subconjunctival Injections of Salt Solution in Diseases of the Eye.—Dr. Adolf Kraemer (*Southern California Practitioner*, July), in a paper read before the Los Angeles County Medical Association, speaks highly of the use of common salt injections under the conjunctiva of the eyeball in diseases of the vitreous humor and of the fundus of the eye. Dr. Kraemer says that he regards it as a great convenience to have a local remedy at hand applicable in such frequent cases, and by which practical results are obtainable, which furthermore, makes us more independent of the individual constitution of the patient. It is also not a small advantage of the injection therapy, that the treatment can be carried out in the doctor's office. Iodide of potassium as well as sweat and mercury cures affect many patients unfavorably and therefore cannot be applied. Our therapeutic remedies in diseases of the vitreous humor and the fundus of the eye are nearly exhausted with these traditional methods of treatment. Of course, if it is a question of a specific disease of the eye, mercury and iodide or potassium would still be prescribed at first.

The subconjunctival salt injection was first introduced into the medical practice about seven years ago by Professor Wellinger for the treatment of *ulcus serpens* of the cornea and later also for diseases of the inner eye. The injections have the great advantage of being absolutely safe and are but slightly painful, if one confines oneself to the two-per-cent. solution. There is not much advantage in using five- or ten-per-cent. solutions, as has been proposed, and injections of solutions of a higher percentage are much more painful.

The injections should be made as far distant as possible from the cornea in the upper equatorial region. When made below and on the sides they are much more painful. The conjunctiva bulbi rises after the injection in the form of a balloon, which is a sign that the injection came just under the surface, and if one pierces the capsule of Tenon, then the liquid disappears without there being much inflation, toward the orbit.

It may happen perchance that, after the injection, quite a strong hæmorrhage takes place, if a large vessel is pierced. This can usually be avoided by a closer inspection of the place of the injection. The injections may, however, be continued. Long-continued irritations, coagulations and adhesions he has never seen as a result of the salt injections. After the injection, the patient usually experiences a stinging sensation for a few minutes. Only very nervous women complain sometimes at the first two injections, but afterward they experience no annoyance. The application of a damp compress after the injection in such cases, eases the pain considerably.

So far as the technics is concerned, it is sufficient to perform it by means of a needle of the syringe

laid flat upon the conjunctiva bulbi and pushed forward so as to make a slight fold with the point, and then carefully thrust in two or three inches, between the sclera and conjunctiva; the salt solution is then slowly injected under the conjunctiva. It is not necessary to raise a fold of the conjunctiva by means of forceps, which would require an assistant, since the upper lid must be held with the left hand.

Notwithstanding his previous skepticism, he is convinced that, especially in cases of opacity of the vitreous humor, of chorioiditic diseases of the fundus, resulting from myopia of a higher degree, the injections lead to a speedy and good result. Also in cases of beginning detachment of the retina good results can be obtained by the use of the subconjunctival salt injections, with rest in bed, perhaps more frequently than by rest and bandage of the eye alone. Yet in cases of detachment of the retina, four to five per cent. solutions would be recommendable, which should be injected as far as possible in the corresponding meridian. The injections of common salt can also be recommended in cases of retinitis pigmentosa. The cure, or rather the improvement, in cases of retinitis pigmentosa is, it is true, only temporary. The sight diminishes sooner or later, but can again be improved through a fresh treatment, in order that thereby the utter loss of sight may be postponed as long as possible, which is itself a good deal in a desolate disease. The author reports an illustrative case.

The Protection of an Inflamed Nerve by Gold.—Dr. D. S. Fairchild (*American Journal of Surgery and Gynecology*, June) reports a very interesting case of severe pain, reflex disturbances, and loss of usefulness of the hand, consequent upon an injury to the median nerve branches of the thumb, which had been caught in scar tissue. Twice these branches had been dissected out, resection of the external cutaneous and collateral branches was done, division of all the soft parts, including the adductor muscles, nerves and vessels, to the inner side of the original injury down to the bone was performed, with removal of the scar tissue, and finally amputation through the middle metacarpal bone of the thumb was effected. Each operation was followed by partial, but only temporary relief.

The great suffering of the patient, his utter inability to perform any labor, and the failure thus far to furnish any permanent relief, led the author to consider every possible means short of the mutilation operation of the median nerve, resection or amputation. After considerable reflection, it occurred to him that if he could protect the nerve from the compressing influence of dense scar tissue, something could be accomplished. He therefore secured from a dentist a sheet of gold of the uniform thickness of 1-500 of an inch, one inch and three fourths in length and there fourths of an inch in width. This he placed in the sterilizer, and he prepared the hand with great care, observing the most rigid asepsis. He again opened up the wound, dissected out all the scar tissue, lifted up the median nerve, as it passed through the wound, on a strabismus hook, to make sure that the nerve was free from scar tissue. When this was done he covered the nerve with the sterilized gold sheet above referred to, pressing it down on each side of the nerve, fitting it evenly so that the

nerve could come in contact with the tissues of the hand only at its posterior surface as it passed along its course. The flaps, composed of the skin and subcutaneous tissue—which he had formed in exposing the field of operation—were united over the gold foil with silkworm gut and horsehair. The greatest care was taken at every step of the operation to secure the most perfect asepsis and coaptation of all the parts. The wound was covered with copious dressings, which were removed at the end of ten days, when the wound was found perfectly dry and the stitches removed.

About two months after the last operation the patient resumed work as a bridge carpenter, and has continued in this employment since, having been practically free from pain.

At the present time—one year and a half after the operation—the median nerve may be said to be restored to its normal state of nutritive stability, and the man is able to perform any labor adapted to his years and strength with entire freedom from pain.

"The Kind that Christian Science Cures."—Dr. W. Osler (*Canadian Practitioner*, June), in a paper read at a recent meeting of the Clinical Society of Maryland, records two cases of a class of secondary cancerous growth in which remarkable changes occur that are almost curative. The tumors disappear, the symptoms disappear, and the patient, for a time at least, falsifies a hopeless prognosis. Dr. Osler says that four years ago last September a young woman came from Pennsylvania to consult him about a lump in her breast. He sent her to Dr. Halsted, who, in November, removed a very large tumor which had already involved the axilla in the right arm so that part of the vein had to be removed. It was an extensive growth, and there was no doubt about its cancerous nature. She did very well, and was soon able to be about, although Dr. Halsted had given a very unfavorable prognosis. Two years ago she came to Dr. Osler again, complaining of pain in the side and a loss of vision in one eye. He was sick at the time, unable to examine her carefully, and as her father was then under the care of Dr. De Schweinitz for a diabetic cataract, he asked her to see him. The doctor sent word back by special delivery letter that the patient had a sarcoma of the chorioid. He did not know about the breast tumor that had been removed, but said that it was a secondary growth, of course, in the chorioid, the first he had ever seen, and the twenty-second on record. All the winter she seemed to get worse, and in June, before Dr. Osler went away for his vacation, he went up to see her and bid her good-bye. She was then in very bad condition, with secondary tumors in the other breast, nodules in the liver, loss of power in the legs, and was suffering a very great deal of pain. She was given considerable morphine, and during the fall began to improve so that to his astonishment, when he returned, he found her not only alive, but rapidly improving, and she has continued to improve. A year later the tumor nodule in the breast had disappeared, she had regained the power of walking, and what seemed more remarkable she was regaining vision in the affected eye. She still has some pain on walking, and has a slight kyphosis about the fourth dorsal, and though she still has to take a great deal of morphine she

gets about, and recently drove two miles to the station to meet Dr. Osler.

A still more remarkable case is the following one. Dr. Osler says that somewhere about four years ago that a young woman came to him with a tumor of the breast, and he sent her to Dr. Tiffany, who removed the cancer. About this time last year she began to have girde pains, pains down the legs and became paraplegic. Her death was expected hourly, but she gradually improved, went to the country, and about four months ago walked from Union Station to Dr. Osler's office. She has some secondary nodules, a stiff back, and has to take morphine, but is able to be about, and to attend card parties and other entertainments. Dr. Osler adds:

"Now, these are cases for which you could not do better with treatment by Christian Science, or at St. Ann's, or Lourdes."

Pneumonomycosis.—Dr. Charles Buttar (*West London Medical Journal*, July) reported recently to the West London Medico-Chirurgical Society a case of a pneumonia patient whose sputa at one time consisted largely of *Oidium albicans*. He found that the soft palate was covered with small aphthous patches, the intervening mucous membrane being very red and inflamed. The aphthæ disappeared quickly with painting with glycerin and borax, and with a chlorate of potassium mouth wash. At this time she complained of a good deal of pain in the sides of the chest. The sputum was very copious, consisting of pellets of muco-pus, thickly scattered with black specks, which were more numerous than usual, considering that London fogs were not prevalent. The signs in the lung had not altered except that the moist sounds were more widely diffused.

As the patient had now been more than four weeks in much the same condition, he sent some of the sputum to be examined. Mr. Foulerton reported that he could find no tubercle bacilli, nor did the sputum look like ordinary tuberculous sputum. It was remarkable, however, for the enormous quantities of *Oidium albicans* present, together with some streptococci. He also stated that cases simulating pulmonary tuberculosis had been recorded, in which the oidium seemed to be the cause of the trouble. The patient remained very weak, and continued to cough up much the same kind of sputum until the end of March. She eventually recovered.

The author draws the following conclusions: (1) That the *Oidium albicans*, like the *Aspergillus fumigatus*, may develop in the lungs. (2) That the organism apparently develops in a previously unhealthy lung, or after some disease lowering the vitality of the patient. (3) That the resulting complication leads to a tedious illness of one or two months' duration; but at the same time the disease is much less serious than the pneumonomycosis due to the aspergillus, inasmuch as it leaves no fresh lesion of the lung. (4) That the symptoms are chiefly those of bronchitis. (5) That the diagnosis can only be made by an examination of the sputum. While thrush is usually regarded as a sign of impending dissolution, the author says that as to his patient he never felt any great anxiety as to the result.

Original Communications.

A CASE OF ACTINOMYCOSIS HOMINIS, WITH REMARKS CONCERNING THE DIFFERENTIAL MACROSCOPIC DIAGNOSIS BETWEEN ACTINOMYCOTIC AND TUBERCULOUS PERIBRONCHITIS.

By GUSTAV FÜTTERER, M. D.,

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The reasons for reporting this case are the following:

1. Every case of actinomycosis in man should be added to the literature on this subject.
2. The diagnosis of actinomycosis in this case was made during life.
3. Actinomycotic foci were found in the heart.
4. The course of the disease can be clearly traced.
5. The study of the case has brought out the macroscopic differences existing between actinomycotic and tuberculous peribronchitis.

I am indebted to Dr. A. J. Ochsner for the case and the clinical history, and it gives me pleasure to render him my sincere thanks for this courtesy.

Clinical History. By Dr. A. J. Ochsner.—Date of admission, December 18, 1898. Date of discharge, December 19, 1898. Diagnosis, actinomycosis of abdominal wall. Hist., No. 5661. Result, improved. *Attended by A. J. Ochsner.* Name, Mr. B—, aged thirty-nine years. Nationality, American. Occupation, commercial traveller. Referred by Dr. Buchsin.

Family History: Mother died of cancer of the pancreas, aged fifty-seven years. Father at thirty-five years, cause unknown. One brother living and well. No brother or sister dead.

Personal History: Ordinary children's diseases; otherwise well. Married at twenty-four years. One child, seventeen years old, living and well. Wife has had no other pregnancies. No venereal history.

Seven years ago the patient first began to have severe attacks of pain in the epigastrium. The pain was excruciating, usually accompanied by vomiting; no distinct chills; several times slight jaundice; once very marked jaundice; attacks of severe pain, which usually lasted from half an hour to five hours, but following this he was usually confined to bed for from twelve hours to fifteen days. Sometimes the stools were clay-colored. These attacks occurred about eight times in three years. Four years ago the patient had an operation. An incision was made in the right hypochondriac region over a mass. The surgeon came down upon a caseous area which was removed, and the wound healed by first intention. One month later he had a laparotomy performed, when a great many adhesions were found in the peritoneal cavity, and also another caseous area. This wound was slow in healing, and since then the wound has opened periodically and

discharged a small amount of pus. Up to the last year there was no particular soreness in the abdomen, but a year ago he began to have soreness a little internally to the upper angle of the scar, and a swelling developed, which was lanced two months later; a sinus remained, which has discharged ever since. For the past year he has had an evening rise of temperature, and for the last three months considerable cough and expectoration. Sometimes vomiting has occurred after a severe attack of coughing.

Present Condition: Fairly well nourished, face flushed, tongue coated; pulse 92; regular, compressible; appetite poor; bowels constipated. Slight retraction of supraclavicular spaces; expansion of left lung good; right lung lags behind; relative dullness over its apex anteriorly. Liver dullness not increased upward anteriorly; vesicular murmur over the apex of the right lung slightly harsh; expiratory sound prolonged; no râles. Slight scoliosis in the dorsal region, convexity to the right.

Posteriorly: Left side, dullness begins at the level of the tenth dorsal spine; right side, at the level of the eighth dorsal spine. *Anteriorly:* Numerous pigmented spots all over the abdomen. Two large scars on the abdomen; one from the tip of the eleventh rib on the right side directly downward half way to the symphysis pubis. The other from the tip of the eighth rib, left side, half way down to the symphysis pubis. At the upper angle and at the middle of the latter scar are two fistulae closed with scabs and crusts. Some tenderness in epigastrium, but no abnormal dullness.

Treatment: A probe was introduced into the fistula and several sinuses were found leading in various directions. These sinuses were followed to their ends, laid open freely, and carefully curetted and dissected out. One of them was found to run beneath the muscles and deep fascia of the abdomen down to the peritonæum. *Curetted material examined, and little yellow granules found to consist of ray fungi.*

December 25th.—Sputum repeatedly examined for tubercle bacilli and ray fungi, but none found.

Dr. E. H. Ochsner adds to this report: The patient had an evening rise of temperature to from 101° to 103° F., with morning remissions, for weeks. During the pyrexia his face was usually flushed and he had the typical appearance of a patient suffering with well-advanced phthisis pulmonum. We gave him one drachm of iodide of potassium three times a day for three days, and then stopped for three days. At first he stated that he could not take this, but after a while he took it very well, and improved markedly for a time under the treatment. Almost one week after the operation a small faecal fistula developed; from the discharge and the location, I should infer that it was connected with the transverse or ascending colon, though it may have been with the ileum. This persisted for almost five weeks, and then healed. The wound took on a healthy appearance, the granulations became firm and red, apparently under the original iodide of

potassium treatment, and healed perfectly. Whether it broke open again later I do not know. When the patient left the hospital the rise of temperature had almost subsided and the cough had greatly improved. When I saw him several months later he was at home and was not so well. The patient died on October 10, 1899.

Post-mortem examination, by Dr. G. Fütterer, on October 11, 1899. *The skin* over the abdomen shows the scars described in the clinical history, and, after opening the abdominal cavity, some adhesions are found between the left lobe of the liver and the parietal peritonæum. The right lobe of the liver is very much enlarged and adhesions between it and

coid mass is found. *The myocardium* appears brownish, is of firm consistence, and the cut surface is dry, rigid, and of a brown color. *The endocardium* has shrunk and appears thickened and milky. *The valves* are intact, but at the bases of the tricuspid valves two yellow nodules are found (Fig. 1, *a* and *b*), which have developed along the course of the coronary artery. Nodule *a* measures 0.9 centimetre in length, 0.4 centimetre in width, and 0.4 centimetre in height; nodule *b*, 1.1 centimetre in length, 0.5 centimetre in width, and 0.5 centimetre in height.

The nodules are sharply outlined, and they form flower-bed-like elevations, with rounded and slight-



FIG. 1. Actinomyces of the heart (Fütterer). *a*, *b*, actinomycotic nodules; *c*, tricuspid valve.

the parietal peritonæum are very extensive. In the *abdominal cavity* is present a moderate amount of a clear, greenish liquid.

The pericardial cavity contains very little clear liquor pericardii.

The heart is small; the blood-vessels on its surface are tortuous; the visceral pericardium appears shriveled, and, instead of subpericardial fat, a mu-

ly irregular surfaces. The color of those nodules is a sulphur-yellow, and their consistence is quite firm.

After the thorax is opened, the lungs collapse but little; no abnormal contents in the left pleural cavity, but some adhesions at the base of the lung. The upper part of the right pleural cavity contains some liquid of a yellowish-green color, while its lower part has become totally obliterated, and the organ

is so firmly adherent to the diaphragm, and this again to the liver, that those three parts have to be removed together.

Left Lung: Moderate degree of anthracosis, the lower two thirds atelectatic, and here and there are seen round yellow areas about half a centimetre in diameter, which are yellow in color and of firm consistence.

Right Lung: At the base (Fig. 2, *a*) a cicatricial portion of three centimetres diameter, having nearly a wedge shape, of gray color and firm consistence. Above the cicatrized area there are pneumonic portions of a reddish-gray color and firm consistence, irregularly distributed. Both the lung and the liver are firmly adherent to the diaphragm (Fig. 2, *b*), and the adhesions, as well as the tissues of the diaphragm, enclose yellow areas with a rusty tinge, which become more numerous downward toward the insertion of the diaphragm (Fig. 2, *c*). The diaphragm is completely destroyed at its insertion on the wall of the thorax laterally and in front, over the right lobe of the liver, and is replaced by those yellow and rust-colored masses (Fig. 2, *d*), which then enter the liver.

In the liver, the most extensive changes are found at the lower margin, while the area of destruction becomes smaller as we trace it upward. The affected parts show a network of blackish-gray lines, the meshes of which are filled with semiliquid yellow masses containing numerous orange-colored fine granules. In some parts there are abscesses of different size found between the diaphragm and the right lobe of the liver, and in one place it is noticed that a perforation of the diaphragm has occurred from the lung into the liver, causing changes in a descending direction (Fig. 2, *e*).

The *gall-bladder* is dilated and thickened, and contains some cloudy bile and four small gall-stones.

The *postperitoneal glands* are somewhat swollen,

and a few swollen glands are found near the porta hepatis. The other organs in the abdominal cavity

show no particular changes. The *mesenteric glands* are not swollen.



FIG. 2. Actinomycosis of the lung, diaphragm, and liver (Futterer). *a*, portal of entrance into the lung; *b*, adhesion to diaphragm; *c*, descending course of the infection; *d*, destruction of the diaphragm and invasion of the liver, with ascent; *e*, perforation of the diaphragm directly from the lung, with invasion of the liver, and descending infection; *f*, peribronchitis actinomycotica.

If now we turn our attention to the upper parts of the right lung, we see three different forms of sulphur-yellow areas.

First. Sharply defined small rings showing a lumen in the centre and marking cross-sections of affected small bronchi which stand out very distinctly from the surrounding red parenchyma of the lung (Fig. 2, f).

Secondly. Small, round yellow areas, without a lumen, marking cross-sections of small diseased bronchi, in which actinomycotic peribronchitis has led to a closure of the lumen. The lung tissues surrounding these areas are unchanged.

Thirdly. Yellow areas of about half a centimetre in diameter, and more or less round in shape, similar to those found in the left lung.

An examination of the brain was not permitted.

Diagnosis: *Actinomycosis of the heart, lungs, diaphragm, and liver.*

Microscopical Examination: A thorough microscopical examination of all parts removed at the post-mortem was made, and the clinical and anatomical diagnoses were confirmed, as the characteristic fungi were found in all the affected parts, the heart, lungs, diaphragm, and liver. No fungi were found in the bile, the glands, or the gall-stones.

The Peribronchitis Actinomycotica.—A macroscopical diagnosis between actinomycotic and tuberculous peribronchitis is generally considered to be impossible, but it seems to me that it is possible, and not even difficult, if the peculiarities of both conditions are well considered.

The *actinomycotic peribronchitis* appears in fresh infections on cross-sections of small bronchi in the form of sharply defined sulphur-yellow rings, with clear, round outlines, against the unchanged parenchyma of the lung which surrounds it, and above which it is slightly prominent. The process has but little tendency to involve the lung substance, which becomes affected very late, if at all. Even microscopically, it can be seen that the alveoli next to the peribronchitic area are unchanged, while occasionally a small nodular prominence of the peribronchitic ring may press against them.

The cut surface of the yellow ring is quite even, and during its further development it shows a decided tendency to grow toward the centre of the lumen of the bronchus, which at last becomes entirely occluded. It is also of the very greatest importance to note that the very youngest, as well as the oldest, peribronchitic areas have the same sulphur-like color, while in tuberculous peribronchitis the color is very variable indeed, and, so long as there is no caseation, it is not yellow at all, but gray or reddish-gray. But even when there is caseation the yellow color has a more grayish tinge, and is not uniform in quality. The *tuberculous peribronchitic*

areas project above the surrounding lung tissue; they have an uneven surface and irregular outlines. There is not the pronounced tendency to grow centrally and close up the lumina, but, on the contrary, the process is very prone to spread peripherally, and an early affection of the surrounding lung tissues is the rule.

The *tuberculous infection* generally affects the apices first, but *actinomycosis* prefers the lower portions of the lungs; while this may also be taken into consideration, it will be of less value than the previously described peculiarities of both processes.

Course of the Disease in this Case.—My conception of the course of the disease in this case is as follows: The port of entrance of the ray fungi was in the lower lobe of the right lung, where it is indicated by a nearly wedge-shaped zone of cicatrization, which marks the oldest actinomycotic focus. Here adhesions formed between the lung and the diaphragm, while the fungi travelled downward between the diaphragm and the wall of the thorax until they reached the insertion of the diaphragm along the costal arch, where they accumulated, invading and destroying a large part of the diaphragm. In the mean time, the anterior surface of the right lobe of the liver had become firmly adherent to the diaphragm in these portions, and so the destruction of parts of the diaphragm meant an immediate invasion of the right lobe of the liver, in which they spread an ascending infection, and, aided by a pus infection, completely destroyed large areas of liver substance, leaving only the framework of the organ. Much later, a small invasion into the liver had also occurred, through the diaphragm, over the upper part of the right lobe of the liver, causing a descending infection of the organ.

If the cicatricial area in the lower lobe of the right lung was the port of entrance of the ray fungi, then this localization would suggest that the infecting mass must have been of macroscopic size, as it entered in the direction followed by foreign bodies, namely, through the larger right bronchus. The illustrations are from photographs of specimens well preserved by Kaiserling's method.

Literature.

A very complete list of publications which have appeared on the subject of actinomycosis is given by M. Schlegel, *Aktinomykose bei Menschen und Thieren*, in *Ergebnisse der allgemeinen Pathologie und pathologischen Anatomie des Menschen und der Thiere*, 1898, Lubarsch und Ostertag. To Schlegel's list should be added the cases published in this country, of which he only mentions Bodamer's publication.

So far, twelve cases, or, including my own case, thirteen, have been reported in the United States. They are:

(1) 1886. A. Schirmer. *Chicago Medical Jour-*

nal and Examiner, Vol. liii, p. 354, 1886. (Localization: Jaw.) Schirmer also found the ray fungus in his patient's sputum.

(2) 1886. A. J. Ochsner. *Journal of the American Medical Association*, 1886, p. 608 to 610. (Localization: Left antrum of Highmore.)

(3) 1889. George A. Bodamer, The Pathology of Actinomycosis, with Record of Cases and Experiments. *Journal of Comparative Medicine and Surgery*, April, 1889, Vol. x, No. 2. (Localization: Right temporal region.)

(4) 1889. J. M. Byron, A Case of Actinomycosis in Man. *New York Medical Journal*, December 28, 1889, p. 716. (Peripleuritis actinomycotica. Localization: In the middle axillary line, on the right side, between the fifth and the seventh ribs.)

(5) 1892. J. B. Murphy. *Chicago Medical Recorder*, February, 1892. Actinomycosis Hominis, with Report of Five Cases. Case 1—Localization: Left lower jaw. Case 2—Localization: Right lower jaw. Case 3—Localization: Right lower jaw. Case 4—Localization: Peritonæum. Case 5—Localization: Lower jaw.

(6) 1894. Lyman Brown, A Case of Actinomycosis. *Chicago Medical Recorder*, October, 1894, No. 4, p. 251. (Localization: Left jaw.)

(7) 1895. Mixer. *Boston Medical and Surgical Journal*, Vol. cxxxii, No. 13, March 28, 1895. (Localization: Below the umbilicus.)

(8) Parker Syms, Actinomycosis. *Annals of Surgery*, February, 1897. (Localization: Abdomen.)

34 WASHINGTON STREET.

REMARKS UPON THE TREATMENT OF HIP DISEASE, AND PRESENTATION OF A FURTHER MODIFICATION OF THE HIP SPLINT.*

By JOHN DANE, M. D.,

BOSTON.

The question of the proper treatment of hip disease has been discussed before this association so many times that it would seem almost necessary to begin any paper upon this subject with an apology. The excuse in the present instance is that the presentation of some further modifications in the traction splint shown at the Washington meeting four years ago would seem to call for some statement of the advantages that it is hoped have been attained.

Although there have been, and probably are still, considerable differences of opinion upon the subject of traction and fixation, certain facts would seem to have been demonstrated. Theoretically, the spasm of the powerful groups of muscles about the hip must drive the head of the femur against the acetabulum with a very considerable amount of force, and one or both of these structures are the seat of an active tuberculous process. Practically, the results of this pressure have been demonstrated again and again, as shown either in an absorption

of the head or in the widening or actual disappearance of the acetabular rim.

To antagonize this spasm, we have both fixation of the joint and traction in an opposite direction applied to the limb. When the patient is properly secured in bed and the limb drawn away from the pelvis by a weight and pulley, traction and fixation are each aiding and are equally important. But as prolonged confinement to the bed is very injurious, and the advantages of fresh air and exercise are so manifest, the question immediately presents itself of whether it is not possible to provide an efficient amount of traction and fixation in some ambulatory form of treatment. Traction, fixation, and the prevention of the jar caused by walking—these are the three ends that have governed the construction of the various hip splints that are used in America.

As first designed, the long traction splint was intended to serve as a perineal crutch. But while it is mechanically easy to transfer the weight of the body to the perinæum or the tuberosity of the ischium, it is not possible to prevent the patient from sinking down into the apparatus at each step to such an extent as to reduce the amount of traction to a point where it is useless to antagonize the muscular spasm. Perineal straps will all stretch to a greater or less extent, and even in thin subjects there is a certain amount of fat and other soft tissues that can be compressed before a rigid point of counter-pressure is met with against the bone. Since elastic traction has not proved successful, it is the custom of many surgeons to try to avoid this difficulty by building up the sole of the shoe on the sound side and providing the patient with a pair of axillary crutches. As long as the extension straps are kept tight and the splint is not used in walking, we are undoubtedly successful in our efforts to maintain traction. But the practical question must ever be, Are these essentials carried out? With the careful supervision of private practice they undoubtedly can be; whereas in the out-patient clinics of our hospitals, where the great majority of our cases must be treated, they are just as certainly neglected. One has but to watch the patients as they come in or go out of the building to satisfy himself of this beyond the shadow of a doubt.

Such being the fact, we are forced to the conclusion that whatever good the splint does, and it certainly does do well for the majority of cases, it must accomplish largely as a fixation and not as a traction appliance. This at once brings into prominence two questions: First, as to the necessity of fixation; second, as to the amount of fixation that can be secured with such splints. In discussing these questions it is well to recall that the inventors of some of the most widely used of the traction splints did not even aim to immobilize the joint; "motion with-

*Read before the American Orthopædic Association at Niagara Falls, June 12, 1901.

out friction" was then supposed to be a mechanical possibility, and the theory that "motion within the limits set by Nature" was an advantage rather than an injury to the joint was a guiding principle with some of the ablest advocates of ambulatory treatment.

Although it is both to be feared and hoped that we are still a long way from a full understanding of this subject, yet the trend of recent investigation and teaching seems to be all in one direction. On the one hand, demonstrations such as those of Phelps (*Post-graduate*, April, 1897) tend to show that absolute fixation of a joint does not cause ankylosis; and on the other, there is the ever-strengthening opinion that physiological rest is the best treatment for all tissues when in a state of acute inflammation. That this principle is generally recognized is clearly seen from analogy. Turning to the various pieces of apparatus devised to aid in the treatment of active tuberculosis of joints other than the hip, do we find any that are intended to permit of an arc of motion? Ankle, knee, spine, elbow, wrist: is it not our aim to secure as nearly perfect quiet as we can for the inflamed structures? For example, in applying a plaster-of-Paris bandage in a case of acute tumor albus, do we not extend it as far up the thigh as possible, and in many cases include even the ankle and foot in the bandage in order to render the immobilization of the diseased joint just as absolute as we can? I can not believe that the best treatment for disease of the hip forms the single exception to so general a rule.

If, then, fixation is such a necessary part of the function of the hip splint, the second question becomes one of great importance—namely, How much fixation do the various forms of hip splint furnish? To bring before you the results of some investigations upon this point is one of the main objects of this paper. The only statistics that I have been able to find are those published by Lovett (*Trans. of the American Orthopædic Association*, Vol. i, p. 193) twelve years ago. His experiments were made with a "Taylor hip splint of the ordinary pattern with one perineal strap." In order to obtain a record, "the shaft of the splint was extended up by an adjustable appliance two or three inches, and terminated in a clamp carrying a pencil at right angles to the skin, which touched the skin covering the ilium just below the crest." Thus any motion between the pelvis and hip would be indicated by a mark upon the skin, the length of the line being a measure of the amount of the motion. Using a boy of ten years for a model, he found that, in a normal hip, a traction of three pounds and a half exerted by such a splint allowed an arc of motion of 35° at the joint when the boy got up or sat down. In "an older boy" the motion under similar conditions was

40°. By increasing the traction to eight pounds, "when it became almost unbearable," the arc was limited to 15°. He says that a "Taylor hip splint with a rigid pelvic band and two perineal straps furnishes much more complete fixation," but gives no figures or experiments bearing upon the point.

The method followed in my own investigations was that suggested by Lovett, with the trifling addition of a piece of adhesive plaster fastened to the skin over the area where the point of the pencil was to travel. An extension of about three pounds and a half was applied by means of a windlass in each case. The first splint used was the customary Taylor hip splint, having rigid pelvic bands and furnished with two perineal straps. The results can be briefly stated as follows:

1. Girl, six years old, normal hip joint; arc of motion = 22°.
2. Girl, five years old, hip disease; 65° motion in flexion; arc of motion = 16°.
3. Boy, six years old, hip disease; 30° motion in flexion; arc of motion = 27°.

As one of the deductions from these figures, I would raise the question of the advisability of treating all cases of hip disease, regardless of the arc of motion permitted by the muscular spasm, by means of a splint that does not restrict motion to less than an arc of 16° and varies from that to 27°.

The next tests were made with a splint similar to that shown in Washington four years ago (described in *Trans. of the American Orthopædic Association*, Vol. x, p. 223), with the following results:

1. Boy, five years old, hip disease; motion in flexion, 40°; arc of motion = 11°.
2. Boy, six years old, hip disease; motion in flexion, 100°; arc of motion = 9°.

With one exception (the normal hip) these were cases as they presented themselves at the outpatient clinic, the splint being adjusted by the parent. While these figures show a distinct gain in the amount of fixation, they would seem to prove that a certain, not inconsiderable, arc of motion is still permitted at the hip joint.

Looking more closely at the mechanical principles involved in these splints, it is an easy matter to see the portion that is least efficient. Below the line of the joint, the long lever formed by the leg is fastened securely to the splint—especially in splints provided with double uprights, the fixation of the leg leaves little to be desired. It is almost the reverse with the upper, or pelvic, arm of the lever. Not only is this arm relatively very short, but its grasp of the pelvis is extremely imperfect and restricted in most splints to a belt very little over an inch in width. The simplest way of obviating this difficulty would seem to be to lengthen the upper arm of the lever by extending the outside upright

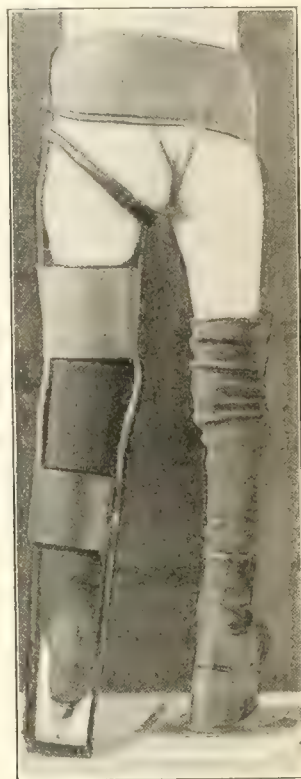
of the splint as far as the axilla, and the first splints with which I experimented were all provided with a thoracic extension. But it is obvious that such a thing as a rigid grasp of the thorax is impossible from the necessity of permitting motion for the ribs during respiration. The grasp of the chest is even less satisfactory than that of the pelvis, and without a fixed point for the upper end of the splint, a thoracic arm serves only as a lever by which all the motions of the trunk are transmitted directly to the hip joint. It is maintained by Whitman, in his admirable *Text-book of Orthopædic Surgery* (page 278), that "as a matter of experience, however, it will be found that motion of the upper part of the trunk is absorbed, as it were, in the flexible lumbar region of the spine before it reaches the joint." I regret that I am unable to agree to this view. The compensating action of the lumbar spine, a region that has been so aptly designated "the third hip joint," is, I believe, only possible when left perfectly free and unhampered by any apparatus. When



wearing a splint that extends beyond the lumbar spine, it is impossible for the patient to sit in any ordinarily constructed chair. He tries to perch on

the edge of the seat as best he can, and aids himself by twisting and bending the thorax as much as the apparatus will permit. The thoracic motion and jar must, it would seem, be transmitted through the splint to the hip, and practically, in my hands, the results of such a splint were so unsatisfactory that after a trial of nearly two years I had to remove all the thoracic extensions, and have since confined myself to such modifications as would secure a more accurate and firm grasp of the pelvis.

The lower portion of the splint here shown is the same as my former splint. The pelvic portion is modified by the addition of a second posterior pelvic arm. The lower arm is carried as far down as possible over the sacrum; the upper follows closely under the curve made by the crests of the ilia. Each of these arms is prolonged around the opposite, or sound, side of the pelvis by means of a strip of flexible steel riveted to its free extremity. To these in turn are riveted the outer ends of the webbing straps which complete the circuit by passing through buckles in the single rigid anterior pelvic arm of the splint. The padding consists of a thick piece of leather, a little wider than the pelvic arms, and riveted firmly to them and to their flexible extensions. It is free only as a flap under the space occupied by the straps and buckles. The advantages of these additions, both as to fixation and as to adaptation, are too easily seen to demand any further comment. To determine the practical efficiency of the new splint, it was applied to a child of three years and a half having a normal hip joint, and tested in the usual manner. The result showed an arc of motion of only 6°. It must, however, be remembered that this was a newly and carefully applied splint, and it has yet to be proved whether as much fixation as this can be secured in the ordinary clinic cases.



For the treatment of the most acute and refractory cases a combination of a traction splint worn over a leather spica has been advocated. The immobiliza-

tion from this should theoretically be distinctly greater than that afforded by the splint alone, and from the satisfactory behavior of a series of bad cases that I have seen treated in this way by Dr. Lovett, I am led to believe that this is true in fact. Unfortunately, I have been unable to demonstrate this in figures, for the method employed would necessitate the cutting of a window in the leather splint just under the iliac crest. An experiment made with a plaster-of-Paris spica applied over a Taylor splint, and not giving the best of fixation, showed an arc of motion of 6° . This leads me to expect that one applied in the proper manner should limit motion to at most a very small arc, and that this would prove a most serviceable method of treatment for all cases that do badly with the splint alone.

THE TREATMENT OF ACUTE HIP DISEASE, WITH THE DESCRIPTION OF A SPLINT.*

By ROBERT W. LOVETT, M. D.,

BOSTON.

It is a generally accepted rule in surgery that a joint in a state of inflammation is better at rest than it is exercising its function of movement. In the chronic inflammation of joints Nature hints at a line of treatment by fixing the joint by a reflex muscular contraction which limits or abolishes motion, and this constitutes her method of cure. In many, indeed in most, cases of joint inflammation fixation remains the chief therapeutic means at our disposal, leaving out for the moment the question of operation.

In the hip, however, traction has been found to be a most useful means of treatment in hip disease, and its adoption by American surgeons has led to its being called the American method. In America it has been generally adopted as a routine means of treatment in the form of the Davis-Sayre Taylor traction splint. In Europe traction is more or less used, but fixation holds much more of a place than here, and even here attempts have been made at a combination of fixation with traction by Phelps,¹ Blanchard,² Dane,³ myself,⁴ and others. But, on the whole, the long traction splint has held its place undisturbed, and one has heard comparatively little of the importance of fixation in American writings on the subject until recently.

In view of the recent discussion in Europe as to the place of excision of the hip in the treatment of hip disease and the widely differing views held on

the subject there and to a certain extent in America, it seems worth while to look more carefully at the conservative treatment of hip disease in order to formulate and carry out the most efficient plan of conservative treatment obtainable. By the perfection of the conservative treatment alone can its true place be estimated. The criticism that in America traction has been allowed to occupy too prominent a place as the chief means of treatment of hip disease, and that fixation has been too little considered, is not without foundation. It may, therefore, be use-

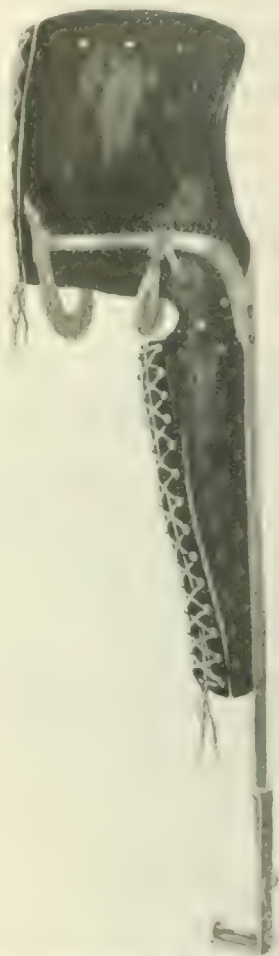


FIG. 1. Lovett's Splint. See text, p. 346.

ful to try to estimate the relative value of these two therapeutic agents and to investigate the efficiency of various forms of apparatus in regard to these two elements.

It would, I think, be generally admitted that the unrestricted use of the hip joint in hip disease was undesirable, and that some artificial limitation of motion should be imposed. Most orthopædic surgeons would further agree that no more motion at the joint should be allowed by the apparatus than Nature indicated by the amount of muscular spasm that she imposed. That is, if in flexion the diseased joint could only be moved through 30° , apparatus which permitted motion through 40° could hardly

*Read before the American Orthopaedic Association, at Niagara Falls, June 1, 1892.

¹Phelps, *N. E. Medical Monthly*, January, 1892.

²Blanchard, *Orthop. Trans.*, vii, p. 230.

³Dane, *Trans. Am. Orthop. Assn.*, 1897.

⁴Lovett, *Trans. Am. Orthop. Assn.*, 1897.

be regarded as efficient. Shaffer⁵ has made the statement that "motion made within the limit set by Nature is not harmful." Whether or not this is true, or whether or not as complete fixation as possible of the hip joint may be desirable in the acute stage of the disease, is a matter of opinion. But probably all orthopædic surgeons would agree that motion beyond the limit set by the reflex spasm was in general harmful or at least undesirable. All this deals with the question of fixation as a therapeutic measure.

Traction is no less important than fixation. It has been shown experimentally that in both the normal and diseased joint a bearable amount of traction can separate the head of the femur from close contact with the acetabulum.⁶ It has been demonstrated by pathological evidence that wearing away of the head of the femur is less evident in cases treated by traction than in cases treated without it. It has been demonstrated clinically that traction relieves pain, quiets muscular spasm, and is agreeable to most patients with acute hip disease.

There seems to be no question as to the advisability of the use of traction in most cases of hip disease. Believing as I do that what we call hip disease at the present is merely the name for a composite group of cases of varying pathological origin of which tuberculosis is only one, I believe that in the future, when we can differentiate the forms of the disease, traction will not be universally necessary. Yet at the present time the danger would lie in using it too little rather than too much, and as an advocate of the general use, not only of traction, but of strong and efficient traction in acute hip disease as we now know it, I desire to go on record.

Fixation as contrasted with traction as the sole treatment is inferior to it, but it is not incompatible with traction, and, although fixation does not distract the joint or prevent the wearing away of the head of the femur, it does, as we all know, both in itself and in connection with traction, quiet joint inflammation. Why else do we put to bed and fasten to a frame patients with irritable hip disease? We add fixation to traction at that time, but only, too often, when we are driven to it. How common is the experience, in cases treated by ambulatory traction splints under these conditions, to see night cries disappear, joint irritability diminish, and the arc of motion increase. Yet, what have we done but add fixation to traction?

Traction, therefore, would seem to be a desirable and reasonable element of treatment in acute hip disease, but with it should be combined enough fixation at least to limit the arc of motion well inside of that set by Nature as shown by the amount of mus-

cular spasm present in the joint, if not to afford all possible fixation to the joint.

This paper is a plea against routinism in the treatment of hip disease. If one believes that motion within the limit set by Nature is not harmful, then the apparatus used in each case should limit the arc of possible motion while wearing the splint well inside of that limit. No one form of traction splint is suitable for every case. If one believes that no motion should be allowed in the diseased joint, then the spica traction apparatus should be used as probably affording better fixation than any other. We are likely to err in the direction of allowing too much rather than too little motion. Recumbency we all avoid for long periods on general grounds, yet we all know that, in general, the irritable joint itself does better when the patient is recumbent than when he goes about wearing the ordinary long traction splint.

As to the efficiency of different forms of traction apparatus in the amount of fixation that they furnish, there is a certain amount of information at our disposal. The traction splint, it must be remembered, was devised to allow motion without friction, and its present form is not radically different from what it was then.⁷ Allowing all due weight to Judson's theory⁸ that the perineal band acts as a brake upon a wheel, the fact remains⁹ that the traction splint with one band applied with $3\frac{1}{2}$ pounds of traction affords fixation only at the ends of an arc from 35° to 40° long. With an amount of traction "almost unbearable" the arc was reduced to 15° . Dane has shown in his paper in this journal that the traction splint with the rigid waist band and two perineal bands allows from 16° to 27° of motion with $3\frac{1}{2}$ pounds of traction. That his hip splint with one band allows from 9° to 11° of motion; that his splint with two bands allows 6° of hip-joint motion. The spica apparatus described in this paper probably allows a few degrees of motion, but approaches nearer to complete fixation than other apparatus. No satisfactory experiment was made on this point.

Complete fixation of the hip joint, therefore, seems unobtainable by ambulatory traction or other apparatus, as would be expected on general grounds.

Those who use one splint, for instance, the long traction Davis-Sayre-Taylor splint for all cases impose an arbitrary limit of motion of a certain number of degrees under ideal conditions (and probably the splint is not more than half as efficient in fixative power under the conditions of ordinary use) upon all cases of hip disease, whether they allow five or fifty degrees of motion in flexion.

⁵New York Medical Journal, November 23, 1899.

⁶Bradford and Lovett, *Children's Hospital Report*, 1895.

⁷American Medical Monthly, 1859, p. 361.

⁸Medical Record, July 7, 1883.

⁹New York Medical Journal, February 8, 1889.

Again, in hospital work, we must all recognize the fact that it is questionable how much real traction is exercised by the splints as applied in daily use at home. For this reason it is worth while to emphasize the importance of using apparatus which of itself affords fixation not dependent on the amount of traction exerted.

Why cases of hip disease differ so widely, we do not yet know, and we shall not know until a more careful study of the disease is made. We do not yet know how to distinguish with any accuracy acetabular from femoral disease. We cannot, in most cases, clearly separate traumatic or other synovitis, tuberculous hip disease, osteomyelitis, arthritis deformans, syphilis, etc., from each other, and, for the present, we must treat by symptoms and be guided by them.

For the treatment of severe hip disease allowing less than 20° or 30° of motion in flexion, I believe that the best possible fixation should be combined with traction. For that purpose I have used in such cases for the last year a combination of a spica bandage and a long traction splint with the most gratifying result. For a permanent splint, I have found it best to use a sole-leather spica which reaches from the upper chest to the calf. This is stiffened by painting with hot bayberry wax. Outside of this, is attached a skeleton long-traction splint. No further explanation is necessary. This splint is applied in the class of cases described and has proved most satisfactory. It is so closely applied to the chest and the trunk that it affords fair fixation, to which the traction contributes. Patients are not allowed to remove it oftener than once a week, and are required to keep it on for two weeks at a time if possible. Its disadvantages are obvious. The patient cannot sit with comfort in an ordinary chair; it is hot and dirty, and the plaster extension is likely to become a source of irritation, but it limits motion sharply; it makes walking on the splint difficult and unlikely, and if traction is not efficiently kept up, the child has, at least, the advantage of fixation.

Traction splints which have an arm embracing the thorax in the hope of affording better fixation have one intrinsic objection. They cannot be firmly attached to the chest, whereas they can be firmly attached to the leg. The twists and turns which the thoracic band makes are transmitted through the hip joint to the firmly fastened leg, thereby irritating and disturbing the sensitive hip. Such, for example, is the objection to the splint that I described some years ago¹⁰ (which was a combination of the Taylor and Thomas splints) and to similar splints. Traction apparatus, on the other hand, which aims

only at securing a better hold on the pelvis avoids this criticism.

I am quite aware that the spica splint differs in no essential from some splints in use. It is rather more permanent than plaster of Paris, and I am making it only a text for a paper on the importance of intelligently adding fixation to traction.

The use of this combination splint has enabled me in the past winter to do away in large part with treatment by recumbency for deformity and sensitiveness coming on in the course of hip disease, and now recumbency is limited in cases coming under my care to those in which the patients have been recently operated upon for abscess and to cases with so much irritation of the skin that an efficient application of sticking plaster is not possible.

The routine has been as follows: If a case with deformity or sensitiveness, no matter how severe, is admitted for bed treatment to the wards, the traction splint is put on and over it a plaster-of-Paris spica bandage reaching from the axilla to the calf. If the leg is adducted or abducted or flexed, the spica is made to hold the leg in the position of deformity, and no attempt at correction is made at the first bandaging. At subsequent bandagings the deformity has been found to have been corrected just as it would have been by recumbent treatment and its gradual reduction by traction. One of the later plaster spicas, when removed, is used as a mould for the leather spica.

Since the summer of 1900, by the kindness of my colleagues, to whom I am indebted for permission to publish their cases, all cases of hip disease entering the Second Surgical Service at the Children's Hospital have been transferred to my care. They have practically all been treated by the method described. It must be remembered that only cases have been admitted to the wards which were doing badly under ambulatory treatment with the long traction splint in connection with a high shoe and crutches, so that the cases commented on are in general the worst ones in an out-patient clinic having under treatment some hundreds of cases of hip disease of all grades. No cases have been omitted from this mode of treatment except those of some very young children and perhaps one or two others for some special reason not connected with the disease. I have the records of fourteen cases treated by this method in the last few months. The series is not, I think, worth giving in detail, and a few sentences will give the important points. In two cases there had been no previous treatment by traction, but in the twelve others the use of the long traction splint had failed to control the symptoms. In all the cases, with one exception where there is some circulatory trouble in the leg necessitating recumbency and one in which excision was performed, the

¹⁰*Orthopaedic Trans.*, Vol. i.

patients are now up and about, and most of them have better motion at the hip than they had when the apparatus was applied, and it must be remembered that in these cases there was little treatment by recumbency, one object being to get the patient about as speedily as possible.

In no case has the apparatus failed to control night cries when properly applied. One patient was reported to have had night cries in spite of the apparatus, while in the hospital wards, but the traction straps were found to be loose, and when they were tightened the night cries disappeared. Twice I have been able to control night cries which had persisted during treatment by traction and recumbency, where every expedient had been tried, by the application of this splint and getting the patient up.

In one case only has abscess occurred, and on opening the joint it was so seriously diseased that the head of the femur was removed. This case was far advanced and extremely acute when the apparatus was first put on. After a while, by a misapprehension, the spica was removed and the ordinary treatment resumed. The acute symptoms returned and the apparatus was again applied, but in a few weeks abscess appeared.

In two bad cases the patients were up and about the ward in the splint, doing perfectly well for some days, and were discharged to their homes, but had to be readmitted later for irritability of the joint. The parents in both cases were ignorant and careless foreigners, and probably misused the splint. In both cases the apparatus at once gave relief when the patients were readmitted and were under the supervision of competent nurses.

In two cases fluctuation over a considerable area was present when the apparatus was applied. In one it has now disappeared, in the other it is less. One case is, I think, worth speaking of more at length:

Clarence D., six years and a half old. Hip disease began in the fall of 1899. The long traction splint, high shoe, and crutches were used in June, 1900, and treatment was continued from that time on at the out-patient department. The parents were careful and intelligent. In September, 1900, the patient was admitted to the wards for sensitiveness, night cries, etc., and discharged in a few weeks to the parents, wearing long traction splint.

November 7th.—Readmitted for the same reason. There were 5° motion in flexion, permanent flexion 20° and eversion, very sensitive, much thickening about the hip. Leather traction spica splint applied and the patient discharged November 19th.

December 7th.—Has 30° motion, no deformity, fluctuation over outer aspect of thigh. Circumference at groin 12½ inches, less sensitiveness.

May, 1901.—Has 40° motion, no deformity; hip not irritable; circumference at groin, 10¾. Fluc-

tuation entirely gone. Child has been about actively since December. Thickening about hip slight; eversion has disappeared.

The cases are not in any way remarkable, but have, on the whole, done well, and in my experience much better than any similar cases that I have ever treated.

The conclusions which I would present are as follows:

Cases of hip disease permitting not over 25° of motion in flexion or extremely irritable cases should be treated by the best obtainable fixation plus traction. Treatment by recumbency is not generally necessary even in the most acute cases, if the apparatus described above is applied to the hip in the position of deformity. This deformity generally disappears under this treatment. The splint should be removed as seldom as possible, and the hip should not be disturbed by frequent examinations.

Cases allowing 25° to 45° of motion in flexion may be treated by Dane's splint with high shoe and crutches in preference to any other form of traction splint. Personally, I should extend the use of the spica traction apparatus to most of these cases in the hope of shortening the disease by over-efficient treatment, but that position could perhaps not be successfully defended.

The use of the Davis-Sayre-Taylor long traction splint, with one or two perineal bands, should be limited to cases allowing well over 45° of motion in flexion, and should be used with high shoe and crutches to prevent the intermittent traction necessarily incident to walking on the splint.

It is probable that the more rational use of combined traction and fixation would lead to better results in conservative treatment in shortening the disease and improving the functional results than can be obtained by the routine use of traction.

A CASE OF ANGIO SARCOMA OF THE NOSE.

BY STANLEY S. CORNELL, M. D., C. M.,

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On December 9, 1900, Mrs. S., a native of Bavaria, aged sixty-four years, 5 feet 7½ inches in height, weighing 170 pounds, consulted me for the relief of stenosis of the left nostril. Obstruction of the nostril had been developing during the preceding two years, its first manifestation becoming apparent immediately after an attack of grippe in December, 1898. The patient had experienced a sense of stuffiness in the left nostril—a sense she described as characteristic of an acute cold in the head.

Absence of the nasal tone was not apparent in the patient's voice—a fact explainable by the guttural sounds preponderating in her words. The patient assured me that no discharge had ever appeared in either nostril, except blood from the left side of the

nose. The bleeding never occurred spontaneously; it was always by her picking a lump easily felt in the affected chamber that hæmorrhage, light or severe, had been produced.

No pain had been experienced in either nostril, nor had reflected pain been evident in any of the facial regions.

The patient was subject to no involvement of the eye; there was no exophthalmos, disordered vision, or pupillary change.

The right eye presented external strabismus; but this condition originated in the patient's habit, when a child, of looking upward and outward at a curl of hair that hung from her forehead.

The nose was short and thick; from its base to its tip it presented a plane surface, one inch and three quarters in length. Looked at anteriorly, it showed a broad surface, gradually widening from base to tip. Its contour was undisturbed upon the right side; upon the left side a shoving apart of the left nasal bone and the nasal process of the adjacent maxilla was apparent, and here the process arched sharply outward and inward, and was slightly indented on its anterior border. The breadth of the nose between the maxillary processes was, upon a plane surface, one inch.

The skin overlying the nose presented an evenness of color that corresponded with the patient's fair complexion.

I shall confine myself to a description of the internal aspects of the left nostril only, because it presented all the morbid alterations discernible in the case.

Upon dilating the left naris, a bluish-gray bulbous growth presented. Its lower end lay within a quarter of an inch of the opening of the nostril, which it completely filled. By stretching the nostril to its greatest extent, it was seen that, from its inferior end upward, the growth was graduated into a slightly smaller stalk possessing the same physical appearances as were observed in its lowermost portions. Yet the bulb and stalk of the mass were so relatively large in comparison with the size of the cavity they occupied that inspection was barren of positive results. Even the inferior turbinate body could not be brought into view.

The growth was intensely vascular, its surface being marked with shallow pits and corresponding globules. The insertion into the mass of the blunt probe, to the extent of one eighth of an inch, caused a considerable flow of arterial blood. Indeed, at every bleeding-point could be seen pulsation of each drop of blood as it issued from the wound made by the probe. Each stream of blood was so copious and so continuous as to obscure the inspection. By pressing a pledget of cotton against each wound, the bleeding could be controlled by a resulting clot.

By seizing the lower end of the growth with a gently compressed forceps a stiff mobility of the whole mass was demonstrated; but the mobility was so slight as to include no measureable area. The greatest contact of the probe with the bulbous mass was followed by a quite severe pain that lasted a few seconds only; but contact effected in the upper and invisible portion of the growth caused a more prolonged and intense pain that passed upward to the root of the nose.

The application of a five-per-cent. solution of co-

caine hydrochloride induced no shrinkage of the growth, and brought no other structure into view; but it did render manipulation a little less painful.

By posterior rhinoscopy no evidence of the growth was perceived, except a slight hazing of that part of the picture between the posterior extremities of the middle and inferior turbinate bodies; here, indeed, there appeared to be a narrowing of the space between these bones.

This description includes all the results of my examination of the affected nostril.

The patient's appearance presented the highest degree of vigor. In fact, she appeared to be no more than fifty years of age. Her temperature was lively, and she indulged in continuous humor. No general examination of the case was made.

Treatment.—The parts were prepared for operation with sprays of carbolic acid and borax, followed by a sterile five-per-cent. solution of cocaine hydrochloride. The cold wire snare was applied as high up the growth as possible, and made to cut through rapidly. A piece of the growth three quarters of an inch was thus removed. With the first hugging of the snare a quick hæmorrhage began, a large stream of bright blood pouring from nose and mouth to the amount of eight ounces. A pledget of cotton soaked in solution of suprarenal extract (five grains in two drachms, used without filtering) was then packed in the nostril, and retained for five minutes. This application stopped the active bleeding, but did not suppress bloody oozing. However, it operated well enough to disclose a piece of the growth—exactly half the size of the piece removed—adhering to the anterior end and the anterior third of the under surface of the middle turbinated bone, and reaching from the attachments to the inferior turbinated body, with whose internal border it was in touch. This piece was now snared away, and then succeeded a hæmorrhage of considerable volume. This flow was not caught for measurement; but it was sufficient in amount to saturate thoroughly many towels, require the use of the cuspidor, and partially suffocate the patient. Another pledget of cotton, soaked in solution of suprarenal extract, was now crowded into the nasal cavity, but did not exercise pronounced hæmostatic effect. The bleeding being still profuse, a bone-curette was vigorously passed over the floor and walls of the nostril, and along the middle and inferior turbinated bones. The bleeding abated a little as the bed of the growth was being attacked, but it was still very active. After curetting, the probal touch indicated a softened condition of the middle turbinated bone; pieces of this bone at its anterior end and inferior border were then bitten off with a Knight's forceps.

The hæmorrhage being abundant at this stage of the operation, plain cotton pledgets were passed within the nose, where they were kept till the chamber dried. They were then removed, all the abraded surfaces—indeed, the walls, floor, and turbinal surfaces—were thoroughly treated with fused chromic acid, and the cavity packed to its capacity with iodoform gauze. The packing was left in place twenty-four hours, during which time there was only oozing of blood.

No bleeding occurred after removal of the packing. The patient was directed to use a hot Dobell's solution three times a day.

At the end of one week she returned. She could breathe a little more freely through the affected nostril, although it was quite blocked with sloughs and crusts. The nose was cleaned. Although the parts operated on were so tumefied that no conclusion as to the annihilating effects of the operation could be arrived at, a somewhat disproportionate enlargement of soft tissues on the under surface of the middle turbinate anteriorly could be defined. This piece was snared, and proved to be the size of a small filbert. I cannot say that it possessed macroscopic appearances differing from those of ordinary hypertrophied membrane belonging to the middle turbinate. The section was made over the antero-inferior surface of the bone.

The cut and granular surfaces were treated by curetting, followed by cauterization with fused chromic acid.

The patient came to my office on January 11, 1901. Respiration through the left nostril was clear, the volume of passing air being, I think, normal. She slept with her mouth closed. A dark brown crust, dry and thin and forming a mould of the anterior third of the nasal chamber, was washed away every morning.

The inferior turbinate was an uncushioned ridge; it presented every feature of atrophy, membranous and osseous. The middle turbinate was covered with granulations antero-inferiorly. These granulations, when touched, emitted a small amount of bright blood. All visible membrane of the affected chamber was rosy-red in color; it had the appearance usual in acute rhinitis. The posterior wall of the pharynx was easily visible by anterior rhinoscopy.

The Dobell's solution was again prescribed. On February 20, 1901, the patient reported by letter that her breathing through the operated nasal chamber was unobstructed; that neither discharge nor pain was present; and that she still used Dobell's solution night and morning.

The patient again came to my office March 23, 1901. The appearance of the nostril operated on was this: The mucous membrane was normal in color and arrangement; it was nowhere bulbous or redundant. The inferior turbinate body was a rounded extension transverse to the outer wall of the nose; it was defined with difficulty.

The middle turbinate anteriorly was normal in appearance; its membrane was naturally disposed in form and color. A considerable bifurcation of this bone, beginning at its middle third and extending backward in such a way as to dispose a narrow projection, terminating in a rounded head close to the adjacent nasal septum, and a shorter and broader projection that adjoined the outer wall at the nostril, was evident. The appearance was much the same as that observed in the bifid condition of the middle turbinate sometimes seen after the removal of myxomatous polyps from the nose.

But in this case the bifurcation was artificial, having been made by the snare and bone-forceps used in the operative work of December, 1900.

The nasal chamber was not sensitive to vigorous probing, nor did it bleed when indented with a blunt instrument.

Diagnosis.—The bulbous end and stalk of the growth were examined by Dr. W. T. Connell, of Kingston, Ont. His report follows:

"Section shows specimen to be one angio sarcoma, in places showing organization into fibrous tissue. The growth is exceedingly vascular; the walls of the larger and medium-sized vessels are well formed, but those of the smaller vessels are poorly formed. The cells are mainly spindles, mixed, however, with round cells (of connective tissue) and leucocytes. The surface of the growth is covered with a layer of epithelium, in most places several layers in thickness. Beneath this layer the fibrous tissue organization is most marked."

I have not seen the patient since March last, but her frequent reports by letter are to the effect that her nasal breathing is clear, that she sleeps with closed mouth; that she uses no nasal douche; that there is no discharge from the operated nostril; and that she is subject to no pain in any region of the head.

THE IMPORTANCE OF AN EARLY AND RADICAL CLIMATIC CHANGE IN THE CURE OF PULMONARY TUBERCULOSIS.*

By C. F. GARDINER, M. D.,

COLORADO SPRINGS, COLORADO.

The advantage of climatic change to those invalids suffering from phthisis has, as we all know, been observed for many years, but the actual study of climatology in its relation to tuberculosis has been a comparatively recent matter. Now, however, the effect of a complete and radical climatic change, such as from a damp climate of the lowlands to a dry climate of elevated plateaus, upon the cure or arrest of pulmonary tuberculosis, is a fact recognized by climatologists all over the world.

The effects upon a pulmonary invalid making this climatic change that I have mentioned, have frequently been presented to this association in the most able and thorough manner, but with your kind permission I will briefly review them again. A patient with phthisis brought from a damp climate of little or no elevation, or the climate of most of our large cities, to that of a climate of 6,000 feet in altitude and very dry, as we find in parts of Colorado, is subject to the following effects due to the climatic change:

The thin or rarefied air will gradually expand the often ill-formed and contracted chest, acting continuously to bring this about day and night, and far more effectively than any exercises taken at low elevations and only occasionally, as the effect is produced even during sleep. The circulation in the capillaries is promoted, congested tissue is relieved. The air being sterile and dry, reinfection is limited, and mixed infection from diseased lung tissue is arrested. The specific gravity of the blood seems

*Read at the eighteenth annual meeting of the American Climatological Association at Niagara Falls, May 30, 1901.

to be increased, and the formation of the new cells encouraged; in consequence of this, nutrition is stimulated and isolation of tuberculous tissue occurs more rapidly, due to increased cellular activity, appetite is increased and power of absorption, with gain in weight. The sun's rays act with much power upon the skin, also warm the air, so that in cold weather it is possible to obtain the advantages of out-door air in winter when the cold air acts as a tonic, and yet not to suffer from the dangers of damp air or damp soil. The sunlight being, not only powerful, but present so many hours each day, is an effective germicide.

The dryness of the air and cool nights prevent exhaustion from heat during the summer, so trying and even dangerous to an invalid. The electrical conditions are stimulating, and the complete change in scenery has a psychological value often overlooked.

These effects of climatic change upon the pulmonary invalid have been reported by men who have devoted the most time and study to the question, and live in the climate themselves. It is, therefore, with some surprise that we have seen lately a spirit of skepticism among certain phthisiologists in regard to any curative effect of climate in phthisis. We hear it intimated that quite good results can be obtained in any climate, provided we properly utilize fresh air and food; that as sanitarium treatment has proved the fallacy of climatic treatment, what is the use of sending our patients hundreds of miles away, when we can obtain the same results in their back yards at home by the skilful use of a steamer chair and good beef?

The assertion is also made that, even granting all the advantages of a dry and elevated climate, these advantages will have to be most marked and decided to compensate at all for the lack of care, poor food, accommodations, and homesickness.

We have, therefore, apparently a difference of opinion among phthisiologists as to the advantage of climate. It seems to me that climate is of as much benefit as it has always been, but the abuse of climate has given a wrong impression. Especially is this true of the dry climates of the west, as in Colorado. In the first place, climate was not properly understood for many years, its effects were often exaggerated, and the fact that climate should only be used in carefully selected cases to obtain the best results, was quite ignored; for, after all, climate-cure of a radical nature can only be used in a very small number of the tuberculous invalids in our country. Most of the people with the disease are financially unable to travel any considerable distance from their homes, and will have to rely upon sanatoria established in more or less unfavorable climates. Invalids are often sent to resorts in the

West where proper food and attention are difficult or impossible to obtain, and any sanitarium methods impossible to establish; also, patients are sent in the last stages, too ill to recover under any conditions, and often in a financial stress, which is an added burden. The climatic treatment of such cases as these is, of course, unfavorable, and to compare such results with those from a sanitarium in a damp climate is misleading, to say the least. Also, any comparison of climatic treatment in the west with sanitarium treatment in the east is unfair to climate as a curative agent, for the reason that, with few exceptions, all invalids treated in closed sanatoria in the east are subject to a close systematic and skilled examination by trained men, to weed out the unfavorable cases and only leave the favorable or curable cases, those in the incipient stage of the disease, for treatment in the sanitarium; and from these carefully selected cases, so taken and placed under a perfect system, having in most cases better food and more pure air than they ever had before, the percentage of arrested cases is taken and compared with cases treated by climate alone, often with no system at all. It is no wonder that unaided climate suffers by this comparison, and the inference is drawn that climatic treatment is worthless.

When, however, any kind of a fair comparison is made, the result is striking. Take cases treated in the first stage in Colorado without the aid of any specially closed sanitarium, but in boarding houses, in their own homes, or in general sanatoria, and the percentage of arrested, or cured cases, is from 76 to 90 per cent., the sanatoria in damp climates showing 70 per cent.

The truth of the matter seems to me to be that in the climate such as exists in the high dry plateaus near the Rocky Mountains, we have undoubtedly a powerful aid in the cure and arrest of pulmonary tuberculosis; that although a closed sanitarium is the best place in which to treat a tuberculous invalid, if other things are equal, in parts of the west other things are *not* equal, hence climate comes in as a factor, and such a powerful one, that, with ordinary methods used at a patient's home in Colorado, the issue in incipient cases will show as good results as, or even better results by fifteen per cent. than, cases treated in closed sanatoria in the east. Besides, many patients will not go to a sanitarium in any case, but prefer to live in a home with their families. Such invalids should have the advantages of the proper climate, which increases their chances for cure by fifteen per cent. If this is doubted, I confess it is hard for me to account for a large number of arrested cases that I have seen in Colorado during the last eighteen years—patients that came from an open-air farm life of the middle and eastern States, who, upon coming to Colorado,

in no way changed their previous habits of life for any better hygiene, but at once began work on some ranche where the food was no better, and often far worse, than that previously obtained at their homes in the east, where the heavy work and kind of work were the same, and where the only change in environment at all favorable to their disease, was, not more fresh air, but a different quality of air, and possibly of soil. Under such unfavorable conditions of sanitation, I have time and again seen arrest and cure, a cure to my mind entirely due to climatic effects of air and soil, as similar cases of tuberculous patients making a change from one section of country to another without the radical climatic change I have indicated, do not so improve, unless they change at the same time an indoor for an outdoor life.

As for poor food and accommodations at Colorado health resorts, this objection is simply a question of climatic ignorance. There are resorts in Colorado where the markets are excellent, the houses well built, and where there are good physicians and trained nurses who understand modern sanitarium methods.

In regard to the treatment of tuberculous invalids, it is as well for us to remember that there has been an evolution in the west as well as in the east, regarding the use of pure air and wholesome food in treating consumption, while, in the use of pure air we have had the advantage, as quality as well as quantity should be considered. Outdoor air is not of the same quality in all climates, and does not, therefore, exert a climatic effect to the same degree taken in the same quantity. Few will doubt the difference between the air of parts of Central America and that of New York city, or we will say within twenty miles of it, but few people, even climatologists, realize that there is as marked a difference between the air of New York and vicinity and that of Colorado and New Mexico. The air of our high dry regions, such as our altitude in Colorado, has a special quality not yet recognized in a strictly scientific way. It is not alone dry, but it is air that has a special quality, due to its having been purified by the rays of the sun over vast areas absolutely uncontaminated. It is not alone the effect of such air, when breathed by the consumptive, upon tuberculous processes in the lungs, but also its evident power of arresting septic process, that is so marked a feature in the prognosis of every case of continual pulmonary tuberculosis that makes such climatically selected air of more value as a curative agent than that of less favored regions. In my experience, a patient will derive as much benefit from four hours spent in the dry, sunny air of Colorado as from eight hours spent in the damp and cloudy climate of some parts of the east. In a dry climate, patients can be

kept day and night, summer and winter, out of doors, with benefit and without risk. And it is this possibility of keeping patients out of doors day and night, summer and winter, that to my mind offers such decided advantages for the cure of the tuberculous. I have, during the past winter, had patients in tents and on piazzas, in the open air all the time; with proper precautions, with stoves or electric heaters and suitable clothing, there is no risk and much benefit.

I firmly believe that the truth regarding climate will prevail, and that the great sanatoria of the future will be built where scientific facts show the best results can be obtained. The sanatoria now established by the government at Fort Bayard, New Mexico, and at Fort Stanton, New Mexico, will in time prove the marked advantage of sanitarium methods and the best climatic cure combined.

SULPHURIC ETHER IN THE REMOVAL OF CERUMINOUS PLUGS.

By E. L. MEIERHOF, M. D.,

NEW YORK.

In dealing with impacted cerumen, difficulty is at times encountered with the syringe in removing the mass, so that there is a temptation to employ considerable force, which is not without danger in the sudden removal of the plug, thereby doing damage to the tympanic membrane. In order to facilitate the removal of these impacted plugs, various substances have been employed to soften or partly dissolve the mass. Among those that have been used are alcohol, glycerin, and the various salts of sodium, and, of late, peroxide of hydrogen has had some vogue.

The writer has tried all of these solvents, but none has given such satisfaction in his hands as undiluted sulphuric ether, poured from a small bottle or a suitable pipette into the external auditory canal. The ether acts in a few seconds, partly dissolving the cerumen from its attachment to the canal, so that, with the most gentle syringing, the plug is promptly removed.

I have not seen any dizziness or other ill effects from this use of the ether.

For those who might hesitate at first to employ pure ether in the ear, a mixture of equal parts of ether and alcohol might be used, with perhaps the same effect.

Blastomycetic Serum in Cancer.—M. Wlaeff (*Progrès médical*, June 22d) recently presented to the Paris Academy of Medicine a patient affected with cancer of the breast, which had been much benefited by injections of the serum of animals that had been treated with blastomycetes.

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

Questions for discussion in this department are announced once a month. So far as they have been decided upon, the subsequent questions are as follows:

IV.—Which form of vaccine do you prefer, dried lymph or "glycerinated" lymph? Give your reasons without mentioning producers' names. (Answers due not later than September 12, 1901.)

V.—How do you treat habitual constipation? Proprietary preparations must not be mentioned. (Answers due not later than October 10, 1901.)

VI.—How do you use quinine for the prevention and cure of malarial disease, and what other treatment do you employ? (Answers due not later than November, 11, 1901.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested that the answers be short, no one answer to contain more than six hundred words. We shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers as original communications.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted this month has been awarded to Dr. Z. E. Lewis, of New Rochelle, N. Y., whose paper appears below.

PRIZE ESSAY NO. III.

HOW DO YOU TREAT COLLES'S FRACTURE OF THE RADIUS?

By Z. E. LEWIS, M. D.,

NEW ROCHELLE, N. Y.

There are just two elements in the proper treatment of silver-fork fracture of the radius—reduction and fixation. Reduction must be complete and fixation secure.

In its nature, the injury is an impacted fracture, the proximal being driven into the distal fragment; though the initial violence is generally sufficient to release the impaction by shattering the lower portion. Whatever may be the immediate condition, the first duty of the surgeon is to absolutely reduce all deformity and restore the normal contour of the limb, even if he must use force and break up impaction to accomplish this result. As a matter of practice, in this reduction it is sometimes necessary to apply force in the exact direction of the original injury—in other words, to make a partial fracture complete.

It is well to remember that the styloid process of the ulna is occasionally hooked under some fibres of ligament, and that correct reposition cannot be

obtained without unhooking it. The dislocation is backward and outward, and reduction must finally be forward and inward. At whatever cost, the reduction must be immediate and absolute. This is not "half the battle" merely, but pretty nearly the whole.

For fixation, I employ the "short anterior and long posterior splints," flat and a little broader than the wrist to preclude the dangers of approximation of the bones of the forearm and of strangulation of the limb. (A cigar-box will furnish the rigid material.) The anterior splint is a little shorter than from the flexure of the elbow to the line of fracture, and the posterior sufficiently longer to cover the entire lower fragment. In padding the splints, a transverse cushion about an inch wide and nearly half an inch thick is to be secured at the lower end of each, which, when applied, anteriorly just above and posteriorly just below the line of fracture, will keep up the pressure which finally brought the fragments into correct position. The pads are held by narrow strips of adhesive plaster, while two broader and longer strips at top and bottom retain the splints after they have been applied. It must be borne in mind that the splints are merely for retention—for fixation—and they need not be very tight, and must on no account make injurious pressure. Annoying looseness due to slipping of the plaster will be prevented by pinning the ends of the straps.

The sling is not allowed to extend beyond the end of the short splint, leaving the hand free for the action of gravity, and as much use as possible, for the prevention of joint rigidity and the shortening of the period of uselessness after the limb is released from "durance vile."

The splints are disturbed during the four weeks of retention only for distinct indications—especially during the first week—and the whole apparatus is protected from dirt by a loose sleeve, with drawstrings above and below the splints.

A sling is provided, but the patient is encouraged, and if need be urged, to freely disregard it, and after the first week to discard it except as a resting place.

76 MAPLE AVENUE.

THE IMPORTANCE OF THE AFTER-TREATMENT.

Dr. C. W. Kellogg, of New Haven, Conn., writes:

Without in any way detracting from the recognized clinical importance of Colles's fracture, it may be said that, other things being equal, the simpler the form of treatment the more favorable, as a rule, will be the result. This very simplicity, however, entails upon the surgeon the exercise of the greatest watchfulness and care if he hopes to overcome in any measure the more or less doubtful prognosis with which the fracture is commonly associated, and

which past experience has seemed to justify. The remark attributed to the late Dr. Nathan Smith that: "He is no surgeon who cannot, with a shingle and a shirt, put up any fracture in the human body," is, taken in its broadest sense, peculiarly applicable to Colles's fracture. With these two homely but indispensable adjuncts to our domestic armamentarium, one may, in case of necessity, apply a dressing which will prove eminently satisfactory. If there is at hand some cotton-batting or absorbent cotton, together with a little adhesive strapping, the operator may quite felicitate himself upon the possibilities before him.

It would manifestly be impossible, in an article of this scope, to enter at all into a discussion of the pathology of the fracture; nor is it necessary. It is, however, absolutely essential for its successful treatment that a clear idea of this pathology be maintained in connection with an accurate mind-picture of the anatomical conditions obtaining in the vicinity of the parts involved. The manner in which the fracture is usually received—the factors that enter into the production of the backward displacement of the lower fragment of the radius, with the resulting classical bayonet-shaped or "silver-fork" deformity (displacement *à la fourchette*)—the various complicating conditions that may exist and militate so materially against a successful result—all should be carefully considered before reduction is attempted.

The futility of more than outlining a general plan of treatment for a fracture presenting as many possibilities as the one under discussion is equally obvious.

With these possibilities in view, unquestionably the first step in the direction of treatment (also one of diagnosis) should be, where possible, a Röntgen ray picture. Unfortunately, it is possible in but a comparatively small percentage of cases. A skiagraph, however, taken before and after reduction, furnishes *prima facie* evidence that the diagnosis was accurate and the reduction as perfect as possible. Reduction may then be performed, in a fairly typical case, as follows:

An assistant should grasp the elbow firmly with one hand, while the other supports and steadies the forearm. The surgeon should then take the hand of the patient into his, precisely as if shaking hands, while the other hand encircles the wrist, with the ball of the thumb pressing gently upon the displaced lower fragment. A combined movement should now be made, consisting of downward traction, adduction, or sweeping of the hand in the direction of the ulnar border, and a slight inclination of the hand toward pronation. When this movement is at its maximum, firm pressure with the thumb upon the lower fragment will usually cause it to slip

into place, sometimes with surprising readiness. This is particularly so if the fracture follows the epiphyseal line. Recurrence does not, as a rule, tend to take place. Reduction should be verified by careful scrutiny—gentle palpation—comparison with the sound arm, and, where, possible, a skiagraph. An anæsthetic is rarely required.

For retention of the fragments, the simpler the form of splint the better. A straight posterior splint, fashioned from a light, thin strip of deal and extending from the upper third of the forearm to the metacarpophalangeal articulation or, if desired, a little beyond, and a similar anterior splint reaching to the middle of the palm, though not extending upward much beyond the middle of the arm, will be found to meet all the requirements. Both should be accurately fitted by means of padding, the posterior having a slight elevation where it impinges upon the lower fragment, the anterior being provided with a cylindrical roll at the lower extremity for the hand to close over. This forms a comforting support for the hand and stimulates to those attempts at flexion and extension of the fingers that contribute so much toward a favorable result. The splints may be retained in position by two or three strips of one-inch adhesive plaster, and snugly covered in by a roller bandage. This at any time can be slit up to admit of inspection. The arm should, of course, be suspended in a sling, in a position midway between pronation and supination. Moulded splints of wire, perforated metal, *papier maché*, felt, and what not are to be had, but possess no advantages over the one described. Plaster and silicate dressings are inadmissible, in ordinary cases, for obvious reasons.

Patient and unremitting after-treatment is, however, the key to success. So soon as the acute stage of inflammation has subsided, movements of flexion and extension of the fingers, both active and passive, should not only be encouraged, but insisted upon. Marbles of various sizes may be manipulated between the fingers; a pen or pencil may be held and movements necessary for writing performed. Any movement, however slight, causes the tendons about the wrist to glide in their sheaths, and tends to preserve their mobility and prevent adhesions. Just the moment that it is deemed consistent with safety—and herein enters the personal equation—the splints should be removed and a slight tentative attempt made toward a *backward* movement of the hand at the wrist. If attended by no untoward consequences, the passive movements at the wrist may be gradually extended from day to day. They should always be performed by the surgeon himself. The splints may be dispensed with at as early a period as possible—the anterior first—and a firm muslin roller substituted.

It may be said briefly that upon the patience and thoroughness with which these movements, active and passive, of the fingers and wrist are carried out depend the integrity and future usefulness of the wrist joint. They may be supplemented, sooner or later, by little movements of massage, aided, perhaps, by some emollient preparation. The patient should be reassured as to the character of the tumefaction about the joint, some reserve, however, being maintained as to the probability of its ultimate complete disappearance. The same reserve should also be maintained as regards the perfect restoration of function, which, above all, is the one thing to be earnestly hoped for.

CORRECT INITIAL REDUCTION THE ESSENTIAL.

Dr. Charles P. Granger, of Rochester, Minn., writes:

The main element of success in the treatment of Colles's fracture consists in doing the right thing at the beginning, making accurate reposition and then holding the parts in place.

In most of the cases encountered no difficulty is experienced. Suddenly flexing the wrist and putting strong pressure with the thumb on the lower fragment will be all that is necessary to effect reduction. But in some cases reduction is difficult, and occasionally impossible. In case this simple procedure does not succeed, turn the dorsum of the patient's hand upward and grasp the forearm in such a way that the radius may be firmly held. The surgeon's thumb being placed immediately over the line of fracture, with the other hand grasp the hand of the patient and carry it forcibly backward in extreme extension, which loosens the lower fragment so that it may be pushed into place by the thumb, and at the same time, the hand, being all the time kept in full extension, is carried into the straight position. Reduction failing, the patient should be anesthetized, and the manœuvre repeated. It is of the utmost importance that the posterior displacement be fully corrected if possible, but should there be a crushing of the spongy tissue and shortening of the outer border of the bone, proper correction is impossible.

Roberts says that, as a rule, the attending surgeon does not use enough force to correct the displacement. If insufficient force is used, the "silver-fork" deformity is but partly corrected, and the patient will have neuralgia and œdematous and stiff fingers. The force must be sufficient to detach the lower fragments from the upper, and drive the lower fragment into place. Roberts argues that it would be well to reduce the fracture by laying the patient's arm on a table, covering it with a towel, and hammering the fragments into place with a mal-

let. Placing the patient's arm under a pile-driver would probably accomplish the same result, and the one procedure would be welcomed about as warmly as the other by the patient and his sympathetic friends.

In those rare cases in which there is no displacement, force of any kind is unnecessary, and to the younger members of the fraternity one is impelled to remark that there is no apparent necessity for describing an arc with the patient's hand about the forearm in order to demonstrate to the captious critics usually present that the surgeon's fee is going to be fairly earned or something else broken in the attempt.

In ordinary cases there will not be any difficulty in preventing a redisplacement after reduction, in case the arm is protected from further injury. The injury is too extensive to allow of a good result from any dressing which permits of the use of the wrist or fingers. The ligaments are stretched, torn, or entirely ruptured. The tendon sheaths are injured, the synovial sacs are bruised, the periosteum is torn and subjected to considerable strain, and the effusion of blood and lymph along the tendon sheaths tends to the formation of adhesions.

After a considerable experience in treating this form of fracture, I am inclined to the belief that to be effective, the dressing must extend to the fingertips, although there are cases where for the first few days I should advise simply a flannel roller about the wrist, together with a compress half an inch thick on the front of the arm and a suitable sling.

A splint may be extemporized from a shingle or any piece of light wood. It should be applied to the dorsal surface, and in shape should conform to that of the arm, being no wider in any place than the arm, and should extend at least to the metacarpophalangeal joints. Pad the splint with oakum, and cover the oakum with patent lint or an ordinary roller bandage. It is well to pad thicker over the carpus and metacarpus, thereby keeping the hand in slight flexion. Beginning with the fourth day, the thumb and fingers should be flexed, and after the first week it is advisable to remove the dressing daily and massage the wrist. In an average case the splint will not be required longer than three weeks. I have tried the adhesive-plaster wristlet and the plaster-cast method. To any aspiring young surgeon who expects in time to have streets named after him I would not advise either method.

The time-honored Bond splint, properly adjusted, has much to recommend it. With its use, the bandage should be rather tight, not much padding under the forearm, and the hand elevated upon a pad or block. The splint should extend from the inner condyle of the humerus to the metacarpophalangeal joints, and its width should correspond to the hand,

wrist, and forearm. Oakum is the best padding, and by its proper use the curve of the radius and ulna may be preserved. I think it wise to place a little cotton between the fingers and to immobilize them for the first ten days, except when giving passive motion.

In closing, there are a few points I would emphasize. Be sure the fracture is properly reduced, that the posterior displacement is fully corrected, remembering, however, that instances occur where deformity is inevitable. If the radio-ulnar ligaments are torn, or if the tendon of the extensor carpi ulnaris is displaced, the tendency to deformity may be difficult to overcome.

Be sure that the arm of your patient is midway between supination and pronation.

Assure yourself that the splint "fits" your patient. See that it is properly padded and that the fingers are immobilized for at least ten days, except when undergoing passive motion.

THE MECHANICS OF THE DISPLACEMENT SHOULD BE TAKEN INTO ACCOUNT IN REDUCTION.

Dr. Edwin M. Hasbrouck, of Washington, D. C., sends us the following:

The fact that Colles's fracture is by far the most frequent befalling the upper extremity makes it imperative that the best method should always be at the command of the surgeon without his having to wait or return for special splints, or to remove a temporary dressing to apply a permanent one. A fracture, once set, should never be disturbed for any such trivial reason, and it has always been considered that that method was best which precisely

A Colles's fracture is at once apparent from the classical deformity caused by the position of the



FIG. 2.

fragments, which in the vast majority of cases is a tipping up of the lower fragment, with the styloid



FIG. 3.

process pointing downward, the lower end of the upper fragment somewhat underriding the lower fragment.

The method of reduction should take into account the mechanics of the displacement. Grasp the fractured limb as shown in Fig. 1, using the thumbs as a fulcrum reinforced by the knee (Fig. 2), pull the fracture apart (*i. e.*, the hand away from the forearm), at the same time bending it around the fulcrum. It can be done almost instantly, in fact, before the patient can do more than utter a sharp cry of pain, and it is all over. Occasionally reduction is more difficult and has to be done under anæsthesia, but the method above described will suffice ninety-nine times out of a hundred. After reduction, the hand is in the position of "wrist-drop," and should be kept so for the proper coaptation of the fragments. The old flat Bond splint will not do this and should not be used. A Levis's splint, as made,



FIG. 1.

served the purpose and was ready at hand without elaborate preparation or paraphernalia.

is precisely the thing in ready-made splints, but it may be miles away when wanted, and I am accustomed to make such a posterior splint as is shown in Fig. 3. It should reach nearly to the elbow, and after padding, an ordinary roller bandage is fastened



FIG. 4.

to one end by adhesive strips as shown. The anterior splint is slightly shorter, and after being well padded is placed in position with one end resting immediately beneath the fracture, while the posterior splint is applied so as to press the hand into the position of forced "wrist-drop" (Fig. 4), and the two are firmly strapped with three or four narrow adhesive strips, and the arm placed in a sling. The dressing should be inspected at the end of a week and any loosening of the straps corrected. Slight passive motion may be begun at the end of two weeks, and repeated with increased range of motion every second or third day. Splints may be removed at the end of four weeks, and in some cases three.

The advantages alleged for this method are:

1. The method of reduction is adapted to the mechanics of the fracture.
2. The splints are always at hand after a few minutes' work with knife and bandages.
3. By the mechanism of their counter-pressure they maintain the fragments in absolute position.
4. They are permanent.

THE IMPORTANCE OF PASSIVE MOTION AND MASSAGE.

Dr. Harold W. Banks, of Escanaba, Mich., says:

1. Cleanse the arm and hand thoroughly with warm water, brush, and soap, followed by alcohol, and cover it with a sterile towel.
2. Employ anæsthesia, unless refused or deemed unnecessary.
3. Reduce the fracture. Grasp the hand as in shaking hands, with two fingers extended to grasp the wrist, and, while support and counter-extension

are made at the flexed elbow by an assistant, make extension and manipulation, and with the free hand assist in reducing the displacement. By manipulation and lateral flexion replace the tendon of the extensor carpi ulnaris, which may be dislocated from its groove on the styloid process of the ulna. Should it be impossible to reduce the fracture because of immobility from overriding or impaction at the seat of fracture, mobilize the parts by forcible flexion and extension.

4. Apply well-padded anterior and posterior splints extending from near the elbow to the root of the fingers, the fingers being flexed in easy position, the hand being semi-prone. Apply adhesive plaster strips and a roller bandage, and place the arm in a low sling, with the hand in slight flexion and midway between pronation and supination.

5. About the fourth day begin passive motion of the fingers and thumb, to be continued twice daily for seven or eight days, when the dressings are to be removed for the purpose of massage of the forearm

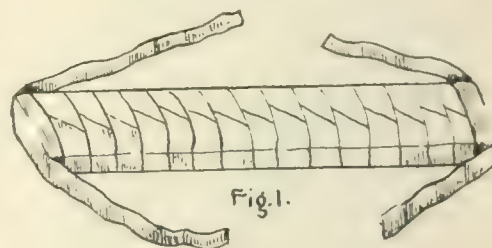


Fig. 1.

and passive motion of the wrist, supporting carefully the seat of fracture. The splints and dressings are reapplied or a substitute splint moulded to fit and support the parts. It may be of plaster of Paris, fibre, metal, or carved wood. The elbow and shoulder joints are given passive motion. The dressings are removed daily or every second day for massage and passive motion. It is essential

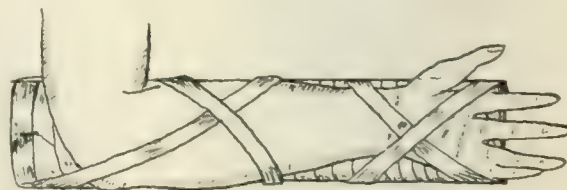


Fig 2.

that this be done in order to prevent adhesions of the tendons and ligaments, and also to limit the formation of provisional callus, and to keep up the strength of the idle muscles. After five or six weeks, active motion and light exercise of the hand may be permitted, depending somewhat upon age and business requirements, but a supporting bandage may be used till strength is restored.

THE LATE DR. VAN ARSDALE'S SIMPLE DRESSING
FOR FRACTURE OF THE LOWER
END OF THE RADIUS.

Dr. Frederic Griffith, of New York, contributes the following:

The dressing to be described is that of the late Dr. Van Arsdale, and the writer, having found no mention of it in the published works of that surgeon, would place before the profession what seems to be a method of treating this form of fracture which fulfills every indication, yet is of the simplest.

In the treatment of these commonest of the fractures of the forearm, Colles's being taken as the type, we must consider displacement of the fragments, pain and discomfort of the patient during the setting and uniting of the bone, and restoration of function.

To procure proper relaxation and secure the best conditions for a good result from treatment of these fractures, an anæsthetic is necessary. Nitrous-oxide gas, when obtainable, could play a happy rôle where these cases are concerned; chloroform or ether, however, may as well be used. The question of danger from the administration of an anæsthetic should, I think, have no weight in these cases, where the whole future usefulness of the member often-times depends upon the value of the momentary manipulations when the bone is "set."

The classical splint for Colles's fracture is that of Dr. Bond, pictured in surgical text-books, but seldom at hand when needed.

By the aid of a long posterior splint, made of a shingle piece of quarter-inch board, moderately padded, some cotton-batting, and a roller bandage we can obtain in the simplest way the fulfillment of the requirements for perfect retention of the fractured bone.

After apposing the fractured ends of the bone (and a Colles's fracture, when well set, will be retained in place without being held), place the splint posteriorly and hold it in position by two straps of adhesive plaster.

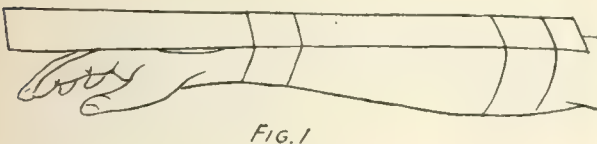


FIG. 1

The pain caused by over-extension of the wrist joint is overcome by a pad of cotton packed snugly between the back of the hand and the lower surface of the splint (a, Fig. 2). The pressure point at the end of the splint (b) may also be relieved by cotton.

The application of the bandage, which had best be a two-and-a-half-inch muslin roller, should be

gin at the middle of the forearm, with turns from left to right until the splint and forearm are covered; coming down to the wrist, the bandage is brought across the back of the hand, passing between the thumb and forefinger to the palmar surface and then up and around the splint, continuing these

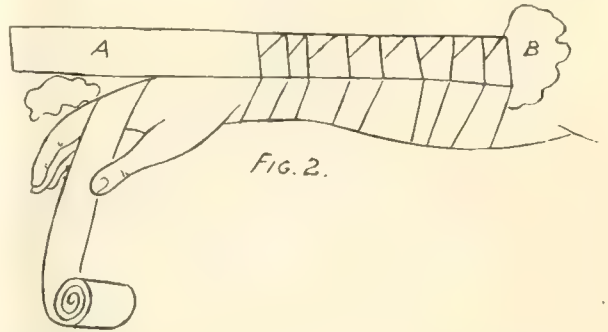


FIG. 2.

figure-of-eight turns three or four times, until the hand is well held in the flexed position. A sling completes the dressing. The pain caused by over-extension of the wrist joint which occurs in the usual forms of dressing for this fracture may be overcome by flexing the joint by means of a pad of cotton, etc.

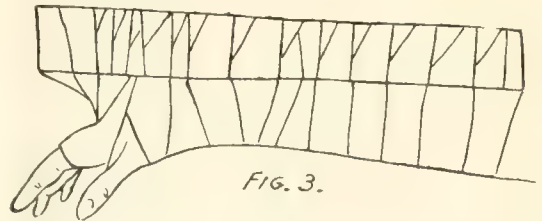


FIG. 3.

THE ADHESIVE-PLASTER TREATMENT.

Dr. B. E. Henrahan, of New Haven, Conn., says:

In treating Colles's fracture, I reduce the deformity by over-extension to separate the fragments, by longitudinal traction, and by forced flexion. I place the arm upon a Bond's splint, which brings the hand in a natural position of rest (semi-flexion of the fingers, semi-extension of the wrist, and deviation of the hand toward the ulna). A dorsal pad is placed over the lower fragment, and a pad for the flexor surface is placed over the upper fragment. A bandage is then applied, leaving the thumb and fingers free. I begin passive motion upon the fingers in about four or five days, and upon the wrist about the latter part of the second week. The splint may be removed in three or four weeks, and a bandage worn for a week or two more because of the swelling.

I have successfully treated Colles's fracture by means of adhesive or rubber plaster. It is a simple method of treatment, and seems to meet all requirements. The application may be set forth in this

manner: A strip of rubber plaster, two and a half inches wide, is wound about the arm just above the wrist joint. A second piece is placed exactly over the first, a fold being made in it on the radial side, which stands out from the arm far enough to allow a large hole to be made in it. Through this hole a string is passed, and the arm is held high up on the chest, the hand dropped downward toward the ulnar side.

The treatment is rather painful at first, but if the arm is kept high up, venous congestion is avoided and it becomes less painful. The plaster is removed in about two weeks, and the hand simply placed in a sling, while the patient is advised to use it carefully. If there should be extensive hæmorrhage, massage is employed. Massage is especially applicable and important in fractures near joints, it shortens the time of bony union by one third or one half, and greatly improves the immediate functional result.

The plan of immobilizing the limb for a short time in the best possible position, and then applying massage and passive motion, promises equally good results, and especially adapts the method to private practice, in which it is particularly indicated on account of the shortened time required for union and the excellent functional results.

Some surgeons give thyroid medication as a means of consolidation in Colles's fracture, with excellent results.

THE PRIME IMPORTANCE OF COMPLETE REDUCTION; PASTEBOARD AS A SPLINT MATERIAL.

Dr. A. E. Gardner, of Morgantown, Ky., writes:

The golden rule in the treatment of this fracture is to secure, first, a complete and perfect reduction. If this is well done, the after-treatment is a small item. If there are much pain and rigidity of the muscles, I give the patient an anæsthetic, and, with an assistant to hold the shoulder stationary, direct and forcible traction is made upon the arm, drawing the hand, with the dorsal surface upward, over the knee and to the ulnar side. Careful manipulation is then made with the fingers of the left hand, to see that the fragments are properly adjusted, while with the right the arm is still held in extension. Great effort is sometimes necessary to accomplish perfect reduction.

In a simple fracture the ulna itself is a good splint, but in addition to this I apply a very simple dressing, like that of Professor E. M. Moore, of Rochester, which consists of a roller of cotton cloth about two inches in width and about three quarters of an inch in thickness. After being rolled very firmly, it is placed over the anterior surface of the ulna, and made to extend down to its inferior extremity. A strip of adhesive plaster about two inches wide is

then drawn around the wrist over the roller as tight as the circulation of the parts will admit of. The wrist is then suspended in a sling about three inches wide, leaving the hand to go free. The adhesive strip can be slit on top with a pair of scissors if strangulation should occur. This dressing should remain for about twenty days, when it should be removed and passive motion instituted.

In compound fractures, I thoroughly cleanse the wound with a bichloride solution, 1 to 2,000, remove all foreign bodies, adjust the parts, and apply the above described dressing, supplemented by two heavy pasteboard splints cut to exactly fit the forearm. The posterior extends from the elbow to the metacarpal joint, and the anterior from within an inch of the elbow joint to the superior margin of the palm. After being moistened in warm water they are padded with a thin uniform layer of absorbent cotton moulded to the contour of the forearm and secured by a well-applied cotton bandage. A perforation is left in the lower extremity of the anterior splint, for drainage and the application of dressings. My preference for the pasteboard is that it is easily applied, will not slip out of position, and can be found in any household.

The arm should always be held in position until the splints get dry, then placed in a sling and the fingers allowed to go free as before. When the swelling subsides, the dressing should be readjusted.

MOULDED SPLINTS.

Dr. J. Bennett Morrison, of Newark, N. J., writes:

The treatment of a Colles's fracture falls under three heads: 1, reduction; 2, fixation; 3, after-treatment.

1. *Reduction.*—If the patient can bear the manipulations, and there is no muscular rigidity, reduce without anæsthesia. Administer it in necessary cases. When the lower fragment is displaced upward and backward, with or without comminution, rotation, or impaction, proceed as follows: With its posterior surface upward, grasp the forearm with one hand, holding the radius firmly, and resting the thumb on it just above the fracture. With the other hand grasp the patient's hand so that your thumb makes firm pressure upon the posterior surface of the lower fragment. Now produce forcible and extreme extension (backward toward the radius) until the fragments separate. While maintaining strong extension and producing slight traction on the hand, at the same time pressing firmly downward with the thumb on the lower fragment, carry the hand to the straight line. It is well now to flex it slightly and press the lower fragment somewhat beyond (anterior to) the upper fragment. This will probably liberate portions of the anterior liga-

ment, which, when lacerated, frequently interpose themselves between the fractured surfaces. Then carry the hand back to the straight line.

Failing to produce reduction, repeat the movements. Subsequent deformity is frequently due to faulty reduction.

The easy cases to deal with are the comminuted ones. Difficulty increases with rotation or impaction. Here direct manipulation of the fragments, while extension is being maintained, is often successful. With rotation of the lower fragment, the radial side is elevated, and the hand turned markedly inward. While forcibly extending, press the lower fragment downward and outward, describing an arc of a circle with the lower end of the ulna as a centre, then with moderate traction bring the hand to the straight line.

With impaction, direct manipulation during extension will frequently liberate the fragments. If not, try adduction. Flex the elbow, place the forearm in supination, extend the hand, and, with the styloid process of the ulna as a fixed point, produce moderately strong adduction. This will often liberate the fragment, and we reduce as before.

Extension or any force is contra-indicated where there is no displacement.

Fixation.—Except in badly comminuted cases, where it is best to fix the hand, there is no necessity for splinting and bandaging a Colles's fracture from the metacarpophalangeal joint to the elbow. The long anterior and posterior splints, unless very intelligently padded and very early removed, often favor deformity, and the absolute fixation of the hand they maintain is a frequent cause of impaired motion.

The ideal dressings are moulded splints, or at least a moulded plaster anterior splint, made with the hand in adduction, beginning just beyond (distal to) the thenar, and, fitting closely to the configuration of the radius, extending back under the forearm about eight inches. This is lightly and evenly lined with cotton and bound on with a light short posterior splint of any material.

The next best dressing is an anterior splint eight inches long with a bevelled end, extending from the metacarpophalangeal joint back under the forearm, well padded in the hollow of the radius beneath the fracture, and a posterior splint a little longer, extending a half an inch beyond (distal to) the same joint. These are best retained in position with the so-called starch (dextrin) or a light plaster bandage applied over a few turns of a gauze bandage, making the whole dressing as light as possible. Support the forearm in semi-pronation, in a sling, reaching just to the wrist, allowing the hand to droop over to correct the tendency to inward (radial) displacement.

There need be no apprehension because of the mobility of the hand so allowed.

After-treatment.—Remove the dressing on the fifth day, rest the forearm upon the anterior splint, make flexion, extension, and massage and again replace. Remove the dressings every second day now for two weeks, flexing and extending the fingers and wrist thoroughly. The patient told to do this will carry out instructions up to the point of producing pain. You will do so up to the point of producing results.

After the fourth week a simple wristlet of starch or plaster, including the thumb for support and retention, may be worn for two weeks longer.

Therapeutical Notes.

For Boils.—Dr. Jay F. Schamberg (*Therapeutic Gazette*, June) says that boils may at times be aborted by cauterizing the centre of each lesion with pure carbolic acid upon a probe or toothpick.

Lemoyez's Ointment for Eczematous Rhinitis.—The formula is thus given in the *Journal des praticiens* for June 22d:

R Oil of cade. 1 drachm;
Vaseline. 150 grains;
Lanolin. 150 "
Oil of cloves. 5 drops.

M.

An Astringent Dentifrice.—Sabrazès (*Journal de médecine de Bordeaux; Nord médical*, June 15th) gives the following formula:

R Saccharin. 7½ grains;
Benzoic acid. 1 drachm;
Tincture of rhatany. ½ ounce;
Alcohol. 3⅛ ounces;
Oil of peppermint. 7 minims;
Oil of cinnamon. 7 "

M.

For the Dyspepsia of Hepatic Disease.—Dr. Bommier (*Nord médical*, July 15th) gives the following formula as covering many indications:

R Tincture of ipecacuanha, }
Tincture of boldo, } of each, 75 minims.
Tincture of gentian, }
Tincture of nux vomica, }

M. From fifteen to twenty drops after meals in a drink of hot chamomile infusion.

Treatment of Psoriasis with Thyreoid Extract.—This method of treating that persistent skin disease, psoriasis, was inaugurated in England. A Roumanian physician, Petoini-Calatz, of Bucharest (*Archives Orientales*, May, 1900), reports one case in which he used thyreoid extract internally with such good success that he fully endorses the statements of Byrom Bramwell and others who have experimented with this drug in psoriasis.

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THE EVIL OF SUBSTITUTION.

We have more than once inveighed against the "sin" of substitution; we feel warranted in calling it criminal. Only in the rarest of instances is it excusable on the ground of necessity, the prescriber being frankly informed of the circumstances. It is bad enough when it is practised on a customer who asks for a certain article for which he has no prescription, even if the apothecary says to him: "I can't give you that particular make, but I have an article of my own that I know is quite as good—indeed, I feel sure it's superior." But when it comes to surreptitious substitution in filling a prescription, we repeat, it is criminal, if not by legislative enactment, at least by the judgment of all well-ordered persons acquainted with the matter. The offender may be punished, but, to secure his punishment, somebody must take legal proceedings against him. Such proceedings, as the substitutionist well knows, are not likely to be taken, save in the interest of the owners of a proprietary preparation, and he knows, too, the difficulties that often stand in the way even of those active and resourceful persons. And so the nefarious practice goes on, and we have information which leads us to believe that it is decidedly on the increase.

In reality, the practising physician is far more injured than the drug manufacturer by the infamous practice of substitution, but we fear that he has heretofore failed to realize the fact to the full extent; at all events, he has made but feeble efforts to do away with the evil. What is the difference, logically, between fighting disease with treachery as a handicap and fighting for one's own life with a gun from which the charge has secretly been drawn? If our prescriptions are tampered with,

how can we hope to afford our patients that measure of relief which both they and we are entitled to look for? It cannot be too insistently brought home to the medical profession that substitution is an obstacle of the first magnitude in the way of their success, and it cannot be too persistently urged upon them that they should do everything in their power to put an end to it. That this object is largely within their attainment, certainly to a greater extent than they generally realize, we are fully convinced.

What, then, is to be done? In the first place, let every physician make himself acquainted with the character of the dispensing pharmacists doing business in his neighborhood. Without doing anything offensive or undignified, he can usually in the course of a very short time satisfy himself as to whether or not a particular apothecary is a man of scrupulous rectitude. Then let him send his prescriptions to such pharmacists only as he finds to be honest. He will generally find a fair proportion of them come up to his requirements, we are glad to be able to say. We are aware that there are persons who are small-minded enough to found a suspicion on the physician's recommendation of a particular pharmacist, and to intimate that his reason for recommending the one specified is either that he has a pecuniary interest in that man's business in general or that he receives from him a commission on all the prescriptions he sends to the man. Such an intimation is, of course, intensely annoying, but an annoyance will never turn an honorable man aside from the path of duty.

There are some patients, we are quite aware, who, whether on account of the above-mentioned suspicion or for some other reason, will not heed the physician's injunction concerning the prescription, but, taking their own perverse course, will present it at some other pharmacy. What is to be done then? Nothing, unless the medicine fails to act as it was expected to act. If it does so fail, the physician's course should be governed by what he knows of the character of the pharmacist who filled the prescription. If he knows him to be given to substitution, he should peremptorily decline the further conduct of the case unless the patient is now ready to follow his instructions implicitly. If he does not know the character of the apothecary, he should at once investigate it. If he is convinced that substi-

ution has been practised—and he can generally convince himself by sharp cross-questioning—he should then and there give the offender to understand clearly what will happen to him and his business if he does not drop the detestable practice of substitution at once and for all. But to stop at this would be selfish; furthermore, it would fall short of the object to be attained. He should inform his friends in the profession of the facts in the case; at least, he should do so in case he finds that his own protest has been ineffectual. We can even conceive of instances of such inveterate and flagrant practice of substitution as to make it the physician's duty to report the facts to the local medical society. This, we take it, would soon bring the cheat to terms or drive him out of the dispensing business. We feel sure that such efforts as these, persistently put forth, would practically put a stop to the substitution fraud.

A RECENT DISCUSSION ON DIGITALIS.

In these days when new remedies are showered upon us, each alleged to exert some definite beneficial action and to be free from dangerous or unpleasant effects, it is well occasionally to take up anew the study of some of the older drugs. This has recently been done in the case of digitalis by the Academy of Medicine of Cincinnati. At a meeting of that body, held on June 10th, Dr. Robert Ingram read a paper entitled *Some Clinical Uses of Digitalis*, and Dr. Frank Scheerer presented one entitled *Clinical Reports on the Use of Digitalis*. Both papers, together with a report of the discussion, appear in the *Cincinnati Lancet-Clinic* for August 3d.

Dr. Ingram speaks of a condition often met with in men who have practised rowing and other severe exercises to excess, also in soldiers after a long campaign. There is shortness of breath, and the apex of the heart is found to be a little to the outer side of its proper situation, but there is no other demonstrable abnormality. The subjects of this affection, he says, are much benefited by digitalis. In the dilatation of the right half of the heart that so often accompanies chronic pulmonary disease, he thinks, the drug may be of benefit, although usually it is not. As for mitral insufficiency, the more prominent is œdema among its consequences the more good will digitalis generally effect. In mitral steno-

sis, Dr. Ingram thinks, the lengthening of the diastole produced by digitalis is one of its great benefits, for "there will be a greater chance that the diastole will be long enough to allow the normal amount of blood to pass through the constricted orifice." Pursuing the idea of a prolongation of the diastole, Dr. Ingram thought that digitalis often did harm in cases of aortic insufficiency by causing more blood to regurgitate and giving rise to great danger of fatal syncope. In the discussion, however, Dr. George A. Fackler said: "It is not because we are decreasing the length of the systole, and thereby prolonging the diastole, but we are prolonging both in reducing the number of pulsations in a minute, and it is for this reason that digitalis is not contra-indicated in any condition of the heart, especially in those cases where there is a low tension of the pulse." Indeed, it was the general purport of the discussion that the indication for digitalis lay not so much in the cardiac physical signs as in the mere fact of incompetent action of the heart.

More than one of the gentlemen who took part in the discussion mentioned the digestive derangement sometimes caused by digitalis, but they all seem to have recognized the overthrow of the old dread of a cumulative action by the drug. It has been overthrown, and the achievement is commonly supposed to be of quite recent occurrence. That being the general impression, it is interesting to remark that at least one of our New York physicians emancipated himself many years ago; we quote as follows from Dr. Jacobi's *Therapeutics of Infancy and Childhood* (second edition, page 518): "For how long a time may digitalis be administered when given in moderate doses? . . . Unfortunately, the preparations sold in the markets are of different strengths and vary too often; so it is best to rely on preparations which are not liable to spoil on one's hands. With that proviso, I can say, *from an experience of several dozens of years* [the italics are ours], that I cannot agree with those who stop the administration of digitalis after a few days, to begin again after an intermission. Moderate doses may be given day after day for months without any ill effect and with great benefit." Concerning the choice of the preparation of digitalis to be employed, the opinion seems to predominate that a well-made fluid extract, prepared from English leaves, is to be preferred.

CHOLESTERIN AND CANCER.

Just at the time when the chase is hottest after the hypothetical micro-organism of cancer there is made public a most ingenious theory according to which malignancy has nothing to do with any germ, but is simply a state of riotous cell proliferation due to the lack of a restraining secretion which normally holds the proliferation in check. This theory is promulgated by Mr. J. H. Webb, M. R. C. S., in the *Intercolonial Medical Journal of Australasia* for June 20th, and the secretion that is lacking should be furnished by the liver. That "devil's den," as the late Rev. Henry Ward Beecher termed the liver, is no doubt at the bottom of many a woe, but it is startling to find its defective action charged with the production of such an almost hopeless disease as cancer. Mr. Webb points to the preponderating prevalence of cancer among the subjects of hepatic disease, especially cholelithiasis, which has been noted by a number of observers.

At first Mr. Webb imagined that the particular hepatic product known as cholesterin was the deficient substance, and he proceeded to treat a number of cases of malignant disease by means of injections of cholesterin dissolved in a solution of superfatted soap, taking great care to strain the solution so thoroughly that crystals of cholesterin should not enter with the injections. A few of his early results were quite striking, but he found that he succeeded best when there was little if any cholesterin really left in the solution. He therefore was led to revise his theory and to take the view that the solvent was the important agent, but it does not clearly appear that even then he gave up the use of cholesterin altogether. The injections are general or local, preferably the latter, and he employs thyroid medication at the same time. It seems that these injections are not wholly free from danger; the quantity injected should be limited, and the patient should be so situated as to be able to lie down for a time after an injection. From this injunction and from the precautions advised as to straining the soap solution most carefully it may perhaps be imagined that Mr. Webb fears the occurrence of pulmonary embolism as the result of an injection.

For our part, we rank ratiocination far above the mere observer's work, especially when there is a dash of imagination intertwined with it; consequently, should it really prove that Mr. Webb has

solved the great problem of cancer, he will, in our opinion, be deserving of much greater reverence than if he had reached his conclusions by laboratory researches.

TROLLEY CAR FATALITIES.

Trolley car fatalities to children seem to occur with disquieting frequency in the borough of Brooklyn. Another child, aged three years, was run over and instantly killed there on the 10th inst., and demonstrations of violence against the motorman were made by the afflicted father and a sympathizing crowd. Only those who saw it can, of course, tell how far the motorman was to blame. The report says that the car was on a down grade when the child, who was in the charge only of a sister of the tender age of seven years, started to run across the track. The motorman apparently did his best to stop the car, but was not successful. There is no doubt that the employees of the car companies are often very careless of the comfort and safety of both pedestrians and passengers; still they cannot always be to blame, and in the case of irresponsible children of three and seven years, allowed to prowl about the streets without any one to take care of them, it is obvious that they must often be as much sinned against as sinning; and we must attribute quite as much blame to a public which allows the streets to be converted into playgrounds for unattended children. It is a lamentable truth that, owing to the physical conformation of New York, there is a grievous deficiency in playground facilities, and that it would be good, neither for the mental nor for the physical development of the children of the poor, that they should be kept confined in stuffy apartments all the time. But if streets must be used as thoroughfares, and cars must be run with promptitude and despatch, then they cannot safely be used as playgrounds for children also. The onus must lie on the public to show that in a given instance the motorman showed criminal negligence; not on the motorman to make it clear that the child was to blame.

These remarks apply with equal force to the recent lamentable accident at Thirty-fourth Street and Broadway. We repeat, of the particular merits of the cases before us we have no knowledge, but whenever a child is run over by a trolley car, there is always a crowd ready to wreak summary vengeance on the motorman, forgetful of the facts that they demand the use of the cars in the streets, that individually they all use them and desire speed in their transportation, and that the children are not kept out of danger by their proper custodians. Gunpowder and

matches are both necessary articles in modern existence, yet they are dangerous when in proximity; and if the location of the gunpowder is inevitably fixed by circumstances, the matches must be kept out of the way, unless an occasional explosion is to be counted upon. Some other solution of the playground difficulty than attacking motormen indiscriminately for every accident must be found.

At the time of going to press news of another similar fatal accident in Madison Avenue reaches us, accompanied by the same threats of violence to the motorman. This only renders the need of our protest more urgent.

THE NEW YORK STATE EXAMINATIONS.

In some remarks on the new intermediate examination, in the *Journal* for August 10th, we expressed disapproval of the supposed rule that candidates who failed, either in the intermediate or in the final examination, to win a mark of seventy-five per cent. in one or more "topics" must be examined again in all the "topics," and must wait six months for the privilege. We are indebted to Dr. Harold Duncan Cochrane, of Albany, for more accurate information. He informs us that a candidate taking the intermediate examination in anatomy, physiology, and chemistry is obliged to pass with a mark of seventy-five per cent. or over in each and every subject; failing to do so, he must be examined again in all three subjects at the expiration of six months. Candidates taking the final examination in pathology, obstetrics, surgery, and materia medica, provided they fail in only one subject, require to be examined again in that one branch only. Candidates taking the entire seven "topics" at the end of their course and failing in one subject are required to be examined again in that one branch only. We presume there is some good reason for this discrimination, but none seems to us obvious.

THE HAVANA MOSQUITO TESTS.

It is to be regretted that the tests recently made in Havana of the agency of mosquitoes in conveying yellow fever have given rise to a death, even that of a person who submitted to the bite in order to acquire immunity. We are glad to learn, therefore, that the experiments have been discontinued. Enough has been done to show that mosquitoes may convey the disease.

A Medical Society Proposed for Sanilac County, Mich.—There is talk of a medical society being formed at Sanilac county, Mich.

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general, during the week ending August 17, 1901:

Smallpox—United States.

Kansas.....	Wichita.....	July 27-Aug. 3.	1 case.	
New Hampshire.....	Nashua.....	July 27-Aug. 3.	2 cases.	
New Jersey.....	Newark.....	Aug. 3-10.....	4 cases.	1 death
New York.....	New York.....	Aug. 3-10.....	36 cases.	13 deaths
Ohio.....	Cleveland.....	Aug. 3-10.....	1 case.	
Pennsylvania.....	Philadelphia.....	Aug. 3-10.....	8 cases.	
Utah.....	Salt Lake City.....	Aug. 3-10.....	1 case.	
Washington.....	Tacoma.....	July 26-Aug. 4.	3 cases.	
Wisconsin.....	Milwaukee.....	Aug. 3-10.....	1 case.	

Smallpox—Foreign.

Brazil.....	Pernambuco.....	June 15-July 15		81 deaths.
"	Rio de Janeiro.....	June 1-30.....		52 deaths.
Colombia.....	Panama.....	July 29-Aug. 5.	7 cases.	1 death.
Egypt.....	Cairo.....	July 1-22.....		2 deaths.
France.....	Marseilles.....	June 1-30.....		4 deaths.
"	Paris.....	July 20-27.....		3 deaths.
Gt. Britain.....	Dundee.....	July 20-Aug. 3.	6 cases.	
"	Glasgow.....	July 27-Aug. 2.	2 cases.	
"	London.....	July 20-27.....	11 cases.	
India.....	Bombay.....	July 8-16.....		6 deaths.
"	Calcutta.....	July 6-13.....		3 deaths.
"	Madras.....	July 6-13.....		8 deaths.
Italy.....	Messina.....	July 20-27.....	19 cases.	16 deaths.
"	Naples.....	July 14-28.....	99 cases.	10 deaths.
Mexico.....	Mexico.....	July 21-28.....		1 death.
Russia.....	Moscow.....	July 13-20.....	4 cases.	2 deaths.
"	Odessa.....	July 20-27.....	3 cases.	
"	Warsaw.....	July 13-20.....		3 deaths.
Spain.....	Barcelona.....	July 1-20.....		5 deaths.
Uruguay.....	Montevideo.....	June 8-15.....	12 cases.	

Yellow Fever.

Colombia.....	Bocas del Toro.....	Aug. 2.....		1 death.
Costa Rica.....	Port Limon.....	Aug. 3.....	4 cases.	1 death.
Cuba.....	Havana.....	July 27-Aug. 3.	3 cases.	1 death.
"	Marianao.....	July 27-Aug. 3.	1 case.	1 death.
"	Pinar del Rio.....	July 27-Aug. 3.	1 case.	
"	Regla.....	July 27-Aug. 3.	1 case.	1 death

Cholera.

India.....	Bombay.....	July 6-13.....		15 deaths.
"	Calcutta.....	July 8-16.....		2 deaths.
Java.....	Batavia.....	June 22-July 6.	63 cases.	43 deaths.

Plague.

China.....	Hongkong.....	June 22-July 6.	109 cases.	107 deaths.
India.....	Bombay.....	June 8-16.....		101 deaths.
"	Calcutta.....	July 6-13.....		16 deaths.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending August 17, 1901:

DISEASES.	Week end'g Aug. 10		Week end'g Aug. 17	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	67	15	56	12
Scarlet fever.....	108	11	120	9
Cerebro-spinal meningitis.....	0	1	0	7
Measles.....	99	13	72	2
Diphtheria and croup.....	131	22	136	27
Small-pox.....	36	13	36	6
Tuberculosis.....	239	144	271	164

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the seven days ending August 15, 1901:

ANDERSON, J. F., Assistant Surgeon. Relieved from duty at Liverpool, England, and directed to proceed to New York and await orders.

GARDNER, C. H., Passed Assistant Surgeon. Granted leave of absence for fourteen days from August 17th.

GEDDINGS, H. D., Passed Assistant Surgeon. Granted leave of absence for one month and fifteen days from August 15th.

GOLDSBOROUGH, B. W., Acting Assistant Surgeon. Granted

leave of absence for seven days from August 11th, and twenty-one days from September 5th.

GRUBBS, S. B., Assistant Surgeon. Granted leave of absence for three days from August 12th.

HANRATH, F. R., Hospital Steward. Granted leave of absence for ten days from August 12th.

LORD, C. E. D., Assistant Surgeon. Granted leave of absence for seven days, under Paragraph 178 of the *Regulations*.

PRIMROSE, R. S., Acting Assistant Surgeon. Granted leave of absence, on account of sickness, for twenty-one days from August 10th.

ROBBINS, S. D., Acting Assistant Surgeon. Granted leave of absence for thirty days from August 5th.

WALERIUS, M., Hospital Steward. Granted leave of absence, on account of sickness, for twenty-three days from August 8th.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending August 17, 1901:

ELLIOTT, M. S., Passed Assistant Surgeon. Detached from the *Annapolis* and ordered to the *Kentucky*.

GARDNER, J. E., Surgeon. Detached from the Naval Hospital, Cavite, Philippine Islands, and ordered to the Brooklyn temporarily.

HIGH, W. E. G., Assistant Surgeon. Detached from the *Kentucky* and ordered to the *Glacier*.

KENNEDY, J. T., Assistant Surgeon. Detached from the Marine Brigade and ordered to the *Brooklyn*.

ODELL, H. E., Assistant Surgeon. Detached from the Naval Hospital, Cavite, Philippine Islands, and ordered to duty with the Marine Brigade.

ROGERS, F., Medical Inspector. Detached from the *Brooklyn* and ordered home.

SHIPP, E. M., Passed Assistant Surgeon. Ordered to the Cavite Naval Station, Philippine Islands.

ULSH, W. H., Assistant Surgeon. Detached from the *Glacier* and ordered to the *Annapolis*.

Another Lady Physician Interne in England.—

Slow as it may be, progress is being made in England in the recognition of equality for women as regards their medical status. Miss Agnes Brymner Sinclair, M. B., B. Ch., Glasgow, has been appointed a resident medical officer to the Carlisle dispensary.

A Brooklyn Physician Seriously Injured in a Runaway Accident.—

Dr. J. C. Kennedy, of Brooklyn, surgeon-in-chief of the consulting staff of St. Catherine's Hospital, was seriously injured on August 17th in attempting to save the life of his carriage boy, while the latter was being run away with in the doctor's carriage.

Cocaine as a Means of Suicide.—The recent suicide of two young women in London by means of cocaine, has directed attention to the ease with which considerable quantities of this drug can be obtained. The expediency of adding cocaine to the schedule of the Poisons Act of 1868 (England) is under official consideration.

A Sanitary Convention for Michigan.—Secretary Baker, of the Michigan State Board of Health, has arranged for a sanitary convention to be held at Ludington on September 5th and 6th. It will be addressed by prominent sanitarians. The subjects of sewerage, water supply, communicable diseases, the hygiene of the home and the milk supply will be considered.

A St. Louis Physician Quarantines Himself with a Leper Patient.—Dr. Louis Knapp, aged forty, a practising physician of St. Louis, will isolate himself from the world to nurse Dong Dong, a Chinese leper, who was found in that city two weeks ago. The doctor, who is a graduate of a Detroit medical college, took final leave of his wife and four children on August 20th.

Dr. Knapp and his patient will live in a three-room frame house now being built by the city authorities at quarantine until necessity for his service shall have ended. Dr. Knapp will take his library to quarantine and will devote the greater part of his time to the study of leprosy. It is said that there were five other applicants for the position.

A Medical Board to Examine Caldas and Bellingaphi's Yellow Fever Serum.—An order has been issued at the war department, Washington, convening at Havana a board of medical officers headed by Major Havard, chief surgeon of the Department of Cuba, for the purpose of examining into the proposition of Dr. Caldas and Dr. Bellingaphi, who will submit a cure for yellow fever and a serum designed to prevent the contraction of that disease. Dr. Caldas is a Brazilian, and his proposition recently was submitted to the war department by the Brazilian minister. A letter has been received at the surgeon-general's office from Major Havard saying that two suspected cases of yellow fever had been discovered in Havana. In connection with these experiments the yellow fever commission will supply the mosquitoes. The commission has eight insects which have bitten a person suffering with a bad case of yellow fever. Two of the mosquitoes subsequently bit two persons, who have since developed well-marked attacks of the disease. The eight mosquitoes will be divided into two divisions. Two persons whom Dr. Caldas will inoculate with his serum will be bitten by two mosquitoes each. The other four mosquitoes will bite two non-immunes, two each. As all eight mosquitoes were infected from the same person, and as two of them have already given yellow fever to two persons, it is inferred that the arrangement will afford a good test of the preventive value of the serum, although other experiments will probably be conducted.

Since the foregoing was written Major Havard has announced that the mosquito tests as to propagation of yellow fever will be discontinued. This decision was reached because one of the non-immunes who was recently bitten by an infected mosquito has died of yellow fever. The man, who was a Spaniard, desired to become an immune and therefore allowed himself to be bitten by the mosquito. Another man who was bitten is also dead.

According to Major Havard, the cases due to mosquito infection prior to the latest two were light. But, as the insect infection has assumed a more dangerous form than the first experiments led the Yellow Fever Commission to expect, it is now thought best not to allow Dr. Caldas's and other proposed experiments in this line.

A New York Physician Wrongfully Arrested on a Charge of Illegal Practice.—Dr. Michael Iovane, of No. 2037 First Avenue, New York, was recently charged by Henry Loring, an agent of the Medical Society of the County of New York, with having practised medicine without being registered as required by law. After dismissing the case and discharging Dr. Iovane, Magistrate Zeller endorsed the papers in the case as follows: "This arrest is an outrage. This defendant is a physician duly licensed and is registered; complaint is dismissed on motion of attorney for complainant." The reason for the magistrate's action was that when Dr. Iovane was called to the stand he produced his diploma as a graduate of New York University and his certificate of registry, dated July 13th. When Magistrate Zeller saw the evidence he said: "It was a shame to bring this reputable physician here on a warrant, when a summons would have been just as effective. It was gross negligence to the part of the officer." Dr. Iovane and his counsel said that a suit for false arrest would be immediately instituted against the Medical Society of the County of New York and its agent. Loring's defense was that he had looked over the records of registry and had failed to find Dr. Iovane's name.

The Lane Medical Lectures.—The sixth course will be given at San Francisco, Cal., by Mr. Malcolm Morris, F. R. C. S., in 1901, on the subject of The Pathology of the Skin in Relation to Certain Social Problems. These lectures will be given on the days and hours as follows:

September 2d, 11 a. m.—Introductory: Social Aspects of Skin Diseases; General Outline of the Subject.

September 2d, 8 p. m.—Inoculable Diseases of the Skin—Animal Parasites—Scabies, Pediculosis—Vegetable Parasites—Ringworm—Favus—Recent Researches in Fungi Producing them—Need of Special Schools for Ringworm Children—The Hygiene of the Barber's Shop.

September 3d, 11 a. m.—Local Inoculable Diseases—Contagious Impetigo and Sycosis—Boils—Carbuncles—Acne—Actinomycosis—Elephantiasis—Prevention and Treatment.

September 3d, 8 p. m.—General Inoculable Diseases of the Skin—Tuberculosis—the Part Played by the Skin in its Dissemination—the Crusade for its Extirpation.

September 4th, 11 a. m.—Lupus—the Light Treatment—other Modern Treatments.

September 4th, 8 p. m.—Syphilis—the International League—Leprosy in the Past and in the Present.

September 5th, 11 a. m.—Affections of the Skin Dependent on Nerve Disorder—Prurigo and other Itching Affections—Mental Effects of Cutaneous Irritability—Skin Diseases in the Insane—Erythema—Lupus Erythematosus—Rosacea—Herpes Zoster—Pemphigus.

September 5th, 8 p. m.—Diseases of Unknown Causation—Eczema—Psoriasis—Pityriasis Rubra.

September 5th, 8 p. m.—Hysterical Œdema—

Feigned Eruptions—Stigmata—Bloody Sweat—Dermographism—Diabolic Marks.

September 6th, 11 a. m.—Diseases of Unknown Causation—Eczema Psoriasis—Pityriasis Rubra.

September 6th, 8 p. m.—Malignant Diseases of the Skin—Epithelioma Cutis—Rodent Ulcer—Röntgen Rays Treatment—Mycosis Fungoides.

The Mississippi Valley Medical Association.

The twenty-seventh annual meeting will be held in Put-in-Bay, Ohio, on Thursday, Friday, and Saturday, September 12th, 13th, and 14th, under the presidency of Dr. Albert H. Cordier, of Kansas City, Missouri. In addition to the president's address, the preliminary programme contains the following titles: Address in Medicine, by Dr. Frank Billings, of Chicago; Address in Surgery, by Dr. Reginald H. Sayre, of New York; The Pathological Cause of the Eruption in the Exanthemata, by Dr. James M. Postle, of Hinckley, Illinois; Acute Intestinal Auto-infection, by Dr. John M. Batten, of Downingstown, Pennsylvania; Surgery of the Palate, by Dr. Truman W. Brophy, of Chicago; Some New Remedial Agents in the Treatment of Gynæcologic Affections, by Dr. Chauncey D. Palmer, of Cincinnati; Hæmatology, by Dr. L. H. Warner, of New York; The Surgical Treatment of Pulmonary Abscess, by Dr. D. N. Eisendrath, of Chicago; The Severing of the Vas Deferens and its Relation to the Neuropsychopathic Constitution, by Dr. Henry C. Sharpe, of Jeffersonville, Indiana; Adrenaline, the Active Principle of the Suprarenal Glands, its Mode of Preparation, by Dr. Jokichi Takamine, of New York; Varicose Veins and their Treatment, by Dr. James L. Johnson, of Louisville; Subdural Hæmatoma from Pachymeningitis Hæmorrhagica Interna, by Dr. Charles J. Aldrich, of Cleveland; Some Obscure Injuries which Follow the First Toxic Action of Alcohol, by Dr. Thomas D. Crothers, of Hartford, Connecticut; The Sterilization of Rubber Gloves, Catheters, etc., by Formaldehyde Gas, Correct and Erroneous Culture Tests, by Dr. A. Goldspohn, of Chicago; Auto-intoxication and its Treatment, by Dr. Charles H. Shepard, of Brooklyn; Aboriginal American (Indian) Contribution to Therapeutics, by Dr. B. T. Whitmore, of New York; The Bed-treatment of the Insane, by Dr. Frank Parsons Norbury, of Jacksonville, Illinois; The Clinical Diagnosis of Carcinoma of the Œsophagus and the Technics of Gastrostomy, by Dr. Charles G. Cumston, of Boston; Clinical Notes on Gleet, by Dr. August Ravogli, of Cincinnati; Dentists' Neck, a hitherto Undescribed Neurosis, by Dr. Albert E. Sterne, of Indianapolis; The Value of Mechanical Appliances in the Aid of Intestinal Suture, by Dr. Edward H. Lee, of Chicago; The Morbid Conditions of the Upper Respiratory Tract Resulting from Infectious Diseases, by Dr. Colus M. Cobb, of Boston; Congenital Valvular Obstipation, by Dr. Thomas C. Martin, of Cleveland; Features Determining the Permanency of Cure in Radical Operations for Hernia, by Dr. A. J. Ochsner, of Chicago; Science and Christian Science, their Claims and Miracles, by Dr. Paul Paquin, of Asheville, N. C.; Gastric Lavage, its Uses and Abuses, by Dr. Thomas H. Stucky, of

Louisville; Some Causes of Ignored Syphilis and their Remedies, by Dr. M. L. Heidingsfeld, of Cincinnati; A Few Cases of Hysteria, by Dr. Hugh T. Patrick, of Chicago; A New Method of Controlling Hæmorrhage in Operations upon the Head and Neck, by Dr. George W. Crile, of Cleveland; Tripartition in the Study of the Female Pelvis, by Dr. A. Ernest Gallant, of New York; Scientific Aids to Diagnosis, by Dr. Henry D. Holton, of Brattleboro, Vermont; How Should Appendicitis Cases be Treated? by Dr. Joseph Price, of Philadelphia; A Case of Unilateral Fulminating Optic Neuritis Cured by Trephining the Sphenoidal Sinus, by Dr. J. O. Stillson, of Indianapolis; Surgical Cases from a Medical Standpoint, by Dr. I. N. Love, of New York; The Surgical Features of Typhoid Fever and Dysentery, by Dr. Hal C. Wyman, of Detroit; Surgical Intervention in Pulmonary Abscess, by Dr. Willis G. Macdonald, of Albany; A Report of One Hundred Cases Operated in for Appendicitis, by Dr. William J. Gillette, of Toledo; The Surgical Treatment of Diseases of the Stomach, by Dr. Albert Vander Veer, of Albany; Some Indications for Gastro-enterostomy, by Dr. William J. Mayo, of Rochester, Minnesota; The Young Doctor, by Dr. Emil Amberg, of Detroit; Fractures, by Dr. E. B. Smith, of Detroit; Cancer of the Uterus, by Dr. Louis Frank, of Louisville; Floating Liver, by Dr. J. H. Carstens, of Detroit; and The Acquirement of Nervous Health, by Dr. Frank Savary Pearce, of Philadelphia.

Diphtheria.—Reports of a number of cases come from Lowell, Mass., and from Evanston, Ill.

Few Cases of Hay Fever Reported.—Chicago physicians report that, for reasons which they cannot explain, they have had almost no cases of hay fever this summer, and although there has been no such statement from physicians in New York, the experience of many confirmed hay-fever sufferers points to a similar situation in the East.

Typhoid.—Typhoid still continues its ravages in Pennsylvania. At Pittsburgh many new cases are reported, and at McKeesport stringent measures to clean the city have been taken. The city hospital there is crowded. The disease is epidemic in Susquehanna county and at Philadelphia. —Other cities in which the disease is prevalent are Chicago and New Bedford, Mass. —There have also been many cases at Baraboo, Wis., but no epidemic there.

Small-pox.—As almost two days passed in New York recently without one case being reported, the disease is now believed to be waning. Since last September anywhere from two to twenty cases have been reported each day. —Several cases have been reported recently in West Hudson towns, New Jersey, as well as in Newark. —There has also been a lively scare at Boston. —Ottawa, Ont., also reports a number of cases, while stringent measures to compel vaccination have recently been taken at St. Paul, Minn. —In Northern Wisconsin detention hospitals are to be established in the lumber camps.

A Collective Investigation of the Influence of Silver-nitrate Injections on Phthisis.—*To the Members of the Medical Profession:* In 1892 the undersigned began a collective investigation of the action of cold in the treatment of acute pneumonia, and there is reason for believing that this procedure, which resulted in gathering four hundred cases of this disease thus treated, with a death rate of not quite five per cent., was an important factor in calling attention to the utility of that treatment and in introducing it to the profession of this country. That research was based on the conviction that no remedy could be called truly successful until it had passed the exacting crucible of clinical experience, and it is now proposed to apply the same ordeal to the silver-injection treatment of phthisis, which, in a large hospital, dispensary, and private practice reaching over a period of three years, during which many thousand injections were administered, has given me greater satisfaction than any other method that I have ever employed. In keeping with the above-expressed feeling a cordial invitation is herewith tendered to those members of the profession who have the inclination and opportunity to investigate this method of treating phthisis, to whom a reprint on the subject, with full information and blanks to report cases, will be cheerfully sent on application.

THOMAS J. MAYS, M. D.

1829 Spruce Street, Philadelphia, August 15, 1901.

Births, Marriages, and Deaths.

Married.

CLARK—McGLAUFLIN.—In San Francisco, on Tuesday, August 6th, Dr. I. M. Clark, of Alameda, California, and Miss Ivy M. McGlauflin.

RHEIN—NORRIS.—In Philadelphia, on Thursday, August 15th, Dr. John H. W. Rhein and Mrs. Elizabeth Kane Norris.

SCHÖNEY—FOWLER.—In New Haven, on Wednesday, August 14th, Dr. Lazarus Schöney, of New York, and Miss Theodosia Secor Fowler.

SIMPSON—CONZETT.—In Warren, Ohio, on Wednesday, August 7th, Dr. Daniel G. Simpson and Miss Luella Konzett.

WESTPHAL—HEROLD.—In San Francisco, on Wednesday, August 7th, Dr. Edward W. Westphal and Miss Eva Herold.

Died.

BARNHART.—In Toronto, Ontario, on Friday, August 9th, Dr. John Barnhart, in the eighty-eighth year of his age.

BOLLES.—In Springfield, Illinois, on Thursday, August 8th, Dr. Hiram O. Bolles, in the sixty-third year of his age.

BURGER.—In Pittsburgh, on Sunday, August 11th, Dr. J. C. Burger, in the seventy-ninth year of his age.

DOWNS.—In Kansas City, Kansas, on Tuesday, August 13th, Dr. Henry M. Downs, in the forty-second year of his age.

QUICK.—In West Salamanca, N. Y., on Tuesday, August 13th, Dr. Theodore S. Quick, in the sixty-eighth year of his age.

RAVENS CROFT.—In Friendsville, Maryland, on Monday, August 12th, Dr. Frank Ravenscroft.

SENTELL.—In Alabama, on Sunday, August 11th, Dr. Wilbur E. Sentell, of Andalusia, Georgia, in the thirty-fifth year of his age.

WILLIAMS.—In Armonk, N. Y., on Thursday, August 15th, Dr. James A. Williams, of New York, in the sixty-second year of his age.

Pith of Current Literature.

Philadelphia Medical Journal, August 17, 1901.

Slow Pulse, with Special Reference to Stokes-Adams Disease. By Dr. Robert T. Edes.—The author reports an interesting case, and quotes others from the literature of the subject.

Progressive Hardness of Hearing and its Arrest by Surgical Removal of the Incus. By Dr. Charles H. Burnett.—Progressive hardness of hearing may be regarded as an affection of the nerves supplying the middle ear and correlated structures. In 1888, the author demonstrated that, by the liberation of the impacted stapes, through removal of the incus, and consequent interruption of the retractive power of the tensor tympani, tinnitus aurium and ear vertigo were relieved. He has noted that in the opposite ear, if already affected, the progressive hardness of hearing has been in some instances arrested and the hearing improved. The explanation the author offers is, that the contraction of the tensor tympani, spasmodic in character, being overcome by the removal of the incus in one ear, the synergetic contraction of the tensor in the opposite ear, induced by cross influence of the more diseased organ, is also overcome by a beneficial cross influence emanating from the operation in the diseased ear. It was also observed that if the fellow ear was entirely unaffected by symptoms of progressive deafness at the time of the operation, it showed no tendency to become thus diseased, demonstrating a prophylactic effect of the operation in the affected ear, upon the unaffected one. Many illustrative cases accompany the text.

The Difficulties Attendant upon the Proper Treatment of Diseases of the Ear in Dispensary Practice. By Dr. Francis R. Packard.—This author finds that cases of aural disease in office-practice respond much more readily to treatment than do those seen in the dispensary. He accounts for this by pointing to: (1) The mixed social condition of the hospital clientèle; (2) the difficulty of properly examining and treating patients because of the overcrowding of most dispensaries; (3) the badly kept records of dispensary cases. It seems incumbent on all physicians who work in the special dispensaries, to lose no opportunity to insist that dispensary work be as carefully provided for as the work done in the wards, that the number of cases handled be restricted to those which can be properly studied and treated, and that every dispensary contain an up-to-date complete armamentarium.

Menière's Disease. By Dr. S. MacCuen Smith.—The elements of time and rest, which are usually enforced, are the two most important factors in the treatment of a real case of Menière's disease; and yet counter-irritation, together with the use of the iodides, bromides, etc., probably has some virtue, and should therefore be employed. The author believes that most diseases of the internal ear are secondary, either to some tympanic, or to some systemic trouble

(excluding traumatism), which must necessarily be carefully sought after and, so far as possible, corrected, while the local manifestations are being dealt with as the symptoms demand.

A Nosological Study from a Clinical Standpoint of Certain Manifestations Accompanying and Following Malaria. By Dr. G. W. Penn.

Medical Record, August 17, 1901.

Syphilis of the Liver. By Dr. Max Einhorn.—The author regrets that the clinical literature is not as extensive as the practical importance of the subject warrants. Ten cases are presented. The diagnosis of hepatic syphilis can be most positively made in cases in which there exist gummata of the liver, together with other signs of a present or recent attack of syphilis. In doubtful cases the effect of antiluetic treatment must be observed. Gummata of the liver are easily confounded with malignant neoplasms. If the disease has lasted for some time, if there exist syphilitic manifestations, and if there has been no considerable loss of weight, the resistance encountered in the liver may be looked upon as in all probability syphilitic. According to Neusser, an increase of eosinophile cells in the blood points to syphilis. A disappearance of the tumor after antiluetic treatment argues in favor of gumma. If the diagnosis is made before the loss of much strength and the appearance of grave symptoms (ascites, albuminuria, etc.) the prognosis is very favorable. The measures directed against syphilis are efficacious. When icterus is present, glycerin (one teaspoonful t. i. d. half an hour before meals) is of great service, as is also iron, or iron and arsenic in the presence of an anæmic condition. Other complications must be treated *lege artis*. Proper dietetic and hygienic management is essential.

Pregnancy Following Myomectomy. By Dr. James N. West.—The author reviews the literature of the subject and, noting the vast contrast there is between the gloomy outlook for a woman affected by a fibromyoma twenty years ago and the roseate prospects of to-day, he points out that this change of views has not been due to the discovery of any one man, but to the accumulated knowledge and experience of the many. In the author's case, in which nine incisions had been made into the uterine tissue, the labor lasted twelve hours, and the expulsive force was ample, the only complication being a lacerated perineum.

The Summit Fissure. Oversphere and Undersphere. By Dr. Wallace Wood.

Notes on Malarial Fevers in Central America. By Dr. J. Hobart Egbert.—In Honduras, four thousand feet above the sea-level, and also above the mosquito-belt, the author points out that malarial fevers—both quotidian and tertian—prevail. He asserts that the distributing agent of the *Plasmodium malariae* in this locality is the flea, and he adduces circumstantial evidence in support of his belief.

Medical News, August 17, 1901.

Fibroma of the Mesentery. By Dr. J. B. Murphy.—The importance of a tumor in the individual case depends upon its histology and its anatomical relations to the vessels of the mesentery, as well as upon its size. Of the solid tumors occurring in the mesentery the most common is carcinoma, secondary to carcinoma in some other position. Next in frequency is the fatty tumor; next the sarcoma, and next, the fibroma. The interference with the mesenteric circulation, even for an inch at its base, may jeopardize the vitality of an enormous portion of the intestinal tract. The gravity of operation depends largely upon the extent of the intestinal tract that it is necessary to remove. Danger arises from shock, and from hæmorrhage from the mesentery in separating a tumor with close attachment to the intestine. Forty per cent. of the cases prove fatal as a terminal result of mesenteric tumors.

Arsenic and Its Compounds; With Special Reference to Sodium Cacodylate. By Dr. Charles William Heitzman.—According to the author, indications for the use of this drug are increasing daily, as it exercises a beneficial stimulating and tonic effect upon all patients to whom it has been given. An almost immediate improvement in the general condition and appetite is noticeable. It is eminently adapted to cases requiring large doses of arsenic, and it is absolutely safe, even in massive doses, being non-toxic in comparison with other arsenical compounds.

Acute Peritonitis: Its Treatment upon an Ætiological Basis. By Dr. C. D. Hill.—Thanks to the studies of the pathologist and the boldness of the surgeon, we no longer look upon peritoneal inflammation as a disease *per se*, but only as a symptom of some other pathological condition. As peritoneal inflammation is a secondary disease, it is self-evident that the primary disease should be treated. If we look on peritoneal inflammation as an indication of absorption of micro-organisms and their products, irrespective of the source of their entrance, the treatment necessary resolves itself into the prophylaxis of sepsis and the elimination of septic products when once introduced. It is to this general aspect of the question of peritoneal sepsis that the author devotes his paper.

A Plea for the Better Appreciation of the Limitations of Operative Work. By Dr. A. M. Cartledge.—In this, the presidential address delivered before the Southern Surgical and Gynæcological Association, at Atlanta, Georgia, the author warns us that our advance has been so rapid, and the conquest of disputed fields so dazzling, it is natural that an unwarranted enthusiasm should be developed. He is of the opinion that shortcut roads to diagnosis are responsible for many unjustifiable surgical operations.

The Ætiology of Melancholia. By Dr. H. Stoner.

American Medicine, August 17, 1901.

Expectant Treatment. By Dr. A. Jacobi.—In order to obtain indications for treatment, make a diagnosis. That art is becoming more accessible, and more easy with the aid of modern methods. Remember that most diseases have indeed a tendency to spontaneous recovery, but also that recovery is not always complete, and that invalidism should not be invited through neglect of treatment. Complications are possible so long as an illness lasts, and, with every day cut short, the dangers of an otherwise typical disease are diminished. We should not try to treat the name of an illness but the patient.

Some Observations on the Treatment of Acute Insanity in General Hospitals. By Dr. Daniel R. Brower.—The defects in our palatial public institutions of to-day, according to the author, are: 1. Most of them are too large, considering that they contain both acute and chronic cases. It is physically impossible for the medical superintendent to individualize the work; he must trust a great part of the medical care and treatment to his subordinates. 2. They are too far from the homes of many of the patients. 3. The admission to these hospitals is by cumbersome, antiquated, and unscientific methods, often subjecting the patients to a severe ordeal that sometimes does serious damage, physically and mentally, and diminishes proportionately their chances of recovery. 4. Often these institutions are degraded to the position of political machines. General hospital treatment for many of the acute cases of insanity is proposed by the author.

A Report of Two Hundred and Twelve Cases of Ventrosuspension of the Uterus. By Dr. Richard F. Woods.—The author's conclusions are: (1) The course of subsequent pregnancies and labors does not seem to be impeded by this operation; (2) the operation in the great majority of cases, carefully selected, gives excellent results and the relief experienced is lasting; (3) it restores the normal condition of the uterus, and does not substitute a fixed unnatural ante-flexion; (4) the risk is minimum and the danger from hernia very slight; (5) by including a small amount of muscular tissue we increase the strength of the ligament without risk to the patient.

A Case of Gastritis Complicated by Myasthenia Gastrica, with Remarks on Weakness of the Gastric Muscle. By Dr. Edwin Zugsmith.—The most important elements in the production of myasthenia gravis are the various forms of local and general overwork. It is also a common sequence of the acute affections, and it accompanies such chronic troubles as diabetes, nephritis, and tuberculosis. The symptoms consist of a well-defined heaviness after eating and drinking, the sensation being out of all proportion to the amount ingested. Prognosis depends on the degree of trouble. Treatment should be influenced by the reaction of the patient. Meals should not be so close together as to constantly require work of an organ already too much fa-

tigued, nor should they be so bulky that a single one will overwhelm the tired stomach. Food should be of the easily digested kind. Lavage should be practised daily, preferably at night. Massage—general and local—and gymnastics, should be employed. Strychnine and quinine should be given, the former in large doses. If all treatment fails, an operation should be performed. Gastro-enterostomy would be the choice.

A Study of the Hæmorrhoidal Circulation, with Special Reference to the Prevention of Post-bleeding in Radical Operations for Piles. By Dr. William B. Davis.—The routine use of the rectal tampon is not advocated by the author. He predicts that thorough divulsion from anus to ampulla will be recommended instead, with the aid of the ligature in possible exceptional cases, where such divulsion is not entirely sufficient. And in such exceptional cases, the hæmorrhage will almost surely be found to be arterial from the slipping or too early cutting through of a ligature, which has more than likely included some of the musculature of the rectum.

Congenital Malformation of the Vagina; Report of Two Cases. By Dr. M. J. Konikow.

The Sodium Tungstate Test for Combined Chlorides in Lime. By Dr. A. L. Benedict.

Boston Medical and Surgical Journal, August 15, 1901.

Address in Medicine. By Dr. James F. Goodhart.—Read before the annual meeting of the British Medical Association at Cheltenham, July-August, 1901.

Demonstration of a Model of the Abdominal Viscera. By Dr. Thomas Dwight.—The author insists that the study of variations and anomalies is by no means a matter of merely scientific interest, but one of real value to the practitioner. He points out that the study of the viscera is receiving a continually increasing attention, and he commends the method of frozen sections, which he introduced into this country, the making of reconstructions from the same, and the use of formaldehyde as a hardening agent, as enabling us to get a knowledge of the real shapes of the viscera. By this method, it has been demonstrated that there is a total absence of free spaces between organs, and that, in growth, one organ is moulded upon another, the hollow organs, however, determining the solid ones, and not the converse.

The origin of Oxalic Acid from Protein and Protein Derivatives. By Dr. Arthur E. Austin.—The author concludes that oxalic acid is derived from the carbohydrate group in albumins, presumably through the intervention of glycol by a process of splitting, through which the remainder is converted to urea, a vital process though imitated by strong oxidizing agents. Oxalic acid may also be derived from uric acid by fermentative action and oxidizing agents, and perhaps also by vital processes. Oxalic acid, present in many organs of the body, practically absent in the fæces of animals fed on non-oxalic

acid containing foods, yet ever present in the urine after long periods of fasting, may rightly be called a metabolic product and rightfully takes its place with acetone, lactic, acetoacetic, and oxybutyric acids as a measure of abnormal retrograde metamorphosis.

Bile in the Abdominal Cavity. By Dr. John F. Thompson.

Journal of the American Medical Association, August 17, 1901.

Electro-thermic Hæmostasis in Abdominal and Pelvic Surgery. By Dr. Andrew J. Downes.—If it is possible to control hæmorrhage within the abdomen and pelvis without the use of any extraneous material which remains after hæmostasis, and by a method which is rapid, we have added very materially to the resources of surgeons. The author describes the technics of electrothermic hæmostasis, and asserts that, though the use of a large and complicated armamentarium might counteract any increased safety as regards secondary hæmorrhage, his experience proves that it offers many advantages independent of hæmostasis. There is much greater freedom from pain following section than after the older operative measures. Three autopsies made, show little or no adhesions of bowel surface to the agglutinated sterile adhesive stumps. While many men advocate the isolation and ligation of the separate blood-vessels and their covering by the peritonæum, as many others still use mass ligation. The author asserts that there is no comparison between the relative advantages of mass ligation and mass electrothermic pressure. Twenty cases are reported; the results, in the main, are corroborative of the author's assertions.

A New Operation for Retro-displacement of the Uterus. By Dr. Emil Ries.—The author advocates the vaginal route, and proposes a method which, he asserts, has the following desirable points: (1) It allows of all necessary operations upon the appendages at the same time and through the same incision with that for the treatment of the retro-deviation; (2) it preserves the mobility of the uterus so as not to interfere with possible pregnancy; (3) it does not depend upon unreliable sero-serous adhesions; (4) it requires little suturing in the peritoneal cavity, and yet leaves no raw surfaces that might give rise to adhesions; (5) it does not interfere with the physiological function of the tube.

Surgical Treatment of Retroversion of the Uterus. By Dr. Franklin H. Martin.—The author gives an elaborate table of the results of sixty-one Alexander operations, and of one hundred and seventy-three ventral fixations of the uterus after laparotomies. The author's own method of ventral fixation, by suspension of the uterus upon a strip of peritonæum, he has adopted exclusively, because (1) it is simple and thorough; (2) it positively does away with any form of permanent buried sutures, and accomplishes a fixation which allows of a large range of mobility and does not directly involve the appendages; (3) experience demonstrates that the point of

fixation is not the source of subsequent irritation or pain; (4) it allows the possibility of pregnancy going on to normal confinement after the operation.

Report of a Case of Unusual Tertiary Manifestations. By Dr. G. Hudson Makuen.

Symptoms of Typhoid Fever in Infancy and Childhood. By Dr. J. P. Crozer Griffith.—A text-book article of moderate interest. A condition not infrequently seen at the beginning, and liable to cause confusion in diagnosis, is that of pseudo-meningitis. As a rule, the diagnosis can be made easily in the adult, but, in the child, typhoid fever may sometimes begin with all the appearances of acute leptomeningitis, and lead, for a time, to an entirely erroneous diagnosis.

The Diagnosis of Typhoid Fever in the Laboratory. By Dr. John Lovett Morse.—Laboratory and clinical methods of diagnosis should not be separated. Both are important and both fallible. Neither is complete without the other. Laboratory methods must be used with due recognition of their limitations. Otherwise they may lead to erroneous conclusions. The Widal reaction and the leucocyte count are the most useful of the laboratory tests for the diagnosis of typhoid fever. They are easily carried out and within the reach of all. Other methods, though of equal or even greater value, are impracticable for every-day use.

The Treatment of Temperature by Drugs. By Dr. Edwin Rosenthal.

A Case of Multiple Gangrene, Associated with Cholangiitis and Adenoma of the Liver, Complicating Typhoid Fever. By Dr. Isaac A. Abt.

Two Cases of Suppuration of the Parotid Gland with Pus in the External Auditory Canal. By Dr. Francis R. Packard.

Tropical Diseases. By Ronald Ross, F.R.C.S., F. R. S., Major, I. M. S. (Retired).

The Lancet, August 10, 1901.

A Clinical Lecture on Mitral Disease, Delivered in the Glasgow Royal Infirmary. By John Lindsay Steven, M. D. Glasg.—The speaker presented ten cases of this form of heart disease, to illustrate the following points:

I. *The Murmurs of Mitral Disease.* The fact that an apical systolic murmur conveyed toward the axilla is present in a given case need not indicate structural disease of the mitral curtains, but only that they are not preventing regurgitation of blood from the left ventricle into the left auricle, and that may occur when the valve is intact. A presystolic murmur heard at the apex, and limited to this region, is the only murmur which may be accepted as *positive* proof of structural disease of the valve. This has also been observed by Balfour. A diastolic murmur limited to the apex and third intercostal space may be accepted as *fairly positive* evidence of actual disease. Where the single apical systolic murmur is associated with a history of rheumatism structural disease of the valve may be *suspected*.

II. *Age at Which Mitral Disease Occurs.* The cases may be said to indicate that structural lesions of the mitral curtains originate more often in childhood and youth than after the middle period of life, while mitral incompetence, due to myocardial degeneration, is essentially an affection of advancing years.

III. *The Physiognomy of Mitral Disease.* In contradistinction to the pallor which often prevails in cases of aortic regurgitation, patients with mitral insufficiency have a red color which tends to become livid on slight exertion.

IV. *Association with Rheumatism.* The fact that six of the ten cases, or sixty per cent., give well-marked histories of acute rheumatism, shows the close relationship between this disease and mitral insufficiency.

V. *The Pulse of Mitral Disease.* The characteristic pulse of this form of heart disease may be said to be one marked by irregularity of force and rhythm and increased frequency.

VI. *Secondary Results.* Failing compensation with its accompanying passive congestion of the lungs, liver, and kidneys, and œdema of the lower limbs is most to be dreaded. Embolism may also be considered a frequent secondary result of mitral structural lesions.

The Comparative Virulence of the Tubercle Bacillus from Human and Bovine Sources. By Mazzyck P. Ravenel, M. D.—An abstract of this paper will be printed when it is concluded in the next issue of the *Lancet*.

The Mortality from Phthisis and from Other Tuberculous Diseases Considered in Some Aspects which may be Demonstrated by Means of Life Tables. By T. E. Hayward, M. B. Lond., F. R. C. S. Eng.—The author, by an elaborate series of tables prepared from data obtained through various insurance companies for the years 1881-1890 in England and Wales, demonstrates that, if there had been no phthisis, the average length of life for each individual born would have been increased by two and a half years; and those who survived to the age of fifteen years would have had their average expectation of life increased by about three years and a quarter.

On the other hand, if typhoid fever, scarlet fever, and diphtheria, could have been exterminated, the average increase of life of those at birth would only have been about one year, and those at the age of fifteen years would only had about the fourth part of a year added to their life expectation.

On the Physiological Cure of the Morphia Habit. By W. Oscar Jennings, M. D. Paris, M. R. C. S. Eng.—The author, who admits that his method of treating morphine *habitues* is based upon observations made upon himself, states (1) that it is necessary for the patient to consent to renounce all liberty of action while under treatment; (2) when morphine is associated with some other addiction, such as alcohol or cocaine, this must be suppressed at once, and usually no difficulty is experienced in so doing. His method consists in (1) a reduction of the

amount of morphine as rapidly as each individual case will allow; (2) a change in the method of administration, i. e., from hypodermic to rectal injections, at first doubling the quantity; (3) administration of heart tonics, bicarbonate of sodium to counteract the hyperacidity of the stomach, which always exists, and hot air baths. A warning is given against the use of the synthetic derivatives of morphine, dionine, and heroine, and he states that the "craving following their use is infinitely more unmanageable than is that of morphine."

The histories of nine cases illustrating the author's method of treatment are given.

Pasteurization of Infected Milk. By E. Sydney St. B. Sladen, M. D. Cantab.—The author reviews the danger of using milk that may be infected by scarlet fever, typhoid, diphtheria, or tubercle germs, and shows by experiments that all of these may be destroyed by heating the milk to 85° C.

The Electrolytic Transmission of Sulphur from the Harrogate Sulphur Waters Through a Pig's Skin, and its Therapeutic Value on the Human Subject Under Similar Circumstances in Eczema, Gout, etc. By Francis William Smith, M. D. Aberd.—The author states that the action of a three-mialliampère constant current, employed for half an hour, forces nascent sulphur from the water of this mineral spring through pig's skin, causing a deposit upon blotting paper placed next to the skin. From this experiment he concludes that sulphur may be forced through human living skin by electrolysis, and states that cases of eczema do much better than when simply allowed to lie in the bath.

British Medical Journal, August 10, 1901.

Introductory Remarks Made at the Opening of the Section of State Medicine, at the Annual Meeting of the British Medical Association. By Shirley F. Murphy, M. R. C. S.

A Discussion on the Relation between County and District Sanitary Administrations, in the Section of State Medicine at the Annual Meeting of the British Medical Association.

Plague and Its Prevention as a Disease Communicable from Animals to Man. By David Samuel Davies, M. D., D. P. H.—The author calls attention to the fact that Cantlie, in 1895, in an address before the Epidemiological Society, was the first to suggest that the endemicity of plague in certain parts of Central Asia, as it coincided with the distribution of a particular sub-family of rats, was possibly in causal relationship with the defined rat habitat.

The evidence collected since that time has proved that plague in man is a secondary event dependent on previous plague in animals, and that, therefore, success in the suppression of human plague depends upon adequate measures for the suppression of rat plague. It is urged, therefore, that international agreement be secured, whereby the rats in all merchant vessels shall be destroyed before loading, if possible, and if any are found on arrival at port, every precaution

shall be taken to prevent their escape to the shore during unloading. After the cargo is discharged then the rats remaining in the ship shall be destroyed. By the universal adoption of such rules it is believed that plague can be eradicated.

Gazette hebdomadaire de médecine et de chirurgie, July 28, 1901.

Parapneumonic Pleurisy.—M. C. Siems describes this form of pleurisy which is dependent upon infection by the pneumococcus. It may attack any part of the pleural cavity and usually appears as defervescence takes place. The diagnosis depends upon the physical signs, but the displacement of organs is an important element. The infection takes place by contiguity or continuity. In the effusion, pneumococci may be found, although they may be present only as saprophytes. The prognosis is doubtful, death often taking place. Thoracocentesis is to be practised, and sometimes aspiration is sufficient to cause the fluid to disappear.

Presse médicale, July 27, 1901.

Death in Mastoiditis.—M. Stanculeanu and M. Depoutre describe three classes of deviation from the usual finding of the cells of the mastoid, which, when there is a suppuration of that bone, may lead to further infection and death. Some mastoid cells may lie at the postero-superior angle of the mastoid process, in relation with the meninges and the lateral sinus or behind the mastoid or the lateral sinus; or they may be found underneath and behind the mastoid process. If the infection spreads to these cells or to any of them, continued fever and pain will follow the primary operation, meningitis or involvement of the same sinus may occur, and, if a secondary operation of sufficiently far reaching character is not performed, death will ensue. A suspicion of the existence of these aberrant cells must always be excited by a continuance of pain and fever.

Münchener medicinische Wochenschrift, July 23, 1901.

Cinchonic Acid and Gout.—Dr. De la Camp says that, with diet, cinchonic acid does not influence the excretion of uric acid to any appreciable degree, either in healthy persons or in the gouty. After its administration, there is always an increase of hippuric acid to be found. The diminution of uric acid appears to follow the use of cinchonic acid only in those cases in which the organism is excreting large quantities of uric acid, as in leucæmia, or in which uric acid producing food is administered, such as the thymus gland. Nevertheless, clinical experience speaks in favor of cinchonic acid in the treatment of gout. It is a harmless drug and is well given in the form of chinotropin, a combination with urotropin, as uric acid forms soluble combinations with formaldehyde which is formed in the body from urotropin.

Salivary Digestion of Carbohydrates in the Stomach. By Dr. Hensay.

Abdominal Operations without Anæsthesia.—Dr. Adoli Schmitt has performed a number of laparotomies with cocaine as a local anæsthetic. His group of cases includes the operations of gastro-enterostomy, gastrostomy, exploratory laparotomy, incarcerated hernia, perityphlitic abscess and vesical calculus. Pain was elicited only when the peritonæum was torn or stretched. The incision of adhesions was absolutely painless, as was cutting into the bladder. The operations were sometimes conducted more slowly than when general narcosis was employed, but in weakened subjects, the dangers of general anæsthesia were avoided.

Palliative Treatment of Inoperable Uterine Cancer.—Dr. F. Torggler recommends the use upon a tampon of formalin, which is left in place for from five to ten minutes. At first, a four-per-cent. solution is employed, then a ten-per-cent. solution, and finally the full strength. The pain, discharge, and odor disappear, and the ulcer takes on a more healthy appearance. A cure has not been found, but amelioration of the patient's condition is brought about.

Origin and Treatment of Pharyngeal Phlegmona. By Dr. L. Grunwald.

Centralblatt für Gynäkologie, July 25, 1901.

New Method of Treating Chronic Pelvic Exudates.—Dr. Oscar Palano reports the successful use of hot-air apparatus applied over the abdomen of the patient in cases of chronic pelvic cellulitis and peritonitis. Acute cases must not be treated this way. The immediate disappearance of the pain is striking. Absorption of the exudate gradually is noted during prolonged treatment.

Care of the Umbilical Cord.—Dr. Wilhelm Leube says that, in Constance, the cord has been treated for a year as follows: After the bath, it is cut off about half a centimetre from the skin and tied with catgut, so that a double knot appears on each side of the cord. Diachylon powder is freely dusted on the cord, and a piece of sterile gauze is laid over it. No hæmorrhage was ever observed, and no suppuration or fungoid growth. The umbilicus was promptly healed in about four days.

Berliner klinische Wochenschrift, July 8, 1901.

Paroxysmal Tachycardia. By Dr. Ulrich Rose. (Continued.)

Sodium Cinnamate Intravenously in Pulmonary and Laryngeal Tuberculosis.—Dr. H. Guttmann says that, of thirty-three cases, cure took place in one, improvement in ten, in nine there was no result, in eight death ensued, and five were lost from observation. Small doses seemed to work best. The drug seemed to be nonpoisonous in its effects upon other organs. In early cases, its action is most marked, but it is not so beneficial in later ones.

Influence of Laryngology upon Medicine. By Dr. Grabower.

July 22, 1901.

Perforation of the After-coming Head.—Professor W. Nagel narrates a case of a woman with

a markedly contracted pelvis, whose child had died from a prolapse of the cord. Under narcosis, he performed a version in such a manner that the chin of the child was brought under the symphysis. With the child's body strongly drawn over the mother's abdomen, perforation and extraction were done. He recommends the extension of the child's body over the abdomen to reach inaccessible heads.

Locomotor Ataxia in Women. By Dr. P. Lebre. (Continued article.)

The Plague in Bombay. By Dr. Martin Hahn.

Changes in the Multinuclear Leucocytes in Some Infectious Diseases. By Dr. Hans Hirschfeld.

Wiener klinische Wochenschrift, July 18, 1901.

Influence of Food in Experimental Uræmia.—Dr. A. Strubell concludes that experimental uræmia does not simply run the course of a narcosis, but is frequently accompanied by severe convulsions. Animals fully fed on carbohydrates after extirpation of both kidneys live longer than those fed on fat or proteids or those which are starved. He draws the deduction that since experimental uræmia in animals does not differ from genuine uræmia in man, in cases of renal insufficiency, or when uræmia is threatening, as well as in acute and chronic nephritis, a pure carbohydrate diet should be instituted, and occasionally only a vegetable diet from time to time.

Diagnostic Value of Specific Precipitates.—Dr. R. Kraus says that agglutinating serum of animals inoculated with the colon bacillus, gives a specific precipitate with the bacilli of the same species. Filtrates of another species do not give this reaction. In general, sera which do not agglutinate the bacteria of allied species, do not furnish specific precipitates. He concludes, therefore, that specific precipitates have as much value diagnostically as agglutination.

Lightning Strokes and High Electric Currents. By Dr. S. Jellinek. (Concluded.)

Riforma medica, July 4, 5, and 6, 1901.

Experimental Researches on the Modifications in the Resistance of the Peritonæum to Infection by the Bacterium Coli After Injection of Various Substances into the Peritoneal Cavity. Application of these Facts to the Surgery of the Abdomen. By Dr. Sante Solieri.—The author's experiments on guinea-pigs show that the injection of one cubic centimetre of normal salt solution into the peritoneal cavity of one of these animals diminishes sevenfold the virulence of a culture of the *Bacterium coli* subsequently injected, and that the injection of two cubic centimetres in the same way diminishes the virulence of a colon bacillus culture sixteen times. Applied to man, this would mean, in the same ratio to weight, an injection of three hundred cubic centimetres of normal salt solution into the peritonæum. The fact that various influences may change the capacity of the peritonæum for defense has been known since the studies of Grawitz and others on the subject have appeared. The author has suc-

ceeded in making a comparative estimation of the powers of defense of the peritonæum in various conditions. He obtained his figures by determining the minimum fatal dose of the *Bacillus-coli* culture used for his experiments, and then by a comparative study of the effects of injections of these cultures on guinea-pigs. He advocates the use in these experiments of a hypodermic syringe so arranged that single drops of absolute uniformity may be injected. The unit of estimation is then the drop of broth culture, each of which is supposed to contain a certain number of germs. Thus, the minimum fatal dose was for a guinea-pig of average weight eight drops of his twelve-hours *Bacterium-coli* culture.

July 8 and 9, 1901.

A Clinical Study of Cardioptosis (Rummo's Disease). By Dr. Benedetto De Luca.—The author has studied the question whether, in certain neurasthenics under his observation, the functional disturbances of the heart and the increase in the size of the organ could be attributed to cardioptosis and to its hydraulic consequences. He analyzes the cases of five neurasthenics who, in addition to the ordinary symptoms, presented marked disturbances in cardiac function and in the volume of the organ itself. In two of these patients the increase in size and displacement of the heart were due to hypertrophy and dilatation, and not to cardioptosis, while in three others there was a distinct displacement of the whole organ corresponding with the definition of cardioptosis. The principal pathological basis of the condition designated by Rummo as cardioptosis is a weakness of the suspensory structures of the heart, particularly of the bundle of blood vessels in which the elastic elements are not sufficiently developed to sustain the heart in its normal position. During the first stage of cardioptosis, according to Rummo's classification, the heart rotates on its anteroposterior axis and assumes a more or less transverse position instead of the original oblique; at the same time, the heart is displaced toward the left, following the natural slope of the diaphragm, so that there is in the first stage a lateral cardioptosis to the left. In the second stage, the vessels stretch still further and the heart sinks down vertically, so that we have a verical cardioptosis. The author finds that in the first stage the median vascular axis and the cardio-vascular angle are displaced toward the left, the amplitude of the angle, however, is not altered appreciably in this stage; for the change in position of the vascular axis compensates for the variation in the position of the cardiac axis. In the second stage the cardio-vascular angle diminishes in amplitude in geometrical progression, according to the degree of lengthening of the vascular axis and the degree of sinking of the heart. The normal amplitude of this angle is from 130° to 135° , while, in the second stage of cardioptosis, it is only 125° . This angle is therefore of the greatest diagnostic importance.

Chirurgia, April, 1901.

A Case of Extensive Necrosis of the Cranium. By Dr. von Stein and Dr. V. M. Zakcheyeff.—An

account of a case of necrosis of the cranium with middle ear disease in which thirty-three square centimetres of sequestrum were removed, and the patient recovered. The authors do not believe that such areas of bone can regenerate and bridge over the defects in the cranium. In this case the necrosis was presumably of syphilitic origin.

The Operative Treatment of Cancer of the Tongue. By Dr. V. M. Zyckoff.—The author reports a case of cancer of the tongue in a man sixty-two years of age. The disease began at a spot opposite a broken tooth and the tumor occupied nearly the whole extent of the tongue, chiefly on the left side of the organ. The tongue was removed without difficulty through a horizontal incision on the cheek, and the submaxillary glands were removed through separate incisions under the jaws.

The Treatment of Hernias with Massage. By Dr. S. E. Beresovsky.—In many cases of hernia the failure of operative treatment depends, not upon the faulty methods of the operator, but upon special predisposing factors in the patient. We must therefore treat the man, not the hernia. Persons with weak and flabby abdomen, *e. g.*, old people and persons weakened by disease or privations, are predisposed to hernias; and in one form of rupture—the direct internal inguinal—the hernia is caused almost exclusively by weakness of muscular structures. Other causes, as is well known, are scars from former operations or accidental wounds, and obesity. In cases in which, after the operation, and in spite of all precautions, there is a postoperative accumulation of blood, the author has used massage, with good results, in order to promote the absorption of the clot. He began massage on the tenth or twelfth day, not earlier, because he wanted to be sure that the wound had closed well and had, above all, not been infected. The massage was preceded by a warm bath and was given for fifteen minutes daily. In order to secure the permanence of operative results in cases in which the operation has been successful, the author aims to remove or prevent the occurrence of general obesity and of atony of the muscles of the abdomen. The former is combated by general diet and by massage, together with such medical gymnastics as do not strain the abdominal muscles. This secures, not only a diminution of fat, but also a strengthening of the abdominal muscles. If these measures are not combined we may get a lean subject with flabby muscles who is predisposed to hernia. General abdominal massage was also used by the author in order to strengthen the muscles in cases where there was no danger of obesity. As a rule, this treatment was continued for two months daily for a few minutes. The whole abdomen was first massaged for fifteen minutes, then special attention was given to the massage of the recti muscles, which were stroked in the direction of the veins; namely, from the umbilicus upward and downward. Stroking and kneading of the inguinal region then completed the massage. The author does not favor the use of bandages or of appliances of any kind in patients who have been operated on for hernia. These devices rather favor recurrence than hinder it. Pressure on the muscles produces atrophy in the course of time.

Roux's New Method of Operation for Femoral Hernia. By Dr. B. K. Bauer.—Roux, of Lau-

sanne, has devised a simple and effective method of operation for femoral hernia. His method consists essentially in the use of a wire nail bent at right angles at two points so as to make the figure \sqcap , as a support to Poupart's ligament and as a means of compressing the femoral ring. The sac is isolated and excised after tying with double ligatures; the stump is returned to the peritoneal cavity, and one, two, or three nails, according to the size of the femoral ring, are nailed deeply into the pubic bone in such a manner that the nails ride over the Poupart's ligament, thus approximating it to the bone. The superficial parts are sewn up over the nails. Of course, care is taken not to compress the ligament too much under the nails. The author reports a case in which he operated in the manner given by Roux. The results were very satisfactory.

Luxation of the Ulnar Nerve. By Dr. K. Soussloff.—The ulnar nerve is held in place at the back of the elbow, in its groove between the olecranon and the internal condyle of the humerus, by a fibrous bridge which is a continuation of the humeral fascia. When this bridge becomes torn, the nerve may easily get out of its groove. This luxation is very rare, and is characterized by the presence of a cord under the skin of the inner portion of the elbow. This cord may or not be sensitive. The two clinical forms of this luxation are the traumatic type, caused by injuries and accompanied with a great deal of pain, and by numbness of the forearm, and even paralysis of the muscles supplied by the ulnar. The second type is the habitual, or the so-called congenital luxation. The nerve is very movable and comes out of its groove at each motion of the forearm. This is accompanied by less pain, but the hand is easily tired. The case reported in the present article belongs to this latter class. The prognosis is worse when a neuritis develops in the luxated nerve. In the case reported there was interstitial neuritis. The treatment of acute cases consists in the application of bandages in extension, followed if necessary by operative intervention if no improvement results from the palliative measure. The skin and fibrous tissues are incised over the cubital sulcus and the fibrous tissues are separated, so that a deep groove reaching to the bone is formed. The nerve is then placed in this groove and the fibrous tissues are sutured over it.

Fratch, June 16 (June 28, New Style), 1901.

The Bacteriology of Acute Articular Rheumatism. By Dr. V. E. Predtetchensky.—The author concludes, as a result of a study of five cases of acute articular rheumatism, that the streptococcus plays an important rôle in the ætiology of this disease. An analysis of the existing literature of the subject shows that the question as to the specific cause of acute articular rheumatism is by no means solved. Achalmé's bacillus was found in large quantities in the majority of cases of acute articular rheumatism, but it did not produce the clinical or pathological manifestations of the disease when injected into animals. Wassermann's streptococcus produced the clinical picture of the disease when injected into ani-

mals, but it was found only exceptionally in man in cases of acute rheumatism. In addition, a variety of streptococci and of other germs was found in acute articular rheumatism in man. In his five cases the author did not find the bacillus of Achalmé in a single instance, though he grew cultures from the blood of patients under the most favorable conditions to the development of this organism; namely, with a liquid culture medium, complete anaerobiosis and a large quantity of blood. In three of his five cases he did not find any micro-organisms whatever in the blood. In two cases the cultures gave positive results and the author was able to isolate a streptococcus which produces in animals a clinical picture that resembled the one seen in man in acute articular rheumatism.

A Case of Tubercular Leprosy. By Dr. V. Th. Demitch.

The Histological Changes in the Post-partum Uterus in Cases of Acute Streptococcus Septicæmia with and without the Use of Antistreptococcus Serum. By Dr. I. I. Klitine.—In comparing the cases of infection directly into the cavity of the uterus and those that took place through the medium of the circulation, the following differences were noted in the histology of the tissues. In infection directly into the blood, the involution of the parenchyma took place more slowly and the involution of the vessels was correspondingly retarded. The cells of the connective tissue approached more to the younger types. The mucous membranes were looser. In the muscular layers there were fewer areas of atrophy with disappearance of nuclei, and the muscular layers seemed, therefore, to be broader. In the circumvascular tissues there were well-marked areas of infiltration—granulation tissue, and white cells; this is not seen in infection directly into the uterus. In hæmatogenic infection there was an inflammation of the uterine veins, and none in the cases of infection directly into the uterus. In the former group of cases also the areas of necrosis in the mucous membrane were fewer and less extensive, and there were more frequently aggregations of white cells than in the latter group. (*To be concluded.*)

Operation for Mechanical Dysmenorrhœa. By Dr. S. A. Alexandroff.—The author's operation consists in removing a wedge-shaped piece from the uterine wall in the region of the internal os. The usual anterior incision is first made, the bladder having been previously dissected off and protected by means of a speculum. The wedge-shaped pieces of tissue are then cut out of the posterior wall, and partly the lateral walls, of the internal os by making two semilunar wedge-shaped incisions, the points of the wedges being directed toward the sacrum. The edges of the uterine wall are then sutured and the os restored by a few stitches. Finally the mucous membrane of the anterior fornix is sutured. The uterine cavity is scraped with a curette. The results of this operation are said to be more satisfactory than those of the other procedures described for the same purpose.

Letters to the Editor.

DR. KNAPP'S TEST FOR LACTIC ACID.

334 EAST SEVENTY-EIGHTH STREET,
NEW YORK, August 10, 1901.

To the Editor of the New York Medical Journal:

SIR: Dr. Knapp's alleged new method of testing (described in the *Journal* for August 10th) is a part of the famous Uffelmann's method of testing for lactic acid in gastric juice, which I describe herewith:

R Liq. ferri chloridi, gtt. i;
Acid carbolici, gtt. iv;
Aque. 5v.

M. S. Reagent.

The strength of the iron preparation is about, or a little over, 1 to 2,000, freshly prepared, as is mentioned in Dr. Knapp's article.

A beautiful amethyst-blue color is produced, which turns to a canary yellow when treated with a solution of lactic acid or gastric juice, containing lactic acid. The delicacy of this test is interfered with by the presence of free hydrochloric acid and peptones. Glucose, phosphoric acid, and alcohol give a reaction resembling that of lactic acid, butyric acid giving a much lighter tint. In case of doubt, a modification that has given good results is the following, which is practically the same test described by Dr. Knapp: Five or ten c.c. of filtered gastric juice are treated with from 20 to 40 c.c. of ether, free from alcohol, and then shaken in a stoppered separating funnel for fifteen or twenty minutes and allowed to stand till the layers have separated. The strength of the gastric juice with ether is in the proportion of 1 to 4, as Dr. Knapp states in reference to the strength. The ethereal solution is allowed to evaporate, the residue dissolved in 5 or 10 c.c. of water, and the solution tested for lactic acid as above. Dr. Knapp, in his paper, omits to mention the necessity of evaporating the ether, which is important for the course and result of the test.

P. M. MILLER, M. D.

Book Notices.

The Theory and Practice of Military Hygiene. By EDWARD L. MUNSON, A. M., M. D., Captain, Medical Department, United States Army. Illustrated by Eight Plates and nearly Four Hundred Engravings. New York: William Wood & Company, 1901. Pp. xii-971.

In this voluminous treatise, emanating from an officer of the Army Medical Department, we have a work of very high order and fully on a par with its predecessors from officers of the medical corps. The thoroughness and originality of the author's treatment of the subject-matter will again attest the excellence aimed at in the United States army.

The success of a book of this kind depends even more than that of other medical publications on its international standing. This will be insured to it by virtue of its cosmopolitan feature in the author's

having selected and faithfully portrayed the principles of military hygiene as practised in all countries, which must needs redound to the advantage of domestic military authorities who would consult its pages. The impartial presentation that we take it to be may be gathered by these few *obiter dicta*: As to marching, "questions of sentiment cannot be permitted to outweigh those of practical utility," wherefore the "bent-knee marching" so advantageously practised by couriers in the Orient is endorsed by the author.

The elaborate chapter on water teaches that while troops are in quarters or in camp, contamination of the water may be overcome; but on the march potable water, owing to exigencies, may often be unobtainable. It is gratifying to have authority for the popular statement that, when estimated in proximate principles and calories, the army ration in the United States is higher than in foreign countries.

In accordance with principles of natural selection, the soldier's clothing should be in keeping with the surroundings in fabric and color, and thereby obscure him from the enemy. All of this was expensively and practically demonstrated in the Anglo-Boer war. Next in efficiency to a well-fed soldier is a well-shod one, and it would be of vast benefit to the civilian laboring class to profit by the excellent advice here given and use the army footgear. It is to be hoped that the government will ultimately lessen the weight of the mess equipment by constructing it of some light metal.

In a spirit of kindly criticism the deficiency of bath-rooms and closets in the officers' quarters is pointed out, and attention is called to the lack of proper quarters for the married soldiers and their families. The growing interest and confidence reposed in the army will ultimately cause these refinements to be installed.

In the matter of hospitals, heating, light, ventilation, and the care of refuse, the problems are those of public hygiene. Tabulations according to race as influencing morbidity show native-born soldiers to possess a greater resistance to death than enlisted aliens. As to blacks, there has been of late years an approximation to the white resistance. The chapter on Military Mortality and Morbidity is the best index of the influence of hygiene, as shown in the statement that since 1872 the death-rate from all causes fell forty per cent.

The author speaks in favor of the army canteen. During its existence statistics show a successive lowering of the percentage of admissions for acute alcoholism, a lessening of offences, fewer desertions, and less drunkenness. The practice, however, of disbursing the surplus proceeds as dividends among the soldiers tends to place a premium on indulgence in alcohol.

The diseases of soldiers are treated of from the prophylactic standpoint. The classification embraces diseases of an infectious character, those due to exposure, those arising from improper diet, and those peculiar to military service. A few isolated facts alone are peculiar to infectious diseases when affecting soldiers. Thus, during a campaign the percentage of troops afflicted with typhoid fever is greater than the corresponding percentage obtaining with the civilian population at the same locality; but in peace this is reversed. Though the proof of the

water-borne theory is conclusive, yet Vaughan's fly-borne theory is worthy of additional study. That desiccated excreta may to any great extent be carried by the wind is possible, though not probable. More potent causes of dissemination are direct contact, ambulatory typhoid, persistence of typhoid bacilli in the urine and, finally, a rainy season, which aids greatly in spreading the materies morbi. Endemic typhoid is an ear-mark of uncleanness. The results of antityphoid prophylactic inoculations, practised in the British army, are encouraging. Even at this early period of its use the efficiency of mineral oil in arresting the development of *Anopheles*, the host of the malarial parasite, is evident. All else in this chapter is a tribute to the far-reaching influence of bacteriology in sanitation.

The chapter on disinfection deals solely with the "not-found-wanting" antiseptics, heat, corrosive sublimate, sulphur, carbolic acid, tricesol, and formic aldehyde. While alcoholism and syphilis exist to a greater extent in our forces than in others, with the sole exception of those of Great Britain, in which both are at a maximum, yet in the past fifteen years the rate of admissions for alcoholism has successively diminished. The author believes that some measures to prevent clandestine prostitution would be productive of the good showing that was manifest during the existence of the lock-hospitals in the British service. On the moot point of acclimation, the author sides with most authorities, believing that the real acclimation, equivalent to the health of a native in the face of hard manual labor in the open air, is unattainable.

The concluding subjects of the hygiene of hot and cold climates and the sanitary arrangements of troop-ships, being matters in which we are yet rather inexperienced, are tersely, but efficiently, treated of. The parting injunctions embody the requirements for the sanitary inspectors. In this connection the soldier ought to be enlightened by word as well as by fact.

A Manual of Practical Hygiene for Students, Physicians, and Medical Officers. By CHARLES HARRINGTON, M. D., Assistant Professor of Hygiene in the Medical School of Harvard University. Illustrated with Twelve Plates and One Hundred and Five Engravings. Philadelphia and New York: Lea Brothers & Company, 1901. Pp. vi-17 to 729.

The work before us deals most comprehensively with all the subjects connected with public health. Chapter I, on Foods, is especially commendable, as in most works of this nature we find this department but lightly treated; the author, however, devotes over two hundred pages to it. He might have included in his title, besides "students, physicians, and medical officers," the general public, for a good many of his aphorisms, although well known to the public, are not always observed by them. Especially is this true in parts of the subject matter in the chapter entitled Personal Hygiene. A short chapter entitled Vaccination is at present very *apropos* in view of the excitement created by our rather mild small-pox epidemic during the past winter.

The author very wisely includes among the topics of the all-embracing subject of hygiene, chapters on

military and naval hygiene, and deals rather practically with tropical hygiene, which chapter will prove of special benefit to those of our colleagues and fellow-citizens who are residing in our new possessions. From this short review it is apparent that the volume is most comprehensive and well adapted to all the purposes indicated in its title.

Diseases of the Heart: Their Diagnosis and Treatment. By ALBERT ABRAMS, A. M., M. D. (Heldelberg), F. R. M. S., Consulting Physician for Diseases of the Chest, Mount Zion Hospital and the French Hospital, San Francisco. Chicago: G. P. Englehard & Company, 1901. Pp. 172. [Price, \$1.]

The author has not attempted to write a treatise on cardiac diseases, but he has summed up the data essential for making a correct diagnosis of the various lesions of the endocardium and myocardium, and has written his book in a very clear and convincing manner. The chapters on treatment are in accord with accepted teachings. There are a few points in which he is at variance with other writers, such as the physical signs of pericarditis, the location of the murmur of aortic regurgitation at the second right interspace, and some other such minor points. In the main, the book is perfectly sound, however, in its teachings, and will be a very useful work of reference.

The book-making is poor, and we would suggest to the publisher that cut leaves are customary in this country.

Uterine Fibromyomata: Their Pathology, Diagnosis, and Treatment. By E. STANMORE BISHOP, F. R. C. S. Eng., President of the Manchester Clinical Society, etc. With 49 Illustrations. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. xii-13 to 323. [Price, \$3.50.]

This is a typical monograph of the higher class. The author has covered his subject most thoroughly and most minutely. From the chapter on anatomy to the consideration of the final results of the operative treatment of fibroid tumors of the uterus, nothing that has any bearing on the subject has been omitted. The author is radical, too. He says without equivocation that the medical treatment of fibromyoma with a view to cure is useless. Electricity he sanctions with certain distinct limitations, such as to fibrocystic tumors or complications with tubo-ovarian disease; but he would permit its use only if the surgeon and patient did not lose sight of the danger of delay in cases calling for an operation.

The surgical treatment of fibromyomatous growths is then thoroughly canvassed. The principal operations are well described, in many instances the language and illustrations of the original authors being given. Chapters on post-operative treatment and after-effects follow. In a discussion of the final results, the author believes that after panhysterectomy or one of the later methods of hysterectomy the general health should be completely restored if there is no concurrent disease. Mental alienation is no more common than after other surgical operations. The retention of the uterus, once the ovaries are removed, has proved of no advan-

tage, but rather the reverse. Supravaginal amputation, with extraperitoneal fixation, will almost certainly result in the production of a ventral hernia. From these citations the radical character of the views of Dr. Bishop may be gleaned, as well as the scientific foundation of his views. Altogether, the book is most readable and interesting, and it is admirably illustrated.

The Syphilis of Children in Every-day Practice.

By GEORGE CARPENTER, M. D. Lond., Physician to the Evelina Hospital for Sick Children, London. New York: William Wood & Company, 1901. Pp. 9 to 112.

It is only within recent years that the extreme importance of a thorough knowledge of luetic disease to every practitioner of medicine, whatever his field, has been recognized and emphasized. It is encouraging to see a monograph of this character, then, dealing exclusively with the manifestations of syphilitic disease in children. The author has drawn his material from over two hundred patients, and has evidently studied it well, for he describes the appearances of syphilis in almost every organ. The book is profusely illustrated with original drawings and photographs, and is fully worth careful and conscientious reading.

The Technique of Surgical Gynecology. Devoted Exclusively to a Description of the Technique of Gynecological Operations. By AUGUSTIN H. GOELET, M. D., Professor of Gynecology in the New York School of Clinical Medicine, etc. New York: International Journal of Surgery Company, 1901. Pp. 7 to 340.

The author has attempted to deal with a limited subject as related to the surgical procedures of gynecology. He has been in part successful, in part not so. His directions for the preparation of patients and for their care after operations accord with the best opinion of the day, despite some trifling differences in treatment. While these data are the common property of all surgeons, it seems as though they could not be repeated sufficiently often to impress themselves upon the minds of operators in all their importance. In these chapters, then, the author has achieved success. We cannot conscientiously say the same for the chapters on surgical technics proper. Here individual idiosyncrasy stands forth dogmatically, and, while it is not to be doubted that the author achieves satisfactory results by his methods of operating, it would be wise, it seems to us, to give at least one additional well-known method, in a book of the intended didactic character of this one. We refer particularly to the plastic operations and the one for the shortening of the round ligaments.

The book is well illustrated, in many instances by original drawings; but even in this respect it is far behind Orthmann's little book, the illustrations of which fairly speak. In the work under consideration, the photographic half-tones especially lack clearness.

A Text-book of the Diseases of the Nose and Throat.

By D. BRADEN KYLE, M. D., Clinical Professor of Laryngology and Rhinology, Jefferson Medical

College, etc. With 175 Illustrations, 23 of them in Colors. Second Edition. Philadelphia: W. B. Saunders & Company, 1901. Pp. 5 to 646. [Price, \$4.]

Since this edition follows the first at an interval of little over a year, there are naturally no important changes in the subject matter. The book has been prepared particularly for students and general practitioners, and certainly meets their needs. The subject is handled in a compact, systematic, complete manner suitable for those who wish to get information without waste of time. Another important feature of the work is the fact that each chapter is complete in itself, even at the expense of repeating portions of certain other chapters. This saves the irritating waste of time often involved in turning back and forth to look up cross-references. The illustrations are fairly numerous and are satisfactory.

The portions of the book devoted to treatment are particularly good. The author does not detail all the things that have been done, but simply states the measures which in his hands give the best results. Moreover, the treatment is subdivided according to the pathological progress of the disease, and the whole subject is put on a rational basis.

BOOKS, ETC., RECEIVED.

Practice of Medicine. By Eminent Medical Specialists and Authorities. Edited by George Alexander Gibson, M. D., D. Sc., F. R. C. P. Ed., Physician to the Royal Infirmary, Edinburgh. Volume I. Pp. xvi-824. Volume II. xvi-907. Philadelphia: J. B. Lippincott Company. Edinburgh and London: Young J. Pentland, 1901.

A Manual of Surgical Treatment. By W. Watson Cheyne, C. B., M. B., F. R. C. S., F. R. S., Professor of Surgery in King's College, London, etc., and F. F. Burchard, M. D. and M. S. C. Lond., F. R. C. S., Teacher of Practical Surgery in King's College, London, etc. In Seven Volumes. Volume V. The Treatment of the Surgical Affections of the Head, Face, Jaws, Lips, Larynx, and Trachea; and the Intrinsic Diseases of the Nose, Ear, and Larynx. By H. Lambert Lack, M. D. (Lond.), F. R. C. S., Surgeon to the Hospital for Diseases of the Throat, Golden Square, etc. Philadelphia and New York: Lea Brothers & Company, 1901. Pp. xx i-470.

International Clinics. A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pædiatrics, Pathology, Dermatology. Diseases of the Eye, Ear, Nose, and Throat, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the World. Edited by Henry W. Cattell, A. M., M. D., Philadelphia. Volume II. Eleventh Series. Philadelphia: J. B. Lippincott Company, 1901. Pp. viii-304.

Photographic Atlas of the Diseases of the Skin. A Series of Eighty Plates, comprising more than One Hundred Illustrations, with Descriptive Text, and a Treatise on Cutaneous Therapeutics. By George Henry Fox, A. M., M. D., Clinical Professor of Diseases of the Skin, College of Physicians and Surgeons, New York, etc. Part II. Pp. 15 to 28. Part III. Pp. 29 to 42. Philadelphia and London: J. B. Lippincott Company, 1901.

Beiträge zur Pathogenese und pathologischen Anatomie der Epilepsie. Von Dr. L. W. Weber, Oberarzt und Privatdocent in Göttingen. Mit 2 Tafeln und 1 Figur in Texte. Jena: Gustav Fischer, 1901. Pp. 100.

Osservazioni cliniche sulla Peste Bubbonica. Dott. Giovanni Polverini, Direttore Capo del Laboratorio Sieroterapico Municipale di Bombay (India). Firenze: Luigi Niccolai, 1901. Pp. 107.

Annual Report of the Society of the New York Hospital. For the Year 1901.

Fourteenth Annual Report of the Managers of the St. Lawrence State Hospital to the State Commission in Lunacy. For the Year ending September 30, 1900.

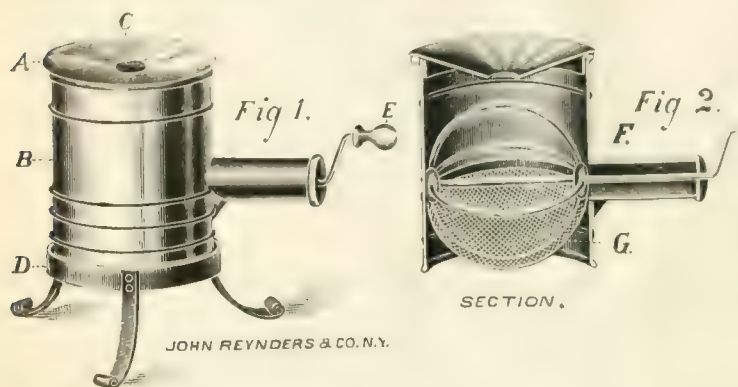
New Inventions.

A NEW STOOL-SIEVE.

By MAX EINHORN, M. D.,

NEW YORK,

PROFESSOR IN THE NEW YORK POST GRADUATE MEDICAL SCHOOL.



[This device was shown by Dr. Einhorn at a meeting of the German Medical Society of the City of New York, held on October 1, 1900, and a description of it was published in the *Deutsche medicinische Wochenschrift*, 1901, No. 10. The following is the author's English version of the description:]

In examining for gallstones it has been customary, as we all know, to spread the feces on a sieve under running water and, after constant stirring by means of a wooden or glass rod, to watch for any concretions that may remain behind. The same principle has also been utilized by Boas¹ in his recent article entitled *Ein Stuhlsieb*. Boas's apparatus consists of two hemispheres, one fitting into the other, the lower of which forms the sieve. In the upper hemisphere are two openings, a larger one to admit water and a smaller one through which a glass rod for stirring the feces may be introduced. Boas has enhanced the value of this apparatus by using it in the examination of the feces not only for gallstones, but also for undigested food remnants. Boas expresses himself as follows: "The apparatus serves the purpose of easily isolating substances that are indigestible or that have escaped digestion by the stomach or bowel, and of rendering them in this way more easily accessible to a gross and microscopical examination. It also serves the purpose of viewing in their whole extent pathological admixtures to the stool, such as mucus concretions, and entozoa and of examining them in all directions. The whole procedure lasts from ten to twenty minutes."

Every physician who has at heart the examination of the bowel function will receive with interest this new article of Boas's. The constant stirring of the feces with a glass rod seems to be somewhat tiresome. I will now describe an apparatus which I have used for some time for the same purposes as Boas's, and which seems to me to have some advantages over Boas's stool-sieve.

The apparatus, as you see it (Fig. 1), is composed of three parts: 1. A flour-sieve (Fig. 1, B). 2. A cover (Fig. 1, A) provided with a large opening (Fig. 1, C). 3. A tripod (Fig. 1, D). The flour-sieve, which is the principal part of the apparatus and which may be used for the examination of feces without further additions, consists of a cylindrical vessel the bottom of which is formed by a hemisphere of fine wire gauze (Fig. 2, G). In this cylinder is an appliance for stirring (Fig. 2, F), consisting of two circular wires placed at right angles and one straight horizontal wire which, perforating the cylinder, ends outside of it in the handle (E). By turning this handle the stirring apparatus is put in motion and, the wires running close over the wire sieve, the feces are constantly brought in contact with the latter. In the presence of water a constant washing and separation into fine particles of the brittle feces takes place. These finely separated substances flow off with the water through the sieve, whereas coarser particles remain behind.

Method of Examination.—The feces to be examined are put into the cylinder (B), the cover (A) is put on, and the apparatus is placed upon the tripod (D). The apparatus being placed under a water faucet, the water is allowed to run directly into the opening (C) of the cover. At the same time the handle (E) is constantly turned. The whole process is usually terminated in from three to six minutes. We now notice that the water runs off clear. We then take off the cover and inspect the residue on the wire gauze. In a normal stool the remnants are very small, as I have determined by several examinations. They consist of small pieces of cellulose connective-tissue shreds and some fruit pits, the total quantity usually not exceeding half a tablespoonful. In pathological cases the residue is at times increased. With this method of examination undigested substances and concretions are very easily found, and I do not hesitate to warmly recommend this new stool-sieve.

 Miscellany.

Women Artists and Anatomy.—From the *Gazette médicale de Paris* for August 3d, we learn that the Superior Council of the Paris School of Fine Arts has had under consideration the question employing the academic loin covering (*caleçon*) for models posing in the presence of the women pupils who are now admitted to the school. The representative of these ladies has solved the difficulty by a letter addressed in their name to the Superior Council in which she says: "We demand to be treated like the women-students of medicine. Do they put drawers on their subjects in the schools? We study what they do, but from another point of view. That is all." This argument has prevailed, as indeed it ought to, and the Superior Council has prescribed the *caleçon*.

¹ *Boas, Ein Stuhlsieb*, *Deutsche medicinische Wochenschrift*, 1900, No. 36, p. 583.

Normal Menstruation and Some of the Factors Modifying It.—Dr. Clelia Duel Mosher (*Johns Hopkins Hospital Bulletin*, April to June) gives in a preliminary note the conclusions arrived at as the result of clinical and experimental study. The first embraced the serial menstrual records of more than 300 women, collectively extending over more than 3,000 menstrual periods. The second included laboratory experimental data on the respiration, urine, temperature, pulse, blood pressure, blood counts, hæmoglobin estimation, etc.

Dr. Mosher's conclusions are as follows: A rhythmical fall of blood pressure, at definite intervals, occurs in both men and women. The daily records of the blood-pressure with the sphygmomanometer of Mosso on men and women under similar conditions of life and occupation give curves apparently indistinguishable in character. The fall in pressure in women occurs near or at the menstrual period. In all of the fourteen series of records the fall of blood-pressure was gradual from the mean average pressure. This from day to day shows oscillations within rather definite limits. The maximum fall of pressure may extend over two or three days and the corresponding rise to the normal average pressure is gradual. There is usually a preliminary rise, above the normal average pressure; this occurs from three to five days before the onset of the main fall of pressure, which constitutes the principal feature of the rhythm. In every case there was a preliminary fall, abrupt and definite, but usually not so extensive as the main fall of pressure; this preliminary fall was followed by a return to the normal or higher pressure before the principal fall occurred. In four cases there was a distinct rise above normal after the main fall of pressure before the return to the normal daily oscillations. These variations were not peculiar to either sex.

A curve constructed on the subjective observations of the sense of well being, shows ups and downs corresponding to the marked variations in pressure; the sense of maximum efficiency of the individual corresponding to the time when the pressure is high, and of lessened efficiency to the periods of low pressure. The observations were carried on independently of each other. In no case was the change sufficient to incapacitate the individual. The time of low pressure appears to be, in both sexes, a period of increased susceptibility. If symptoms of any kind are shown they are apt to be given by the point of least resistance. For example, in a man or woman having a tendency to digestive disturbances, the symptoms from the digestive tract are likely to occur at the period of low blood pressure; or when a slight chronic catarrh exists, as so frequently happens in this climate, there may be marked increase of symptoms from the respiratory tract.

In women the fall in blood pressure most frequently occurs before the menstrual flow, the maximum fall being coincident with the onset of the flow; there is a gradual return to the normal mean pressure by the time the menstruation ceases. Occasionally the fall occurred during the flow.

While true dysmenorrhœa is far too frequent, much of the so-called menstrual suffering is not dysmenorrhœa but simply coincident functional disturbances in other organs, induced, possibly, by the favoring conditions of a lowered general blood pres-

sure occurring near or at the time of menstruation. (Goodman's restricted definition of menstruation is adhered to—"A periodic sanguineous defluxion from the genital tract.")

When the attention is of necessity directed to so obvious a process as the menstrual flow, untrained women, especially if without absorbing occupation, naturally refer their lessened sense of well being and diminished sense of efficiency, which may accompany the lowered general blood pressure occurring near or at the menstrual flow, to the function of menstruation. When we remember how firmly fixed is the tradition that a woman must suffer and be incapacitated by this normal physiological function, it is readily understood how many women would call the depression due to lowered blood pressure, menstrual suffering.

All statistics, however extensive or carefully taken, are likely to exaggerate the percentage of women suffering from dysmenorrhœa, because the errors just mentioned are so difficult to eliminate.

The conception that functional disturbances in other organs are considered and recorded as dysmenorrhœa was first derived from the study of the clinical data and later strengthened by the blood-pressure experiments supplemented by the notes of the persons studied.

The conclusions of this paper would have been impossible had my clinical data consisted merely of isolated statements based on the general impressions, as to their own conditions, of individual women filling out a single menstrual record, and without a personal acquaintance with, and an intimate knowledge of, the habits of life and conditions of work of the women studied.

The Bimanual Method of Percussion for the Detection of Cystic or Loculated Fluids in the Abdomen.—Dr. George M. Foy (*Medical Press and Circular*, July 24th) calls attention to the following method recommended by Dr. John Clark, of Philadelphia:

On bimanual examination of a pelvic mass of questionable consistence, the intestines intervening between the anterior abdominal wall and the tumor may dissipate the percussion impulse of the abdominal hand, and although fluid may be present, a wave of sufficient intensity to be felt by the vaginal touch is not induced. To overcome this difficulty, Dr. Clark confines the tumor as closely as possible between the two examining hands, while the percussion is made by an assistant. "With light, quick taps, even small collections of fluid may be detected by the quick, responsive, pulsatile wave passing from the abdominal to the pelvic hand."

In tumors other than pelvic, says Dr. Foy, the method has been modified. By pressing one hand deeply in over the hypochondrium, while with the other deep counter pressure is made just below the fixed ribs, the author has been able to detect an appendical abscess situated beneath the cæcum and the lower lobe of a downward displaced liver.

Such cases and such tactile methods of diagnosis, he adds, require from the physician the *tactus eruditus* which comes of long practice and careful observation; but which is almost a lost art since scientific instruments have become so generally adopted. To those who possess the gift the bimanual method

of percussion cannot fail to be helpful, and it is worthy of a trial from all.

A Plea for Psychology in the Medical Curriculum.—Dr. George A. N. Dearborn (*Science*, July 26th) makes a strong plea for the importance of psychological training as an essential part of the medical curriculum, for "psychology discusses the mental processes whereby all perceptible nature is perceived." Even chemistry and the other sciences only arrive at their analyses "through mental processes which it is the business of psychology to explain and facilitate." It is therefore a basal science. It is also an eminently interesting one, for its subject is the ego, and "the biologic egotism implanted deep in every soul sees to it inevitably that all one's life, whatever the social status or the life-pursuit, that soul shall study continually itself, with however apparent indirectness or however elaborate the social system of real or hypocritical altruism may be."

In substance older than Thales, known methodically since Aristotle, there is danger of wandering into metaphysics or "divine philosophy," while mysticism, run riot in Christian science *et hoc genus omne*, casts its baneful shadow over it among average men. But psychology is a very practical science. "A science seemingly should not be classed with *belles-lettres* or with pure philosophy, as the means of satisfaction for man's eagerness for abstract knowledge or for an understanding of the aesthetics of existence." Success in life is largely proportionate to psychological attainments, be they conscious knowledge or unconscious gift. Its value is real to all men, but especially to professional men, the divine, the lawyer, the medical man. But "the men who, for the public benefit, require the largest amount of insight into mind and its relations with body, have had thus far the least convenience for acquiring it." This is probably due to the fallacy that material things are real and more important than things which are immaterial, ideas and emotions and the determinations of the will; yet, "for every person maimed by a material accident, a dozen are maimed by some one's will or emotion or idea."

The physician needs psychology in his relation as the teacher of the public in public medicine. The success and hold of the "family doctor" were largely due to it, for, "practical psychologist that he was, when he entered a house, patient and household at once felt better even though death were near." The practitioner needs it since he is concerned with living and social organisms who are invariably compounded of both body and mind. If necessary for the general physician, how much more is a preliminary grounding in psychology necessary to the specialist in mental disease.

The education afforded to the medical student seems in general too grossly materialistic. "He learns but one side of this two-sided story; from the first year to the fourth, from the dissecting room to the gynæcological or otological clinic, the routine student sees and hears of muscles and bones, and viscera, sense-organs, nerves and vital fluids, but little, unaccountably little, of that other aspect of men and women which to these very men and women is their life, while these other, these organs, are but needful instruments of that life's attainment." The man thinks nothing of his stomach, the woman nothing

of her reproductive mechanism, so long as both functionate well. "There is something besides cell-built tissue for the gynæcologist in charge of an operative case to consider when of two women, alike in vigor, who undergo identical ovariectomies, for example, one goes in three weeks from the hospital a new woman, cheerful, capable and happy, while the other becomes an hysteric wreck, never perhaps to equal her former self in happiness or in health. As every surgeon knows, such differences are met continually and they puzzle him. Why is it that present medical education takes no account of the principles underlying phenomena like these?" Not only what can be seen, heard, and felt, with or without the aid of instruments, can be made cognizable to the senses in some way, but also the will, affections, habits, character, which constitute the real man or woman, must be studied; not mind controlling body or body mind, but both one unity sensitive to the stimuli of a common environment and mutually interdependent.

A science of psychology would soon develop a nomenclature, and impart precision to many terms at present vaguely used, e. g., temperament. A brief exposition of genetic and empirical psychology should begin such a course, whence a departure would be made into allied branches, leading to topics more immediately practical; e. g. temperament, mood, idiosyncrasy, pleasure, pain, emotion, anæsthesia, hypochondriasis, dynamogeny, will-power, sleep, subconsciousness, habit, sexual, racial and epochal differences, suggestibility, hallucinations and other scarcely abnormal phenomena of the sense organs and their neural centres. Finally, the author, reviewing the progress of bacteriology, pathology, and experimental physiology in recent years, says that "it seems time now that the growing energy of the medical schools should look around more widely and realize, with practical benefit, that if emotions cause at times disease as well as bacteria [*sic*], so it is equally important that the conditions of the one should be taught the student as well and as certainly as those of the other."

Medical Aspects of Cancer of the Breast.—Dr. William Osler (*Canadian Practitioner*, June), says that surgery has become largely the practice of medicine, and medicine, in part at least, the preliminary practice of surgery, in so far as making the diagnosis for surgeons and handing them our cases for operation. Consulting physicians see a cancer of the breast in two stages, because the patients come to them as the lesser of two evils; they prefer the opinion of the physician, who may possibly tell them that an operation is not necessary, to that of the surgeon who, they fear, will surely tell them that an operation is necessary; but a more important group for the physician to recognize is the late manifestations of cancer of the breast.

These may be grouped according to the metastases, for it is through these that we are brought into relation with them, into cerebro-spinal, thoracic, and abdominal groups. We will first consider the cerebro-spinal. Owing to the fact that the metastases are almost as frequent in the bones as in any other part of the body, we see a proportionately large number of cases with symptoms pointing either to disease in the cranium, the spinal canal, or the vertebræ.

That point has not been sufficiently brought out. Statistics are available now from several of the large German clinics and the percentage is considerable. The author refers to a remarkable case that illustrates the cerebral form of metastasis following breast cancer. The patient suffered with headache, vomiting, and progressive coma. She had a double optic neuritis, and it was quite evident that she had a brain tumor. Attention was called to the fact that she had cancer of the breast eighteen years ago. On examination, there was a hard, firm, scirrhus nodule in the breast.

The spinal group is very much more important, and really forms a very considerable number of all the cases of late metastases in carcinoma of the breast. They are important in the first place because they are very apt indeed to be mistaken for something else. The metastases may occur in the body of the spine or within the spinal membranes, and a very small new growth, as in a case recently seen in the Hopkins, may cause very serious symptoms. But the cases that are of most interest for the physician are those described by Charcot under the name of *paraplegia dolorosa*, an excellent name. The onset of these spinal symptoms may be early, within a few months after detection of the cancer, or may be delayed for months or years, or, on the other hand, they may occur long before the tumor is recognized. The patient and the physician may not know of the existence of the tumor; an instance of that kind occurred at the Johns Hopkins Hospital in 1894, when a man was brought in from Union Station, having become completely paraplegic on his way up from Florida. He had had curious symptoms of numbness in the hands and feet, accompanied by burning pains, and his physician had been sent for to bring him home. By the time he reached Baltimore he had become so ill that it was decided to bring him to the hospital. On examination, it was quite evident that one breast was very much larger than the other. The patient himself had never noticed this, but palpation showed a firm, hard, indurated tumor. With the existence of the primary tumor of the breast the painful progressive paraplegia was easily and readily explained. The difficulty in these cases arises from the fact that weeks and months often intervene between the onset of the pain and the development of the paraplegia, and that pain and pain alone is the feature presented by the case for many months.

The early symptoms usually are not associated with a scar. They are usually distinct pains, a feeling of tingling and numbness, neuralgia of great intensity and shooting pains down the front or back of the legs, then a slight, followed by complete, paraplegia, but long before this last you have the characteristic retraction of the legs associated with severe pain. The degree of suffering is probably as great as that seen in any other condition in medical practice. Now remember that all this may occur without the slightest sign of a secondary tumor. The spinal list is the longest of the cases seen by the author, and in scarcely one of his long series was the condition recognized in the early stage. He emphasizes particularly the fact that these cases are, so far as we know, utterly hopeless cases, and just so soon as a diagnosis can be reached the patient should have all the comfort and aid that medicine can offer,

and no blame attaches to making them morphine habitués, for it gives them relief for a time, but they cannot be cured.

The thoracic group is next in importance, and naturally owing to the close relation and the liability to involvement of the lymphatics, that group of cases is fairly numerous. Metastasis may occur in the pleura, in the mediastinum or in the lungs. Cases in the pleura are common. There is usually an invasion of the pleural membrane and effusion, and the patient comes with symptoms of pleural exudate requiring tapping, and you may be surprised to find a bloody fluid and the necessity for frequent tapping. These patients may die with little or no distress other than that associated with dyspnoea. The pulmonary cases are exceedingly rare. Involvement of the mediastinal glands is, next to that of the spine, the condition with perhaps the greatest degree of distress, and when in a year or a few months following the removal of a breast cancer the patient begins to have a cough or dyspnoea without signs of effusion in either pleura, then, even if the glands above the clavicle are not enlarged, it is clear that one of the worst accidents has happened. These cases, as a rule, are very distressing and die of suffocation. There is increasing pain, dyspnoea and pulmonary oedema, and fortunately the duration of the illness is shorter than in the spinal cases.

The abdominal group comes next, and first in that are the hepatic cases. Metastases of the liver are perhaps the most common. Large nodular masses can usually be felt or seen, and death is rapid, without much pain.

In conclusion, Osler draws attention to a very remarkable circumstance in connection with the secondary tumors following breast cancer. It occasionally happens that the tumor of the breast ceases to grow, the fibrous tissue predominates, and the growth becomes a firm, hard, cancerous mass, shrinking to perhaps a third of its original size. It is one of the special characteristics of a scirrhus that it not only tends to increase but that it tends to heal to a certain measure, just as tuberculosis does. If one looks at the central portion of a nodule of the liver, it is firm, hard, and has undergone changes that are really conservative and on the road to healing. In a few of those instances of a secondary growth, one sees remarkable changes that are almost curative; at any rate, they proceed to such a degree that the tumors themselves disappear, and what is more important, the symptoms they cause disappear, and the patient, who was in an apparently hopeless condition, recovers, gets up, and our grave prognosis was apparently a false one. A number of such cases are on record, and Osler adds two more interesting cases of this character. (See *New York Medical Journal*, August 17th, p. 336—The Kind that Christian Science Cures.)

Medical Engineers.—According to the *Gazette médicale de Paris* for June 29th, there are at least four French physicians who are also engineers; M. de Rey Pailhade is a mining civil engineer, though unconnected with the national society; while Professor Gariel, M. Imbeau, and M. Weiss are engineers and members of the Corps national des Ponts et Chaussées.

A New Mechanical Treatment of Inflammatory Exudates and their Residua in the Female Pelvis.

—Dr. Hugo Ehrenfest (*St. Louis Courier of Medicine*, July) gives an account of Professor Freund's "pressure-weight" treatment of inflammatory exudates, as modified by various authorities:

The pressure is produced by placing a bag filled with bird-shot on the abdomen, and at the same time inserting into the vagina a rubber condom also filled with shot.

Funke (*Hegar's Beiträge*, Bd. I, p. 264) reported a series of cases from Freund's clinic, in which excellent results followed this treatment, and gave in this report the indications for the use of this method. Before this was published, Pincus (*Zeitschrift für Geburtshilfe und Gynäkologie*, Bd. 39, p. 13) used and recommended a similar treatment, to which he gave the name of "pressure-posture." His method consists of placing the patient in the Trendelenburg position with a bag of shot on the abdomen, and nothing in the vagina save a colpeurynter filled with air, its object being to support the uterus.

The many successful cases following the use of these methods induced Professor Schauta, of Vienna, to try them in his clinic. Schauta utilized a combination of both, which consisted in placing a shot bag on the abdomen and at the same time introducing a colpeurynter filled with metallic mercury into the vagina, the patient being placed in the Trendelenburg position.

The most satisfactory results with this method were published by Halban (*Monatsschrift für Geburtshilfe und Gynäkologie*, February, 1899). Later, Funke (*Centralblatt für Gynäkologie*, No. 8, 1900) advised some changes in the technics, which the author has adopted, and finds of great practical value.

The shot bag placed on the lower part of the abdomen compresses the pelvic exudations, while counter-pressure is produced by the vaginal colpeurynter filled with mercury; the latter exerts the same influence in the reversed direction, with the addition, that the uterus is forced out from the lower pelvis, thereby stretching all adhesions and bands, if any exist. For this particular purpose the Trendelenburg posture is the most effective. In this posture the mercurial weight does not, as in the horizontal dorsal position, press against the sacrum, but it exerts its influence in the direction of the pelvic axis and tends to press the uterus in the same direction.

In the case of a retroflected uterus, pregnant or non-pregnant, the colpeurynter placed into the posterior fornix will push the uterus directly out of the cul-de-sac and cause it to assume an anteverted position, the patient being in the elevated dorsal posture. By changing the position of the patient to either side we can produce the pressure in any direction desired. Such treatment further assists the absorption of exudates by improving the pelvic circulation.

The indications for the use of this method are found in chronic inflammatory conditions of the pelvic organs or their results, and in malpositions of the uterus.

Naturally we may expect the most favorable results in lesions situated in the lowest part of the pelvis, for instance, cicatrices following cervico-vaginal lacerations, hard exudates as the result of chronic parametritis, deep-seated adhesions and

bands after perimetritis, as well as shortening of the sacro-uterine ligaments. In adhesive bands of the fundus uteri the effect is not so manifest, though in such cases we often succeed in materially relieving the subjective symptoms due to the stretching of these bands. In the treatment of retroversion of the uterus, where the fixations are low down in the pelvis, the results of this method are surprisingly good. In cases of incarceration of the pregnant uterus, even a single introduction of the vaginal colpeurynter (filled with mercury) was followed by the correction of this abnormal condition (as reported by Halban and Funke).

The principal contraindications to the use of this method are all acute inflammatory conditions of the pelvic contents. In some cases of sub-acute conditions we may use this treatment, but only with the greatest caution, in order to avoid a recurrence of acute symptoms, particularly in cases of pyosalpinx. In such cases, when the tubes and their exudates are located in the cul-de-sac, we often get good results, if the proper precautions are observed. Care must be taken that in these cases the weight of the mercury in the vaginal colpeurynter is between 200 and 400 grammes ($6\frac{1}{4}$ to $12\frac{1}{2}$ ounces), and the treatment must be immediately stopped so soon as the patient complains of severe pain. Should the patient have an elevation of temperature, this method must not be repeated.

The general technics of this method is as follows:

Two vaginal colpeurynters are connected by means of a stop-cock made of hard rubber, so that the whole length of the apparatus is about 24 inches. Before connecting this apparatus, one of the colpeurynters is filled with 1,000 grammes ($31\frac{1}{4}$ ounces) of metallic mercury, while from the other the air is evacuated by compression of the bulb. The patient is placed in a comfortable recumbent position on a bed or couch, the foot end of which is elevated from twenty to twenty-four inches. The empty colpeurynter is folded, introduced into the vagina and placed against the part desired. It is retained in this position by means of two fingers, while the filled colpeurynter is elevated with the other hand, allowing the mercury to flow downward. In the beginning of the course of this treatment it is advisable not to use more than between 250 and 500 grammes ($7\frac{3}{4}$ to $15\frac{1}{2}$ ounces), and only after the patient has become accustomed to this treatment, may we increase the amount until the upper colpeurynter is completely emptied. The closed valve then prevents the return flow of the mercury. A flat linen bag, containing from 1,500 to 2,000 grammes (47 to $62\frac{1}{2}$ ounces) of shot is placed on the lower abdomen. The patient usually remains in the dorsal position, but should it be necessary to turn her on either side, the abdominal bag can be kept in position by means of a bandage. To remove the filled colpeurynter from the vagina, the patient is allowed to sit up, and by opening the valve and lowering the empty colpeurynter, the metal flows out readily. The apparatus should be cleaned and kept in an antiseptic solution.

At the beginning of the treatment the procedure must not consume more than fifteen minutes; yet, the author has found that patients become speedily accustomed to it, and it is by no means uncommon that patients remain in the Trendelenburg position with the pressure of 1,000 grammes in the vagina

for four or five hours with very little inconvenience. Usually he leaves the colpeurynter in place for one to two hours every second day. As mentioned before, the treatment must be interrupted should the patient complain of pain, and in a few days it may be attempted again, but in the event of elevation of temperature this method must be given up, as this condition contraindicates its use.

The pressure treatment is a form of forced massage, but it does not exclude manual massage according to Thure Brand's method.

We can treat more successfully the adhesions which are situated higher up in the pelvis by means of manual massage, after we have removed the exudates and adhesions below by pressure weight. The author's experience, as mentioned before, justifies him in strongly recommending this treatment. If applied according to the directions suggested in this paper, it will be followed by good, sometimes by even surprising, results.

Leprosy in Russia.—The *Medical Press and Circular* for July 31st says that the measures taken to stamp out leprosy in Russia have not, so far, been attended by much success. In Lithuania there are 609 cases under medical supervision, 201 in Courland, 124 in Astrachan, and 121 in the Kuban district. Last year a marked increase is stated to have taken place in the Caucasus, Central Asia, and East Siberia. In addition to the official cases there is every reason to apprehend that the disease exists in many other districts, and steps are being taken to investigate its prevalence.

The Proneness of Diabetics to Pulmonary Consumption.—Dr. T. N. Kelynack (*Medical Press and Circular*, June 26th), after quoting authorities to show the proneness of diabetics to pulmonary tuberculosis, cites his own experience of nine years as pathologist to the Manchester Royal Infirmary concerning nineteen cases of diabetes mellitus admitted to autopsy.

Of these, eight males and three females were the subject of active pulmonary tuberculosis to a greater or less degree; in two males and five females the lungs were free from all evidences of tuberculosis; and in a male, aged forty-two years, there was a small patch of consolidation in each lung, which, however, was not distinctly tuberculous. Thus of nineteen cases there were undoubted evidences of pulmonary tuberculosis in eleven cases, or in 57.89 per cent. The exact ages were obtained of ten of the phthisical cases, and averaged—males, 36.42 years; females, 37 years. The non-tuberculous cases averaged males, 33.5 years; females, 32.6 years.

These numbers would go to show that pulmonary tuberculosis occurring in diabetes is to be considered as generally a terminal infection, and having but little effect in shortening the average mortality of diabetes.

Usually the phthisis was of a particularly active form. In one case, however, old puckered cicatrices and calcareous nodules were found at the left apex, but no definite recent tubercles. In another case, where there was marked pancreatic atrophy, an old calcareous nodule was found, but

no phthisis. In an adult male, in whom calculi were found in the pancreatic duct, there were large irregular cavities in both lungs, with much surrounding caseation, and also well-marked tubercles. In several of the cases where cavities of considerable size existed, blocked vessels and strands of fibrous tissue were prominent in the walls or crossing the excavations. This is of interest, since hæmoptysis seems generally to be the exception in the phthisis of diabetes. In a male, aged fifty-two years, an old alcoholic with typical "hob-nailed" liver, extreme cavitation was present in the left upper lobe. In a male, aged twenty-five years, where both lungs were the seat of extensive phthisis, there were large necrotic-like cavities containing non-odorous detritus. In several cases the large cavities extended to the visceral pleura, and would apparently have very readily led to pneumo-thorax, although this condition in the author's experience is rare in the phthisis of diabetes. Even in the non-tuberculous cases pulmonary congestion and oedema or bronchitis were usually present. Lobar pneumonia seems to be exceptional in diabetes. In the case of a female, aged nineteen years, there were patches of dark greenish-brown necrosis, but no tubercle. In one case where no tubercles could be detected in the lungs there was acute fibrinous pleurisy. The case of a male, aged forty-six years, proved of much interest. There were no distinct evidences of tuberculosis, but much fibrosis, bronchiectasis, and chronic pleurisy.

Perhaps the most practical deduction, says the author, to be made from a consideration of the above observations is that one should insure, so far as may be, for all diabetic patients a non-tuberculous environment. At the present time there is reason to believe that many general hospitals afford to cases of diabetes perhaps the worst possible means of escaping tuberculosis.

Early Transitory Facial Paralysis in Suppurative Otitis Media.—Dr. R. H. Kennan (*Medical Press and Circular*, June 26th) gives notes of some cases of scarlet fever in which facial paralysis supervened at an early date in the history, not only of otitis media, but even of the scarlet fever itself. The author says:

"That paralysis of the facial nerve occasionally results during the process of necrosis and disintegration of the temporal bone is also well known, and this fact is alluded to in all text-books which deal with the subject of aural surgery and nervous disease; but that facial paralysis connected with otitis media is not necessarily postponed to this late date is not so clearly shown or so confidently enunciated."

The author cites Gowers, Grüber, Stedman, Ross, and Bastian to show that a prevailing opinion exists that facial paralysis only arises when the suppurative processes in the tympanum have existed long enough to be considered chronic, *i. e.* after the lapse of time necessary for necrosis of bone; and, secondly, that paralysis secondary to osseous necrosis and due to inflammation of the nerve in the canal is unfavorable for rapid cure as contrasted with that resulting from in-

inflammatory action in the nerve outside the canal.

It would follow therefrom that facial paralysis arising in consequence of scarlatinal suppurative otitis media should be given a grave prognosis. The author reports his cases, therefore, to show that in some cases paralysis may set in at such an early date, not only of the suppurative process, but also of the scarlatina attack itself that it is highly improbable that necrosis or disintegration of the bone had taken place; and, secondly, that in these cases recovery may be as rapid and complete as in those in which the nerve has been attacked outside the bony canal.

In the first case, a child aged four years, scarlet fever was manifested on February 12th, and on March 1st facial paralysis of the left side was noticed, and in a few days became complete. The patient was discharged cured on April 30th, the only treatment being a blister outside the ear, and Easton's syrup. Two other cases of similar character are reported.

The author concludes that paralysis may arise without necrosis, and that implication of the nerve in the bony canal does not necessarily lead to a severe variety of paralysis, but may result in one pursuing as favorable a course as when the nerve is attacked outside the canal.

The ages of the patients were such that trustworthy information concerning the presence of tinnitus, affection of the sense of taste and hypersensitiveness to sound was unobtainable. Electrical reaction was not observed, but it is not likely, in view of the rapid recoveries, that the reaction of degeneration would have been marked.

Gout and Plumbism.—Dr. George Lorimer (*Quarterly Medical Journal*, May) arrives, as the result of an exhaustive investigation, embracing 107 cases of gout associated with lead impregnation, observed in the Devonshire Hospital, at the conclusion that lead impregnation is a predisposing cause of gout. The evidence which is adduced in support of this belief is: (1) That among hospital patients who suffer from gout, a large proportion are found to be affected with, or to have previously suffered from, lead poisoning. (2) That patients who are subject to gout are specially susceptible to plumbism, while it is also found that gout may be induced by the administration of lead salts in those who are predisposed to it, and the relation of cause and effect is shown from the fact that the latter ceases on the discontinuance of the former and recurs on its repetition. (3) That under the influence of lead salts, the blood becomes abnormally charged with uric acid, while there is a corresponding deficiency of it in the urine.

Lead gout is very conspicuous in London, but seldom seen in the provinces, and this distribution has been attributed to the difference in the use of alcoholic beverages, beer and stout being largely consumed by Londoners, and whiskey principally used in the north. The author, however, considers both the infrequency of lead-gout in the north and the difference in beer-drinking of the two sections, open to question.

The author has observed articular rheumatism after rheumatic fever in a subject of plumbism assume a distinctly gouty character, with the final evi-

dence of uratic deposits, and thinks that it may be assumed that there is a gradual transmutation from the rheumatic to the gouty type of arthritis, unless (a most improbable conjecture) the uratic deposits were mere accessory epiphenomena.

In gout associated with lead impregnation there is the combined effect of two morbid and concurrent influences: (1) Plumbism, with its cachexia resulting from its effects on the nervous and circulatory systems, and (2) gout, with its protean forms, its complications and tendency to vascular and tissue degeneration. As has been well observed by Sir Dyce Duckworth, "the lines of the two affections, saturnism and gout, run as it were parallel, and seem only to be modified by individual habit and diathetic tendency."

The author concludes that there is a "basic diathesis," or basic *arthritic* stock or stem, from which arise as branches two distinct diseases, gout and rheumatism; that this peculiarity of tissue, inherited or acquired, is an essential condition, but that the environment and the influence of special causes determine the direction or modification of the disease evolved from it.

Reproduction of the Tibia after Removal of the Diaphysis for Acute Infective Periosteitis and Osteomyelitis.—Mr. R. J. Pye-Smith, F. R. C. S. (*Quarterly Medical Journal*, May) reports an interesting case, accompanied by an excellent skiagraph showing the regeneration of the tibial diaphysis after its removal. He considers that the chief interest of the case lies in the comparatively perfect reproduction of the tibia. This seems due (1) to the operation having been undertaken early enough to save the periosteum almost entire, (2) to the abstention from the application of any strong caustic, such as pure carbolic acid, to the suppurating surface, (3) to the open method by which the wound was treated till suppuration had ceased, and (4), to the fact that the fibula, being unaffected, made an excellent splint, and kept the tibial periosteum in place. It was, of course, necessary to supplement this mechanical action of the fibula by artificial splints, without which genu varum or valgum would probably have developed.

Typhoid Fever Mistaken for Appendicular Inflammation.—M. Muhsam (*Gazette hebdomadaire de médecine et de chirurgie*, August 1st) reported to a recent meeting of Berlin surgeons the case of a man, thirty-two years of age, suddenly seized with constipation, vomiting, and abdominal pains. The symptoms improved and after eight days the patient entered the hospital when a temperature of 100.7° F. was found and a puffiness in the right iliac fossa. A diagnosis of appendicular inflammation was made. Some hours after admission a great aggravation of symptoms took place. A laparotomy was done, and the appendix was found healthy, but in the region of the cæcum was discovered an ulceration of the intestinal wall ready to perforate. It was sutured and the abdomen closed. Eight days after the operation, the patient presented a roseola and a tumefaction of the spleen. A diagnosis of typhoid fever was then made, and was confirmed by the serum reaction and by cultures from the stools.

Special Articles.

THE DIAGNOSIS, ÆTIOLOGY, PROPHYLAXIS, AND TREATMENT OF CYSTITIS, PYELITIS, AND PYELONEPHRITIS IN WOMEN.

By THOMAS R. BROWN, M. D.,

BALTIMORE.

There is probably no subject in the domain of medicine less understood than that of the infections of the urinary tract in women, or one in which a misinterpretation of the conditions found leads to more deplorable results. It is for this reason that within the past three years I have definitely devoted myself to a consideration of this question in the hope that it may call to the attention of the medical fraternity the essential features of the diagnosis, ætiology, prophylaxis, and treatment, so that a correct interpretation of the conditions may be possible in the hands of all and *ipso facto* the correct line of treatment inaugurated and carried out.

The objects of this research have been to determine definitely, as far as lay in my power, the bacterial flora of cystitis, pyelitis, and pyelonephritis in women and to clear up, as far as possible, the moot questions in this subject, to discuss the other factors which may play a part in the ætiology of such infections and their relative importance in the development of these conditions, to discuss the means of arriving at a correct diagnosis, to determine the various modes of entrance of the bacteria into the urinary apparatus, to formulate if possible certain rules regarding the relationship between the species of bacterium found and the clinical picture presented, to call special attention to the necessity for careful prophylactic measures in all conditions in which infection of the urinary tract is rendered easy, to suggest from the findings in my cases the line of treatment to be carried out, and to note carefully any details in the cases, considered both individually and collectively, that may tend to throw light upon the disputed points of the question or to open up new lines of thought and investigation. The circumstances attending these investigations have been extremely favorable. In the first place, an unusual opportunity was furnished for the study of the ætiology of these infections, as most of the acute cases were post-operative and were most carefully studied before, during, and after the infection, so that all the factors in the development of the condition could be carefully analyzed and given their proper importance. In the second place, a careful

cystoscopic examination was made in all the chronic and most of the acute cases of cystitis, so that no possible mistake could be made in the diagnosis or character of the infections. In the third place, the urine was obtained directly from the kidney by ureteral catheterism in all cases of supposed renal infection, and with the urine so obtained the bacteriological, chemical, and microscopical investigations were made. One hundred cases of pyelitis, pyelonephritis, cystitis, and conditions simulating cystitis, such as vesical neuroses, urinary hyperacidity, etc., were considered and subdivided as follows: Cases of acute cystitis, 26; cases of chronic cystitis, 31; cases of tuberculous cystitis, 6; cases with symptoms suggestive of cystitis, but with no infection, 17; cases of acute pyelitis and pyelonephritis, 2; cases of chronic pyelitis and pyelonephritis, 12; cases of tuberculous pyelitis and pyelonephritis, 6.

In discussing what must be perforce a mere outline of the results obtained, I shall take up in turn the subjects of (a) diagnosis, paying special attention to the point derived from the urinary examination, both chemical, microscopical, and bacteriological; (b) ætiology, discussing under this heading, first, the primary ætiological factors, that is, those which definitely bring about the condition, and also the secondary factors which render, as it were, the bladder or the kidney, as the case may be, in suitable condition for the infection to be set up; discussing also under this section the mode of entrance of the bacteria, certain peculiarities of the micro-organisms met with, the relation between infections of the kidney and stone-formation, and other points of interest in this connection; (c) prophylaxis; and (d) treatment, paying special attention to the medical treatment of the acute cases, although mentioning in passing some of the surgical measures of treatment necessary in the subacute or chronic cases.

Diagnosis.—Although a consideration of the patient's symptoms, fever or chill, pain localized in the vesical or renal region, tenesmus, the mode of onset, the history since the onset, are all of great help in arriving at a diagnosis of cystitis or pyelitis, the one and the only absolutely satisfactory means of arriving at a diagnosis is by the examination, chemical, physical, microscopical, and bacteriological, of urine obtained either from the bladder or from the kidney under precautions so strict that there is no possible danger of contamination during the procedure. The method I have employed during the past few years has been this: In the case of the bladder, the vestibule of the vagina and mouth of the urethra having been carefully cleansed with bichloride-of-mercury solution (1 to 1,000) or boric-acid solution (saturated) followed by sterile water, the lips of the urethra are pulled apart by traction on the labia, and a

sterilized glass catheter with a sterilized rubber cuff about 10 cm. on its distal end is introduced, the operator only touching the rubber cuff at about its middle. After the urine has flowed for a short time (so that, if a few micro-organisms from the urethra were introduced, they would be washed out by the first-flowing portion of urine), the rubber cuff is withdrawn by traction on its distal end, and from 10 to 20 ccm. of urine collected in a sterile tube, the cotton plug of which is only removed during the reception of the urine. In obtaining urine from the kidney, the sterilized rubber cuff is placed upon the distal end of the sterilized ureteral catheter, which is introduced through a cystoscope into the ureter, great care being taken that it touches nothing in its course until it is inserted into the ureteral orifice. The bladder should be thoroughly washed out just previous to the procedure if there is the least possibility of a vesical infection, while if an infection of the bladder has been definitely determined, either by urinary or cystoscopic examination, the ureteral orifice should be carefully swabbed off with a solution of nitrate of silver and a catheter inserted but a short way up the ureter (to prevent any possibility of renal infection from the bladder); the urine is then collected as before. Ordinarily, in this latter case, the urine flows drop by drop, but in case of hydro-ureter or pyo-ureter or nephrydrosis or nephropyosis the urine first flows in a steady stream for a short time, until the dilated portion of the ureter or dilated renal pelvis is emptied, when the catheter reaches that portion of the ureteral or renal tract. The adequacy of these measures has been shown by the negative results obtained in 52 check experiments in the case of the bladder and 32 in the case of the kidney. Usually, besides this small portion collected for bacteriological examination, a larger portion was collected in a carefully cleansed glass vessel for the chemical and microscopical study, in which a larger amount is usually desirable. At the same time a careful cystoscopic examination should be made, special attention being paid to the presence or absence of congestion, the presence, character, and localization of any ulcers, the condition of the mucous membrane in the trigonal area and in the upper portion of the urethra, the character of the mucous membrane contiguous to the ureteral orifices, and the character of the urine flowing from them, this being of immense importance in determining the presence or absence of an infection of the kidney in cases in which ureteral catheterism is impossible.

The bacteriological examination of the urine is made from the specimens so obtained, two or three loops of the urine or of the urine diluted with sterile bouillon being plated on agar, and from the colonies that grow thereon the various transplantations on

the other media made and the micro-organism distinguished. In all cases, except perhaps acute post-operative cases, the tubercle bacilli should be carefully searched for in the sediment, while if there is pyuria or hæmaturia in an acid urine, but with no growth on the ordinary media, intraperitoneal injections in the guinea-pig should be employed if the tubercle bacilli are not found in the sediment microscopically. In any specimen where the history of the case or the microscopical examination of the sediment (the discovery of intracellular diplococci) makes us suspect the presence of the gonococcus, this micro-organism should be sought for by the use of special media and the use of special staining reactions. The varieties of micro-organisms found in my series of cases, as well as a consideration of the results obtained by certain of the European investigators in this field, will be discussed subsequently under the head of the ætiology of these infections.

Hardly less important than the bacteriological examination is a careful chemical and microscopical examination of the urine obtained under the precautions mentioned above. The *reaction* of the urine should be carefully tested, as by its acidity, neutrality, or alkalinity it tells us in a broad way something regarding the nature of the microbe causing the infection; while in cases with symptoms suggestive of cystitis, but where the cultures are negative, it is important also to determine the degree of the acidity; in my cases this has been done by titration with 1/10 normal solution of sodium hydroxide, phenolphthalein being used as the indicator. I have seen during the past two years nine cases which had been diagnosticated by the attending physician as cystitis, but which I found were not associated with any infection, and in which a careful determination of the reaction of the urine showed that the condition was due to its marked hyperacidity. In these cases, compared with those in which the acidity of the urine is normal (average acidity—100 ccm. of urine is neutralized by 25 ccm. of the 1/10 normal sodium hydroxide), show an acidity from two to five times the normal. In considering these cases one was at once struck by the fact that they were entirely confined to patients of very neurasthenic, neurotic, or hysterical tendencies, and it was always noted that in the exacerbations of these conditions the urinary hyperacidity and the vesical symptoms associated with it were markedly increased. I, therefore, regarded the condition as a neurosis of secretion, probably of neuropathic origin, and in the treatment of the condition not only was attention paid to the diminution or neutralization of the acidity by the administration of alkalies and large quantities of fluid by the mouth, but also the treatment was devised to counteract the patient's general neu-

ropathic tendency, attention being paid to regulating the patient's mode of life, diminishing the possibilities of excitement and of emotional disturbances, the use of cold packs, massage, over-feeding, systematic rest, and the various medicinal agents which are suitable in such a condition. I have discussed this subject at length because the condition can so absolutely simulate cystitis that in the majority of cases the physician will be deluded into believing it to be a case of that nature and will treat it as such, with the deplorable result that by the treatment itself, local applications, cystoscopic examinations, irrigations, etc., a real infection of the bladder may be set up which may take years to be recovered from or may be absolutely incurable. I have seen no fewer than four cases in the past year in which what was evidently but a urinary neurosis of this nature was misinterpreted by the attending physician and a true cystitis brought about by treatment, and in all of them the patient's life has been rendered almost unbearable by this misinterpretation. One of the cases had lasted for twelve, another for ten years, before being seen by me, and in each of them the cystitis was of so severe a grade that the pleasures and the duties of life were rendered absolutely impossible. The *specific gravity* of the urine is of importance, because of the frequency of low specific gravities in cases of pyelitis and also in cases of hysteria and the various neuroses; its determination is of special interest when both kidneys are catheterized, as well as the quantitative determination of the urea output from either kidney, so that we may determine the secreting function of each, a question of immense importance when nephrectomy is being considered.

The question of the presence and the quantity of *albumin* is also of immense importance, because this tells us better perhaps than anything else, except the ureteral catheterism, whether the infection we are studying is of the bladder or of the kidney. Speaking generally, in all cases of bladder infection, even where the pyuria is of high grade, the quantity of albumin present is always slight, while in cases of pyelitis or pyelonephritis, even when the pyuria is of much lower grade, there is much more albumin present. According to Rosenfeld, in the severest cystitis the amount of albumin is never above 0.1 per cent., while in pyelitis it is often 0.3 or even more. This point is of special importance in diagnosticating cases in which subjective symptoms are practically absent and ureteral catheterism or cystoscopic examination is impossible. I have been able by this means to diagnose seven cases of renal infection before entirely unsuspected, the diagnosis of which was subsequently substantiated by ureteral catheterism.

Microscopical examination of the sediment is of

value, because it tells us of the presence or absence of vesical, ureteral, and renal epithelial cells (although it is not safe to make a diagnosis of renal infection from the character of the epithelial cells alone); it calls our attention to the crenation or lack of crenation of the red and white blood cells (the former of which conditions speaks for renal hæmaturia or pyuria, if the grade of these conditions is low; if the pyuria or hæmaturia is of high grade, this method of distinction is of very little value), and it tells us of the morphology, number, and motility of the micro-organisms giving rise to the infection; also, by counting the white and red blood cells in a definite quantity of mixed urine (1 cmm.) with a Thoma's hæmatocytometer, we can definitely determine the success or failure of the mode of treatment employed. While, therefore, as I said before, a consideration of the clinical history of the case is of great aid in many cases, the only absolutely satisfactory means of diagnosing the cases is by the careful bacteriological, chemical, and microscopical examination of the urine, as has been outlined in the preceding paragraphs.

Ætiology.—Although Pasteur, in 1859, suggested the bacterial origin of cystitis, a view which was subsequently held by Traube, Niemeyer, Neubauer, Vogel, and others, it is only within a short time that this idea has been generally accepted. In fact, even in many of the modern text-books on medicine most absurd and erroneous views are expressed regarding the ætiology and general characteristics of cystitis, ideas which could be refuted by a few moments' study with the microscope and with the appliances of the most poorly equipped laboratory. Speaking generally (with the exception of those rare cases of pyelitis or cystitis due to hydatids, the *Filaria sanguinis hominis*, the *Bilharzia*, the *Echinococcus*, yeast, *Amœba coli*, the ova of various parasites, cantharides, turpentine, cubebs, and various aniline dyes), the cause of cystitis, pyelitis, or pyelonephritis is the introduction and multiplication of some variety or varieties of micro-organisms.

My cases of acute cystitis (twenty-six in all) are unique in the fact that the urine in all but two had been carefully examined immediately preceding an operation, and therefore they furnish us with absolute criteria as to the micro-organisms bringing about the infection and as to the other ætiological factors involved. In all these cases the micro-organism was present in pure culture, and generally in large number. In practically all the cases two, and in the rare ones three or more, cultures were made, and in the post-operative cases a culture was always taken after the disappearance of symptoms. In all these twenty-four cases the infection entirely disappeared under treatment. The urine contained varying numbers of pus cells, red blood cells, and

vesical epithelial cells, besides bacteria. In some cases the bacteria were present in enormous numbers, while the pus cells were very scanty, but I have met with no case in my series of true bacteriuria in which, with the presence of many micro-organisms, the pus cells were absent altogether. The bacteria found in these twenty-six cases were the *Bacillus coli communis*, fifteen times; *Staphylococcus pyogenes albus*, five times; *Staphylococcus aureus*, twice; *Bacillus pyocyaneus*, *Bacillus typhosus*, and *Bacillus proteus vulgaris*, each once; while in one case, although the cultures were not completed, the organism microscopically appeared to be a colon bacillus. In the chronic, non-tuberculous cases, thirty-one in all, in twenty-four cystitis was present alone; in seven pyelitis was associated with the cystitis. In three of these latter the pyelitis had preceded the cystitis, and in four the reverse had taken place. In this series of thirty-one cases the colon bacillus was met with sixteen times, fifteen times in pure culture (once in association with tubercle bacillus); *Staphylococcus pyogenes aureus* three times; *Staphylococcus albus* twice; a white staphylococcus which liquefied gelatin slowly, but decomposed urea rapidly, four times; and the *Bacillus proteus vulgaris* once, while in two cases cultures were negative, the infection evidently having died out spontaneously. Six cases of tuberculous cystitis were met with. In one case the cystitis occurred alone, and in the five others it was associated with a tuberculous infection of the kidney. Five of the cases were chronic, one was comparatively acute; the constitutional symptoms were more marked in these cases than in the other forms of chronic cystitis; in all the tubercle bacilli were found, usually in small number, while one case showed a mixed infection, the colon bacillus being also present.

The symptoms in these cases were extremely variable—in some cases comparatively slight, in others so severe as to render life practically unbearable. As to the mode of onset in the acute cases, this varied markedly, in some cases there being chill, marked rise of temperature, and severe vesical pain; in other cases the rise of temperature and the pain being comparatively slight. The cases developed from the third to the twentieth day after an operation, being shorter in the cases of the *Bacillus proteus*, *Staphylococcus pyogenes aureus*, and some of the infections with the *Bacillus coli communis*. Apparently the more virulent the micro-organism and the severer the symptoms, the earlier after the operation did the infection manifest itself. A special point of interest in connection with the study of the acute cases was in determining the mode of entrance of the bacteria into the bladder. In the majority of cases it was undoubtedly from the vulva by catheterism, although this procedure was performed

with extreme care; this is not at all remarkable when we consider Melchior's, Savor's, Gawrowsky's, and Bouchard and Charrin's researches upon the bacterial flora of the normal urethra and vulva, colon bacilli and various staphylococci being frequently found. In some cases, however, infection seemed to have taken place definitely from the rectum or from some other focus of infection (an abscess cavity, etc.), either by means of the blood or lymph currents, by direct transmission through the rectovesical tissue, or by the abscess cavity discharging directly into the bladder.

Another point of special interest in connection with my series of acute cases is that it definitely disproves the idea of Rovsing and various English investigators who ascribe but a slight rôle to the colon bacillus in the ætiology of bladder infections, they believing that the infection is set up by another micro-organism, which in turn is supplanted by the colon bacillus, although it has no part in the production of the infection. In a consideration of such a large series of cases as this, however, and of the many post-operative cases in which no cystitis developed, one is at once struck by the fact that in all my cases of infection other accessory ætiological factors are present which, by lowering either the resistance of the patient as a whole or that of the bladder itself, render that organ susceptible of infection, and it is an undoubted fact that without these accessory factors infection would in all probability not arise even if a considerable number of micro-organisms were introduced into this organ. The experimental work of Melchior, Rovsing, and others bears out this view, for they found that into the healthy bladders of rabbits and other animals virulent micro-organisms in considerable number might be introduced without doing harm, while if the bladder underwent trauma or congestion, or if the urethra was ligated, these same micro-organisms would bring about an infection. In my series of cases the most important of these accessory factors were anæmia, mal-nutrition, intercurrent disease, and changes incident to the menopause as general factors, while as local factors I found constant pressure on the bladder by other organs or by new growths, sagging of the bladder due to relaxation of the perinæum, trauma of the bladder due either to the operation or to the catheterism (these are undoubtedly the most important of the accessory factors, as evidenced by the fact that in almost all the cases of post-operative cystitis the nature of the operation was such that considerable trauma of the bladder was inevitable), the trauma and congestion of the bladder incidental to childbirth, catheterism with poor technics, and operations upon the urethra. In the cases of those micro-organisms which decompose urea and in which the urine is alkaline or am

moniacal (*Bacillus proteus vulgaris*, urea-decomposing white staphylococcus) it seems probable that the irritation of the decomposed urine is sufficient to render the bladder susceptible to infection without any of these other accessory causes.

The reaction of the urine was acid in the case of the tubercle bacillus and the colon bacillus (often more acid than normal in these cases), the *Bacillus pyocyaneus*, and the *Bacillus typhosus*. It was usually acid, though less so than normal, occasionally neutral, and rarely alkaline in the case of the *Staphylococcus pyogenes albus* and *aureus*, and alkaline or ammoniacal in the case of the *Bacillus proteus vulgaris* and the urea-decomposing white staphylococcus. My cases show, therefore, that the *Bacillus coli communis*—the ordinary colon bacillus—is much the commonest cause of cystitis, while the tubercle bacillus and various staphylococci and the proteus bacillus are frequently met with, and rarely the pyocyaneus bacillus, the typhoid bacillus, and other micro-organisms.

In Rovsing's series of cases of cystitis in women there were three cases of cystitis with pyelitis—one due to the *Bacillus coli* and the *Streptococcus ureæ*, one to the *Staphylococcus aureus*, and one to the tubercle bacillus; nine cases of suppurative ammoniacal cystitis, due to the *Bacillus coli* and various associated cocci; six cases of suppurative acid cystitis—one due to the tubercle bacillus alone, two to that bacillus associated with the colon bacillus, and three to the colon bacillus. In Melchior's series the colon bacillus was met with ten times in pure culture, once in association with the tubercle bacillus and twice in association with the *Bacillus proteus*, while the *Bacillus proteus*, *Bacillus typhosus*, and *Diplococcus ureæ liquefaciens* were found once each in pure culture. A comparison of the bacterial flora of men in the series of these two investigators with that of women seems to show that there is a marked difference, there being a larger variety of micro-organisms found in the case of men, with a much less prevalence of the colon bacillus. The frequency of the colon bacillus in infections in women is probably largely due to the shortness of the female urethra and to the close juxtaposition of its external orifice to the anus.

Pyelitis and Pyelonephritis.—My studies in this connection are unique in that the urine from which they have been made was obtained directly from the kidney by ureteral catheterism. Both kidneys were usually catheterized, so that the two sides could be compared, a most important point in determining upon the advisability or non-advisability of nephrectomy. As already stated, however, a diagnosis can in all probability be reached by a consideration of the relation between the albuminuria and the pyuria and hæmaturia and by a careful cystoscopic exami-

nation of the bladder, special attention being paid to the condition of the bladder in the region adjacent to the ureteral orifices and the character of the urine flowing therefrom. The symptomatology of these cases is even less satisfactory than that of cystitis, for, while in some cases there are marked local and constitutional symptoms, pain in the back or side, fever, chill, etc., in many cases the local symptoms are very slight or lacking altogether, especially in those which are subacute or chronic from the onset. It is, therefore, even more necessary here than in cystitis that a most careful bacteriological, chemical, and microscopical examination of the urine should be made.

Twenty cases of pyelitis have been studied by me—two acute cases, twelve chronic non-tuberculous cases, and six tuberculous cases. Of the acute cases, in one the colon bacillus was present, in the other the *Bacillus proteus vulgaris*; while, of the chronic cases, in six the colon bacillus, in three the proteus bacillus, in two the urea-decomposing white staphylococcus mentioned under cystitis, and in one no growth (the infection evidently having died out) was found. In the six tuberculous cases the tubercle bacilli were found in pure culture in each case. The symptoms in the last cases, especially the constitutional symptoms, are more severe than in the non-tuberculous cases. The urine from the kidneys was acid in the case of the colon bacillus and the tubercle bacillus, and alkaline in the case of the proteus bacillus and the urea-decomposing white staphylococcus.

As to the mode of infection of the non-tuberculous cases, in seven the bladder was infected first, the kidney secondarily; in six the kidney was infected first, probably by metastasis from the intestine or from some focus of infection; in one the infection was an ascending ureteral infection from a uretero-vaginal fistula; while in the tuberculous cases, if one can judge by symptoms, in four the kidney seemed to have become infected from the bladder by an ascending ureteral infection. In all these cases the urine contained varying numbers of pus and blood cells, with renal and ureteral epithelial cells, the hæmaturia being more marked in the acute and the tuberculous cases. The urine from the infected kidney in almost all these cases was pale, of less specific gravity, although a greater quantity flowed in a given space of time than from the normal side, and low in urea percentage.

In considering accessory ætiological factors it is much more difficult to arrive at a definite conclusion than in the case of cystitis in this connection. But the fact that in some of the cases anæmia, mal-nutrition, the inevitable diminution of resistance due to pregnancy or the menopause, or, locally operative trauma to the kidney or displaced kidney was pres-

ent, and the fact that in all cases except one the condition was unilateral seem to show that here also these accessory factors play an important, though probably not so important, a part. Of the tuberculous cases, none gave a tuberculous family history, and only one showed a tuberculous lesion outside the urinary tract. In all the chronic cases in which a urea-decomposing micro-organism was the cause of the infection (proteus bacillus, urea-decomposing staphylococcus) a renal calculus was also present composed of the phosphates and carbonates of calcium and magnesium, while the fact that from the centre of two stones a pure culture of the infecting micro-organism was found leads me to suppose that the stone formation was secondary to the infection, and that it was due to a decomposition of alkaline salts precipitated by the urea-decomposing micro-organism about an agglutinated mass of the bacteria as a nucleus. In only one of the cases in which the urine was acid was a stone found, and in this case it was composed of a mixture of uric acid and urates. In the case of the diagnosis of stone more and more help is being derived from the use of the Röntgen rays.

In Rovsing's series there were sixteen cases of pyelitis without cystitis, and in these the colon bacillus was found fourteen times in pure culture, once associated with a staphylococcus, once with a streptococcus. Of three cases of pyelitis with cystitis, one was due to the colon bacillus and the *Streptococcus ureæ*, one to the *Staphylococcus aureus*, and one to the tubercle bacillus. In all these cases the urine was acid, except the two cases due to the colon bacillus in association with the *Streptococcus ureæ* and to the *Staphylococcus aureus* respectively.

Among the interesting phenomena met with in the bacteriological study of my series was the marked pleomorphism of various bacteria, especially as regarded variation in the cultural peculiarities, motility, and virulence of the colon bacilli and the chromogenic properties of the staphylococci. It is probable that these variations, due undoubtedly to the previous history of the micro-organism in question, whether its habitat had been favorable or unfavorable, have led to the marked confusion, especially on the part of Rovsing, regarding the bacterial flora usually met with and are undoubtedly the cause of the enormous number of new species of micro-organisms which have been described in this condition, but are unquestionably but atypical members of the colon or staphylococcus family.

Another point of special interest was the fact that in two out of three cases tested definite agglutination of the bacteria took place when they were mixed with the patient's serum. Unfortunately, a large number of experiments were not carried out, but these are interesting in suggesting a certain reactive

tendency on the part of the body as a whole against the infection.

Prophylaxis.—In no condition is prophylaxis more essential than in this, for while, especially in cystitis, the chronic cases are especially difficult and, it seems, sometimes impossible to cure, the condition, in the majority of cases, can be prevented, or at least can be cured with comparative ease, if treated during the acute stage. Foremost in importance, it is absolutely essential that the technics should be of the most rigorous kind in all examinations of the bladder and kidney, and that these examinations should be made only when absolutely necessary; in the second place, that no conditions such as urinary hyperacidity, vesical neuroses, vesical symptoms due to pressure of organs or tumors on the bladder, etc., should be mistaken for cystitis; and, thirdly, that in all operative cases in which the resistance of the patient is diminished, or in which the resistance of the bladder is lowered by the trauma incident to the operation, the urine should be watched with extreme care, and at the least sign of a beginning infection appropriate treatment at once started. In fact, in all cases in which the bladder is inevitably handled to a great extent, or in which there are many adhesions between the bladder and other organs or tumors, as a routine practice the patient is made to drink large quantities of water, while "urinary antiseptics" are administered for the first ten or twelve days after an operation, and it is noteworthy that during this period of time the number of cases of post-operative cystitis has diminished very markedly. I cannot insist too strongly upon the necessity for carrying out these simple suggestions, for by their means we should undoubtedly be able to prevent more than half the cases of cystitis either from appearing at all or from becoming chronic.

Treatment.—A thorough discussion of the treatment of cystitis and pyelitis would obviously take me beyond the limits of my paper, and I shall, therefore, simply call attention here to a few general principles which are of value in this connection. In the first place, it is essential that the resisting power of the patient be increased as far as possible by careful attention to all questions of personal hygiene, insistence upon plenty of fresh air and sunshine, plenty of food, the removal of any depressing or very exciting influence, and attention to any disorders of the blood, the circulatory and respiratory organs, or the organs of digestion and elimination, if such conditions are present. In the second place, to render the urine a poorer medium for the growth of bacteria and to help wash out the bacteria, pus cells, etc., present, large quantities of water should be administered, preferably by the mouth, but if this is not feasible, by rectal enemata or by subcutaneous injections. In the third place, the administration of

substances which render the urine somewhat antiseptic is advisable, especially in the acute cases; in the chronic cases, however, they seem to be of much less, if of any, value. Also in cases associated with alkaline urine, acids, such as boric, benzoic, or camphoric acid, should be given by the mouth in sufficient quantity to render the urine acid, while in the acid infections an alkali should be given until the urine is alkaline, as it would seem probable that by this means we diminish the growth of the respective micro-organisms by furnishing a less favorable medium. The same condition of inhibition of growth would probably be brought about in any case by the administration of either acid or alkali in great excess. In some cases, especially in cases of acute cystitis, and less often in cases of acute pyelitis, the measures described above are all that are necessary to bring about a complete cure, as shown by their success in all of my post-operative cases.

But in some of the acute cases and in all the chronic cases other measures besides the ones just mentioned have to be employed. Among the most important of these may be mentioned various forms of topical treatment, local applications to ulcerated areas, irrigations of the bladder with boric-acid solution or with solutions of silver nitrate, instillations of silver nitrate in small quantity in from 0.50- to 2-per-cent. solution (this being especially effectual in the very severe chronic cases with deep ulcerations), curetting of various portions of the bladder, exsection, suprapubic cystotomy, the repair of a lacerated outlet when lack of success of other treatment suggests that the local sagging of the bladder keeps up the infection, nephrectomy, nephrotomy, and drainage of the kidney with removal of stone if such is present.

In this brief communication I have attempted to call attention to the absolute necessity of arriving at a correct diagnosis in these cases of infection of the urinary tract by the use of the chemical, bacteriological, and microscopical methods that I have described, and, having made the diagnosis, of carrying out the proper line of treatment. I cannot insist too strongly upon the necessity of the recognition and correct interpretation of this condition, for I feel that this is a subject about which many erroneous ideas are held and many useless lines of treatment advised. The special conclusions to which this work of mine leads may, I think, be summed up as follows:

1. The great majority of cases of pyelitis, pyelonephritis, and cystitis are due to infection with various micro-organisms (of which the colon bacillus is the commonest) which may reach the kidney or bladder either exogenously or endogenously.
2. That in the majority of cases the condition either can be prevented or can be cured if the condi-

tions underlying its development are recognized and understood, and the correct measures inaugurated.

3. There are various conditions, such as urinary hyperacidity, which may simulate almost exactly true vesical infections, and yet in which misinterpretation and improper treatment may lead to the development of a true cystitis and its deplorable consequences.

4. In no condition is prophylaxis more essential than in that of the infections of the urinary tract, while, to be able to prevent such conditions, we must have constantly before us the danger of the development of infection in all cases associated with conditions which tend to lower the general resistance of the patient, and also those which render the bladder susceptible to infection, especially by the trauma of an operation or catheterism.

5. While an absolute diagnosis of renal infection can be made only by ureteral catheterism, in the majority of cases a very probable diagnosis may be arrived at by a consideration of the relation between the grade of albuminuria and pyuria and by careful cystoscopic examination of the bladder, especially that portion about the ureteral orifices, and the character of the urine flowing therefrom.

6. Contrary to the opinion expressed in the majority of text-books, a great majority of the infections both of the bladder and of the kidney are associated with acidity of the urine—that is, are due to micro-organisms which do not split up the urea.

7. Probably in the majority if not in all the cases of renal infection due to a urea-decomposing micro-organism, after the condition has lasted for a certain length of time, a stone is formed by the decomposition of the precipitated salts about the bacteria as a nucleus.

8. And, finally, to be able to thoroughly understand the cases of cystitis, pyelitis, and pyelonephritis brought to our notice, to make the proper diagnosis, to inaugurate and carry out a rational line of treatment, to be conversant with the proper means of prophylaxis, and to give a correct prognosis, a careful chemical, microscopical, and bacteriological study of the urine is absolutely essential.

1033 CATHEDRAL STREET.

Intra-uterine Dentition.—Dr. Jean D. Coun-
douras (*Grèce Médicale*, April) records the case of a female child, plump and physiologically formed, in which, immediately after birth the right middle lower incisor was found presenting in the gum as a white line, and, increasing rapidly, attained in two or three days a millimetre in size above the gum. Then the left middle incisor began to appear, and very soon the first left molar. Nothing was evident in the superior maxilla.

Original Communications.

A STUDY OF THE TEMPERATURE, PULSE,
AND RESPIRATION IN THE DIAGNOSIS
AND PROGNOSIS OF CERTAIN DIS-
EASES OF THE BRAIN.

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The following paper is based upon about twenty years' personal experience in carefully observing the temperature, pulse, and respiration in all cases of disease that have come under my care during that time. For the most part, during this period, my practice has been limited to the diseases of the nervous system. During the three years that I was busily engaged in investigating surface thermometry, both in private and in hospital practice, in Philadelphia, I began to realize that from a careful study of the temperature, by means of the ordinary clinical thermometer, the pulse, and respiration, much information of special value in the diagnosis and prognosis of certain diseases of the brain might be obtained. In observing the surface temperatures of corresponding portions of the body, as well as those of the head, I found differences of temperature between the two sides of the body in some diseases of the brain, especially in cases of hæmorrhage into the brain substance, both of the apoplectic and of the traumatic varieties, and in many cases of apoplexy caused by thrombi or emboli. In apoplexy from hæmorrhage a difference in temperature of the two sides of the body was noticeable immediately after the stroke. On the other hand, in cases of apoplexy, either thrombotic or embolic in origin, scarcely any appreciable difference of temperature of the two sides of the body occurred before the third or fourth day. This difference seemed to be due to acute softening, which begins at about this time. Having made over 20,000 surface-temperature observations of the head and body, I came to the conclusion that the results were of too little value to justify the time and labor required in making the observations. In 1882 I began bilateral axillary temperature observations in nearly all cases of disease of the brain that came under my care.¹ This practice I have continued up to the present time, with few exceptions, in hospital and in private work, when I have had trained and intelligent nurses to assist me. If no appreciable difference in the axillary temperatures is found on making the observations two or three times

in a given case, the bilateral axillary temperatures are not taken again, unless a change in the symptoms of the patient seem to justify it. If a continuous difference is found in the heat of the two axillæ, the temperature in each axilla is registered so long as the difference exists.

The statements made in this paper in regard to the value of temperature, pulse, and respiration as aids in the diagnosis and prognosis of certain diseases of the brain are based upon the records and observations of 374 cases, grouped as follows: Meningitis (tuberculous), 80; meningitis (from suppuration of the ears), 20; apoplexy (from hæmorrhage, thrombi, and emboli), 60; acute alcoholism, 40; acute fatal cases of insanity, 12; tumor of the brain, 60; abscess of the brain, 14; cases of traumatism of the brain, in which were observed two or more of the following conditions: Shock, hæmorrhages, depressed bone, contusion or laceration of the brain and its membranes, 88. In more than one half of the above-mentioned cases autopsies were made.

As accuracy and uniformity of observation are absolutely necessary to obtain reliable and scientific results, I will state the methods employed in observing the temperature, pulse, and respiration. To prevent repetition, when degrees of temperature are used in this paper, the Fahrenheit scale is meant.

It is not enough to have recorded the temperature of the body and the frequency of the pulse and respiration. The temperature, as manifested in different portions of the body, and in certain cases at corresponding portions of the two sides of the body, the variations in the frequency and character of the pulse and the respiration, with its numerous variations from the normal, should be noted at regular intervals. In all acute brain cases these observations should be repeated every two or three hours during the day and night. In cases in which an early diagnosis is of the first importance as a guide in the treatment, the physician should not rest satisfied with the records of the trained nurse, but he should personally repeat the observations for himself. The more experience one has in making such observations, the more keenly he appreciates the necessity for absolute accuracy, and the sooner he becomes impressed with the fact that much care and patience are needed for the work. One of the essential qualifications for all such clinical details is a fondness for scientific investigation, both for the physician and for the nurse. If the physician is not accurate, observing, and painstaking, the nurse will not be. Some nurses are mentally totally unfitted for scientific observation and never can become close and reliable observers. The same may be said of many physicians.

On looking over the clinical charts used in some

¹See *Transactions of the Association of Physicians of Philadelphia for 1883*, two papers by J. T. Eskridge, M. D., one entitled Report of Three cases of Abscess of the Brain, and the other, Tubercular Cerebrospinal Meningitis.

hospitals I have failed to find any space marked for recording the respiration. It is rarely that I meet with graduate nurses who have been taught during their hospital training special features to be observed in regard to the temperature, pulse, and respiration in certain brain cases. It is quite evident, if nurses do not know what to look for, they will not observe and record clinical details that may greatly aid physicians in the management of serious cases. That nurses should be taught to become close observers of variations from the normal, and to note such observations in writing on the hourly record sheet, needs no argument.

Temperature.—If the temperature is taken only two or three times a day, it should be observed at the same hours each day and in the same portion of the body. In all critical brain cases, however, it should be registered every two or three hours, and in some cases every hour, both day and night. Occasionally the nurse is required to take the rectal temperature in brain cases. In all cases in which bilateral temperatures are not required and in which the patient is sane, conscious, and free from delirium, the mouth is the preferable place in which to place the thermometer. It must be remembered that, if the mouth has been held open for several minutes, it will become cooler than normal, and that hot or cold substances held in the mouth will cause a variation from the normal of the temperature in the mouth. The precautions necessary to be observed are evident. I wish to say a word here against the employment of "the minute thermometer" in all cases in which absolute accuracy in temperature observations is of the first importance. These thermometers are so delicate that a little pressure made on the bulb may cause the mercury to ascend half a degree or more. I prefer the three-minute or five-minute clinical thermometer. It is well to let the thermometer remain in place one minute after the mercury ceases to rise.

In registering the temperature in the axilla, one must remember that after all precautions have been taken to prevent error the axillary heat will be about half a degree less than that of the mouth. Some writers, especially of text-books for nurses, state that the temperature of the mouth is one degree above that of the axilla. I do not believe that this difference between mouth and axillary heat will be found in cases in which the proper precautions are taken to enable one to get the exact axillary temperature. It is well to remember that when lying in bed we often expose the axillæ, and that these, being damp, cool quite rapidly. Again, in lean persons there is a considerable hollow in the axilla when the arm is lying against the body, so that the patient may hold the thermometer in the axilla without the bulb being against the flesh. In all cases in which the axillary temperature is to be taken, I direct the

nurse to dry the axilla with a cloth, cover the patient to the neck, and see that the arm on the side corresponding to the axilla in which the temperature is to be taken is kept lying across the chest for a period of, at least, five minutes before the thermometer is put in place. The thermometer is held by the nurse with the bulb against the upper portion of the axilla, while the upper arm is held firmly against the chest. The thermometer is held in place one minute after the mercury ceases to rise. In cases of hemiplegia, in which bilateral axillary temperatures for some reason are not taken, the nurse should alternate between the right and left axilla in taking the temperature each time.

Bilateral Axillary Temperatures.—It is very important to register the temperature in each axilla in certain acute unilateral brain diseases. It is rather difficult for a nurse to learn to do this accurately. The same precautions mentioned above for taking the temperature in one axilla are necessary with both axillæ. The only source of error under such circumstances is that normally the temperature in the axilla in which the thermometer is to be placed last will be a fraction of a degree higher than the one in which the thermometer is placed first, provided, however, that the heat is the same in each axilla. The difference is due to the fact that the axilla in which the temperature is registered last is covered and protected from the air of the room for a longer time before its temperature is registered than is the case with the axilla the heat of which is taken first. To overcome this source of error, I direct the nurse to alternate between the right and left axillæ. If the temperature is taken first in the right axilla, the next time the thermometer is placed in the left axilla first. Thus she alternately takes the right or left axillary temperature first. The same results may be obtained by seeing that the axilla in which the temperature is registered last is covered no longer than the one in which the thermometer is first placed. In registering bilateral axillary temperature, the thermometer should be allowed to remain in each axilla one minute after the mercury ceases to rise.²

The Pulse.—In nervous and apprehensive subjects it is well not to count the pulse while the patient is excited. For the reason that the patient is usually made less anxious by the presence of the nurse than by that of the physician, the former can frequently succeed better than the latter in getting the average frequency of the pulse. After the frequency of the pulse is noted, its character should be studied, as to whether the impact of the blood in the artery, as felt by the finger, is slow or quick, weak or strong, small or large, and as to whether the pulse is compressible or incompressible (soft or hard).

²A large magnifying glass enables one to read with ease the thermometer while it is still in the axilla.

Next the rhythm of the pulse should be studied, whether it is regular, irregular, or intermittent. If the pulse is noted as irregular or intermittent, the frequency and character of the intermissions and irregularity should be stated. An intermission may take the place of one or more beats, or it may occur only once or several times a minute. An irregularity in the pulse may consist of an inequality of the beat or of a lengthening of the space between some beats, and these may occur frequently or infrequently. These niceties of details an intelligent and well-trained nurse can soon learn to make with ease and accuracy. It remains with the physician to interpret their meaning.

At the risk of some repetition, I shall go a little into detail concerning the pulse before studying the temperature, pulse, and respiration in connection with individual diseases of the brain.

A rapid pulse is found under so many different conditions that extreme frequency alone may have little significance. On the other hand, a rapid pulse, in connection with other symptoms, and in individual cases, may aid the physician in diagnosis and prognosis. A child is suddenly taken sick, with or without a convulsion. The most careful inquiry fails to elicit any previous indisposition on the part of the child. If the parents are sufficiently intelligent and observing to enable one to rely upon their statements, a pulse numbering 120 a minute and regular in character and a temperature of 104° or 105° would indicate that the disease was not organic trouble of the brain, unless there were some localizing brain symptoms, such as are sometimes found in meningeal hæmorrhage. A pulse of 100 to 120 and temperature of 102° would be consistent with a tentative diagnosis of tuberculous meningitis being probable, if other symptoms pointed to such a condition.

A child is acutely taken sick, the prominent symptoms being ushered in with or without convulsions. I use the word acute here to indicate some previous indisposition, in contradistinction to sudden, in which no such symptoms can exist. An extremely rapid pulse, 120 to 140 a minute, with a temperature of 105°, would almost enable one to exclude meningitis and suspect scarlet fever. A pulse of 100 to 120, a temperature of 104° or 105°, and respiration 30 to 40 a minute would indicate pulmonary instead of brain trouble. An uncomplicated acute meningeal inflammation is usually ushered in with a pulse from 90 to 120 and a temperature of from 102° to 103°.

A person is stricken down by apoplexy, with or without hemiplegia. The more rapid the pulse the greater the probability is that the apoplectic attack is due to a thrombus or embolus and not to hæmorrhage. Exceptions exist when the hæmorrhage is

in the ventricles or in the substance of the pons or medulla, or is so large as to be rapidly fatal. In these instances the pulse may be rapid, but the low temperature in large hæmorrhages, either in the substance of the brain or in the ventricles, would indicate the nature of the lesion.³

A rapid pulse soon after the receipt of a traumatic injury to the brain points to contusion or laceration, rather than to hæmorrhage or compression. It must be borne in mind that injuries to the brain, sufficiently severe to prove rapidly fatal, are usually attended by a frequent pulse soon after the occurrence of the injury.

A Frequent Pulse as the Disease Advances.—In meningitis the pulse gets slower as soon as exudation within the cranial cavity takes place. A continued frequent pulse indicates a rapidly fatal case. The pulse almost invariably becomes rapid before death, and the more frequent the pulse, other things being equal, the sooner the end will be reached. After the shock is over in apoplexy, whether the "stroke" has been due to hæmorrhage, thrombus, or embolus, a rapid pulse lends gravity to the prognosis. A continued frequent pulse in traumatism of the brain, be the lesion hæmorrhage, compression, or inflammation, or all combined, warrants, in the majority of instances, a cautious or bad prognosis. In all cases of death from a brain lesion, dissolution, if it takes place in the usual manner, is preceded by a frequent pulse. A careful study of the pulse in connection with the temperature and respiration will enable one often to indicate approximately the time when death will take place. We have all watched cases of brain disease in which the pulse, temperature, and respiration indicated a speedy termination, and we have felt inclined to tell the patient's friends that death would probably take place within twelve or twenty-four hours, but our experience has taught us to be more cautious. We have said "without a change for the better, death will probably occur within twelve or twenty-four hours." I have seen a few such patients recover, and others linger several days. We must remember that symptoms indicating a speedy dissolution may be due to temporarily acting causes, such as a distended bowel, inactivity of the kidneys, insufficient food, or insufficient supporting treatment. Did we know the exact pathological lesions within the cranium, we could not measure the vitality and resisting power of each individual. Any irregularity or intermittent character that a rapid pulse may have gives increased gravity to the case.

A slow pulse in organic brain disease generally indicates increased intracranial pressure. There is a probable exception in abscess of the brain, in which

³ We must bear in mind that sudden lesions of the pons or medulla are usually attended with a high temperature.

intracranial pressure often seems not to be increased. The slow pulse in this disease has been attributed to the poisonous and depressing effects of toxins on the brain, especially inhibiting the vital centres. It must also be remembered that a sudden increase of the intracranial pressure to such an extent as to overwhelm the functional activity of the brain, the heart uncontrolled, is allowed to beat away at its own "sweet will." A slow pulse of 60 to 80 is the rule in the exudative stage of acute meningitis. A pulse of from 40 to 60, especially if irregular and intermittent, as it usually is, denotes great cerebral disturbance and rapid progress of the disease. These are the cases in which sudden death often occurs, apparently from the exudate either directly or indirectly, affecting the cardiac and respiratory centres. The slower the pulse in apoplexy, the greater the probability is that the stroke is due to hæmorrhage. The typical pulse of abscess of the brain is a slow pulse until that stage is reached in which the functional activity of the brain is greatly impaired. In traumatism of the brain a slow pulse denotes in the majority of instance either hæmorrhage or a depressed fracture, and, if the pulse is irregular or intermittent, that the respiratory and cardiac centres are affected.

It would be interesting to study in detail the irregular and intermittent pulse in organic disease of the brain, as illustrated by a number of well-observed cases, but time will not permit. Suffice it to state that neither a rapid nor a slow pulse in many cases has more significance in weighing the probable outcome of a case than the degree of irregularity or intermission of the pulse. The greater the prominence of these variations from normal the graver the prognosis.

(To be continued.)

Syndicate Formed at Milwaukee to Build a Sanitarium in Northern Wisconsin Woods.—Dr. S. Fichtner is at the head of a syndicate which has been formed in Milwaukee to build a sanitarium in the woods north of Rhinelander where consumptive patients can be cared for. The project includes the purchase of a 12,000-acre tract of land, and Dr. F. W. Schultz, of the health department, will inspect the property and report on its hygienic surroundings and fitness for sanitarium purposes. The plan of the syndicate is to build an immense hospital like the ones now operated in the East as State institutions and supported partly by taxation, though during its inception it will be supported by patients. The promoters are said to stand ready to make an initial expenditure of \$100,000, and the institution, it is estimated, shall be one of the largest and best-equipped in the West. The Northern Wisconsin region is particularly adapted to the location of such a sanitarium, as the climate there is reputed to be unexcelled for the relief of tuberculosis and all pulmonary affections.

THE ŒSOPHAGOMETER, OR INTRAGASTRIC WHISTLE, A NEW DEVICE FOR MEASURING THE LENGTH OF THE ŒSOPHAGUS IN THE LIVING.*

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The cardia, or œsophageal opening of the stomach, is the will o' the wisp of the digestive tract so far as the living subject is concerned. Nobody doubts the existence of an opening between the œsophagus and stomach, called the cardia, but its whereabouts eludes the investigators like the North Pole.

The anatomists, the clinicians, and the gastro-enterologists have variously located the cardia in different altitudes, latitudes and longitudes, with reference to vertebræ, ribs, cartilages, sternum, liver, diaphragm, and what not. Morris (1) finds it opposite the ninth dorsal spine. Gegenbauer (2) came across it behind the left seventh costal cartilage. Quain (3) gives for its habitation four or five inches posterior to the interval between the ensiform process and the inner end of the seventh left cartilage. Hemmeter (4) asserts that it is found at the level of the twelfth dorsal vertebra. Boas (5) is content with the statement that it is situated two or three centimetres below the diaphragm. Einhorn (6) is sure that he has met with it in the left parasternal line, somewhat above the ensiform process. I could enumerate a dozen more writers whose description of the position and relations of the cardia would differ from those just mentioned and from one another; and no wonder. The discrepancies in the anatomical position of the cardia are not due to faulty observation, but to the variations in the length of the œsophagus and position of the stomach, two organs that do not remain stable even within physiologic limits. Mehnert (7) found that the length of the œsophagus was influenced by bending or stretching of the neck, and by the condition of the stomach whether full or empty. Strauss (8) asserts that the œsophagus can be stretched fully one eighth of its entire length. It is self-understood that in pathological conditions, like total displacement of the stomach in either direction, neoplasms in the œsophagus or external to it, old age, abnormally tall persons, etc., the length of the œsophagus will vary, and that, therefore, the posi-

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tion of the cardia will vary accordingly. The average distance from the incisor teeth to the cardia, as given by Vierordt, Sahli (9), Morosow (10), Strauss (11), Rosenheim (12), Quain (13), Gray (14), Testut (15), and others, is forty centimetres, or sixteen inches. The distance between the incisor teeth to the cricoid cartilage—the beginning of the œsophagus proper—is subject to but insignificant variations, and may therefore be considered as measuring fifteen centimetres, or about six inches, in all subjects under all conditions. Gumprecht (16) gives higher figures, 41 to 48 centimetres. Rolleston (17) gives lower figures, 15½ inches. McCaskey (18) gives the widest extremes, 38 and 52 centimetres. The author (19) reported before the American Gastro-enterological Association, on May 1, 1901, a case of carcinoma of the cardia, in which the obstruction was encountered at a distance of 52.5 centimetres (21 inches).¹

The question will be asked, Is there, besides the scientific or theoretic value, also a clinical or practical value in ascertaining the length of the œsophagus? The answer is in the affirmative. It is important to know when the stomach tube or any other intragastric instrument has passed the cardia for the following reasons:

1. In severe gastric lesions it is important to know how much rubber tubing should be allowed to enter the stomach.

2. In both gastrectasis and gastroptosis the greater curvature is found lower than in the normal, and, therefore, the diagnosis will rest upon the position of the cardia. If the cardia is *in situ*, we have to deal with a dilated stomach; if the cardia is low, the stomach is displaced.

The following methods are used for ascertaining the length of the œsophagus:

1. The distance is measured outside of the body by applying one end of the tube or sound to the line of the incisor teeth and the other end to the xiphoid appendix of the sternum, giving the tube a curve approximately corresponding to that made by the mouth and pharynx.

2. The following procedure is employed in Kussmaul's clinic. The sound is introduced into the mouth until it meets with the resistance of the posterior wall of the pharynx. It is then taken out and applied externally from behind the lobe of the ear down to the tenth dorsal vertebra. The sum of the two measurements represents the distance between the incisor teeth and cardia.

3. Strauss (20) recommends measuring the trunk, from the incisura thyreoidea to the symphysis pubis. The œsophagus has been found to be two-thirds of this length.

4. Rosenheim (21) measures from the spine of the second cervical vertebra to the point of attachment of the left twelfth rib to the twelfth dorsal vertebra, to which should be added the distance between the incisor teeth and the uvula.

5. Van Valzah and Nisbet (22) measure the distance from the ninth dorsal vertebra along the spine and side of the neck to the front of the teeth.

6. Purjesz (23) attaches a manometer to the distal² end of the stomach tube. The instant the tube passes the cardia is indicated on the manometer by a sudden relaxation of pressure.

7. Schreiber (24), Rosenbach (25), and Turck (26), introduce into the stomach a tube, to the proximal end of which is attached a collapsed rubber ball. The ball is then inflated with air and the tube is withdrawn until it meets with resistance, and the distance is noted at the incisor teeth.

8. McCaskey (27) uses an instrument—a cardiometer³—which is based on the principle of Schreiber and Rosenbach's inflated ball. In the proximate end of a soft Goodrich colon tube is placed a tightly fitting piece of metal tubing over which is adjusted a small bag of very thin rubber. To the distal end is attached a closed rubber bulb. The tube with rubber bag collapsed is introduced into the stomach and is then expanded by compressing the bulb. The tube is then withdrawn until the impact of the rubber balloon is felt against the cardiac orifice. The distance is read off on the centimetre scale.

9. Turck (28) uses his gyromele (revolving sound) for ascertaining the length of the œsophagus. The gyromele is introduced into the stomach, and, so soon as the vibrations of the rotating end become palpable, the sound is withdrawn until the sponge attached to its end meets with slight resistance at the cardia. The distance is noted at the point of the incisors by a tightly fitting movable rubber ring.

I do not care to make an exception to the time-honored rule adopted by all who devise a new instrument—namely, to assert that all the methods and devices hitherto used possess many disadvantages, and that the only perfect instrument in existence is the one devised by the author. In view of the fact that the length of the œsophagus is by no means a constant unit, it is obviously needless to comment

¹ Of course, the distance between the incisor teeth and the cardia, in all anatomical and clinical work, is the length of the œsophagus, give the average distance of the cardiac end of the œsophagus from the incisor teeth as being 16 inches. This universally accepted figure has deluded the manufacturers of surgical instruments into making the stems of the olive-tipped bougies 16 inches long. Of course none of the bulb bougies on the market answered my purpose, and I was obliged to order a special stem 25 inches long.

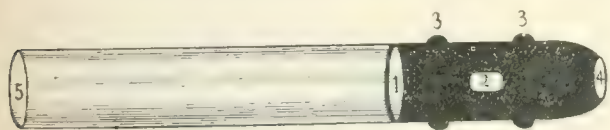
² I use the words distal and proximal with reference to the patient.

³ Cardiometer means an instrument used for measuring the cardia. Since the cardia has only a transverse measurement, the designation "cardiometer" is not the proper name for an instrument used for measuring the length of the œsophagus, or the distance between the cardia and the incisor teeth.

upon the inaccuracy and fallacy of the methods, 1, 2, 3, 4, and 5, which employ the method of external measurements. Methods 7 and 8 are objected to by Turck as unreliable, and rightly so, for the reason that the inflated bag occupies the gastric funnel-shaped portion of the cardia, thus meeting the resistance of the gastric walls and not of the cardiac orifice proper. The resistance at the cardiac orifice when using Turck's gyromele with a regular sponge attachment is almost *nil*. The use of a cone-shaped pledget of cotton or wool (covered with rubber), would be one of the things "difficult to swallow."

My method is based upon the principle of acoustics, that sound is produced by the vibrations of air, and upon the facts that the stomach is a hollow organ containing air, and that the œsophagus when not in the act of swallowing is an air-tight organ. Hence, a musical instrument, when introduced into the œsophagus, will produce no sound whatsoever throughout the whole of its length, but so soon as it reaches the threshold of the stomach, the cardia, it will emit a sound.

My device consists of a stomach tube provided at its proximal end with a whistle. The whistle is inserted in such a way that the opening of the whistle through which the air is blown in looks toward the distal end, and the opening through which the air makes it exit is in apposition with the side opening of the tube. The whistle is secured in the tube by tying it externally with a piece of catgut or silk.



Stomach tube. 1, 2, distal opening. 3, proximal opening. 4, side opening. 1, 2, 4, whistle introduced through proximal opening. 4, closed end of whistle at 4, and side opening of whistle 2, in apposition with side opening of tube 2. Whistle secured by threads 3, 3.

The tube is introduced into the œsophagus, and air blown in by means of a pump, Davidson syringe, Politzer bag, the mouth, or what not. So long as the whistle traverses the œsophagus the instrument is smothered and no sound is heard; but, so soon as the cardia is reached a distinct whistle is heard. The tube can be pushed forward and backward several times so as to ascertain the exact point at which the whistle becomes audible. The distance between the distal border of the side opening of the tube and the point at the incisor teeth where the whistling sound is first heard represents with precision the distance between the incisor teeth and the cardia.

The œsophagometer is to be used in patients who have swallowed the stomach tube several times, and whose stomach is empty.

The advantages of this device are:

1. Precision in measurement not attainable by any of the other methods, except by that of Purjesz.

2. Cheapness. The materials necessary for manufacturing this instrument are (a) a stomach tube, (b) whistle, and (c) a piece of thread. It does not take more than two minutes to insert and secure the whistle in the tube.

3. No special instrument is needed. It is an œsophagometer only when used for the purpose of œsophagometry.⁴ In the twinkling of an eye the component parts are separated and we have our stomach tube and whistle ready for other uses.

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⁴I am at present investigating the auscultatory phenomena of the œsophagometer during its sojourn in the stomach, and hope that the intragastric whistle will prove to be an aid to diagnosis in more than one way.

DUPUYTREN'S CONTRACTION OF THE PALMAR FASCIA.*

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In 1883 I made an inquiry upon the subject of Dupuytren's contraction of the palmar fascia, the result of which I read before the Royal Medical and Chirurgical Society of London on March 25, 1884.¹ I propose now to refer to some points which were not brought forward in that paper.

It had long been thought that the affection did not occur in women, until Keen, of Philadelphia, published statistics which showed a proportion of 20 females to 106 males. But even when I read my paper an impression prevailed in England that the affection was extremely rare in women, and at the meeting above referred to Mr. William Adams stated that he had only seen six cases in females. In my inquiry I found eleven cases of clearly defined Dupuytren's contraction among 444 women whom I examined in workhouses, and I produced six of these women at the meeting referred to. In addition to these eleven cases, I had also found among these 444 women fifteen others in whom there was indurated and thickened palmar fascia, although the fingers were not contracted.

These eleven distinct cases of the deformity in women represent about $2\frac{1}{2}$ per cent., which is a much greater proportion than is generally found among females. Among 300 old men I found 45 cases, and this is of course a remarkably high percentage (15 per cent.).

These statistics contrast very strongly with those of other inquirers. For instance, the late Mr. William Anderson, in his book on *Deformities of the Fingers and Toes*, stated that he had only found 33 cases in 2,600 adults, and in 800 children whom he also examined he did not find a single case. The difference in these observations has a great value in throwing light upon the age at which this deformity mostly begins. Young people seem to be practically exempt.

In Mr. Anderson's cases five sixths of the patients were over middle age, but in only eighteen were the patients over sixty, showing, I should assume, that the patients examined were younger than those from whom I derived my cases, and it only natural that the inmates of workhouses should be older than those who are found in infirmaries.

Among the forty-five cases in males which I found in St. Marylebone, City Road, and St. Pancras

workhouses, the individuals were considerably above middle age (assuming middle age to mean about forty), no patient was below sixty-three years of age, and the disease had begun in probably every case after the age of fifty.

These points are shown in the following table:

<i>Age of Patient.</i>	<i>Duration of Disease.</i>
74.....	2 years.
72.....	2 "
67.....	5 or 6 "
74.....	20 "
63.....	3 "
71.....	20 "
67.....	" "
63.....	6 or 7 "
63.....	1 "
73.....	10 "
66.....	" "
80.....	" "
75.....	" "
84.....	" "
77.....	" "
83.....	" "
68.....	" "
74.....	" "
68.....	4 "
85.....	20 "
80.....	" "
72.....	" "
70.....	" "
73.....	10 "
63.....	" "
74.....	5 "
70.....	" "
84.....	" "
67.....	" "
70.....	" "
64.....	" "
78....R. accident 50 years, L. 20.	" "
71.....	" "
75.....	20 "
80.....	20 "
83.....	" "
74.....	" "
68.....	" "
70.....	" "
83....R. over 12 years, L. over 20.	" "
55.....	very slight till lately.
82.....	" "
78.....	6 or more "
83.....	" "
74.....	15 or 16 "

In many of the cases it was impossible to obtain a definite statement as to the length of time during which the disease had existed, but I think we may

*At that time the medical journals gave abbreviated accounts of the

infer from the others that in few, if any, had the contraction begun before the age of fifty. It would thus appear that the percentage of cases of Dupuytren's contraction among the population depends upon the ages of the individuals examined, and that the greater the age, the greater will be the proportion of this affection.

In the paper above referred to, I discussed the ætiology of the disease and recorded facts without offering any opinion of my own. The majority of writers upon this affection attribute it to gout, and undoubtedly in a great number of the individuals who came before us a tendency to gout can be recognized. The ordinary case of Dupuytren's contraction does not, however, necessarily exhibit the common symptoms of gout. In only a small proportion of cases have I seen this affection in patients who were in other respects gouty, and in whom there were enlarged finger joints, and I have never seen any deposit of urate of sodium in the nodulated fascia so peculiar to Dupuytren's contraction.

Referring again to my paper, the records state that, of the eleven women whom I examined, none acknowledged to having had gout; of the forty-five men, two acknowledged to rheumatic gout and three to gout; nineteen denied having suffered from either gout or rheumatism, while the twenty-one remaining had only suffered occasionally from ordinary slight rheumatism.

Whether we consider the origin to be gout or not, we may, I think, assume that the retention in the blood of excretions and toxines which ought to be eliminated probably has an influence in causing this contraction and induration of fascia, and, although among the seventy patients whom I found in work-houses so few complained of gout, yet it is highly probable that all of them suffered at times from errors of diet and consequent accumulation of effete matters in the blood.

The First Stage of Dupuytren's Contraction.—I have now to record an interesting case in which the contraction was observed in the very early stage and the history of which may throw some light upon the subject of origin. In a man aged fifty a nodule of about the size and shape of half a small pea developed subcutaneously at the base of the ring finger of the left hand, at the position of the transverse fold. The patient first became aware of its presence by feeling pain in that part. The nodule was distinctly defined and painful on pressure, and there was a slight increase of redness in its immediate neighborhood. It was a source of distinct irritation to him, and a few days later the palmar fascia extending from the nodule to the base of the ring finger became slightly contracted. Although I had never previously seen a case of Dupuytren's contraction in this early condition, the appearance was quite char-

acteristic of the affection. The patient was a strong, healthy man, and had no constitutional disease whatever, with the exception of a tendency to rheumatic attacks such as lumbago. His habits of life were healthy, his family history was very good, his mother had been healthy with the exception of a tendency to slight muscular rheumatism, his father had been perfectly healthy, and both had died at about the age of seventy. His two brothers were quite healthy and there was no history of gout in any known member of the family. This patient was in the habit of occasionally taking a blue pill or other mercurial purgative to act upon the liver, but said he had not done so recently. He seemed to be suffering from what is commonly called a "bilious attack." I administered a full dose of pil. cathart. comp. U. S. Pharmacopœia (a preparation which I have found an excellent combination). This treatment was followed by relief of the pain in the hand next day, and the nodule rapidly subsided, so that after several repetitions of the purgative at weekly intervals the active symptoms entirely disappeared and only a slight hardening and contraction remained. A few months later nothing was left but a very slight hardening of the fascia in the neighborhood where the nodule had appeared, and all signs of linear contraction had gone.

I believe that this was a case of incipient Dupuytren's contraction, and that if it had not been for the active treatment adopted the induration of fascia would have become organized and permanent, and have acted as a centre of further mischief. Of course one such instance is not sufficient upon which to base a theory, but it seems to me to possibly represent the manner in which this affection begins.

In conclusion, I would add a few words regarding treatment. At the time I published the paper on my observations of the seventy cases of Dupuytren's contraction which I had examined, I advocated subcutaneous division of the contracted bands by as few incisions as possible sufficient to allow of full extension of the fingers. Since then I have learned the value of multiple incisions and punctures of the nodulated portions of fascia in addition to section of the contracted bands. These multiple incisions cause a rapid absorption of the hardened tissue, a fact which was first noted and acted upon by my friend, the late Mr. William Adams. In my experience there is no surgical treatment more satisfactory than subcutaneous section in Dupuytren's contraction.

I have not found much tendency to recurrence, but even if every case were to begin to recontract after the lapse of months or years and were to require further operation, such treatment would, I suggest, yet remain a desirable method. I have not yet found it necessary in any case to excise the hardened and contracted tissue.

THE EFFECT OF NASAL STENOSES ON THE THROAT, EAR, AND ORGANS AT A DISTANCE.

By W. PEYRE PORCHER, M. D.,

CHARLESTON, S. C.,

EX-PRESIDENT OF THE SOUTH CAROLINA MEDICAL ASSOCIATION;
FELLOW OF THE AMERICAN LARYNGOLOGICAL
ASSOCIATION, ETC.

The subject that I have selected to speak of to-day would appear almost too trite were it not that illustrative cases which I have to report are so unusual that I feel impelled to describe them. It has been said that the most important requisite to be entertaining is to have something to say. I must leave you to judge when you have heard my story if it has not warranted the telling of it.

I have on a former occasion attempted to relate to you the evidence chiefly of other authorities in regard to the reflex neuroses of the nose, which evidence was so extraordinary that it might from a pathological standpoint compare almost with a tale of the *Arabian Nights*. I purposely on that occasion confined myself to the evidence of other observers in order that I might not be accused of advancing any biased judgments of my own. I shall be equally at a loss to explain some of the clinical data which I shall submit to you in this paper. It must all rest upon the reliability or unreliability, if you should so determine, of human testimony.

At the same time you must remember that the evidence given was purely voluntary, and while all human testimony, voluntary or involuntary, may be at fault; when a person who may be or is entirely ignorant of what might or might not result from a certain procedure makes the assertion that certain phenomena have occurred, one is forced to admit that the testimony is unbiased and to assume that no hypnotic or other influence has induced him or her to exaggerate the facts of the case in any way.

It would certainly be no novelty to any man in this audience to be told that deafness was a common result of an acute rhinitis, or that any obstruction to respiration, such as adenoids or hypertrophied tonsils, also produced deafness; in fact, it has been asserted that to these pathological conditions may be attributed at least ninety-five per cent. of all the diseases which affect the ear. Dr. Holmes, of Cincinnati, in September, 1900, writing on Hypertrophy of the Turbinate Bodies, and their Relation to Inflammation of the Middle Ear, said: "We know that most cases of middle-ear inflammation can be permanently arrested by timely treatment of the nose and pharynx. In acute and mild cases, treatment alone suffices, but when the pathological changes are

marked, then removal of the adenoids, hypertrophied turbinate bodies, polypi, etc., must be resorted to. Tubal catarrh is generally arrested at the isthmus, for a longer or shorter period, but if the primary causes in the pharynx and nose are not relieved, then the inflammation will, during some acute attack, pass this imperfect barrier and enter the tympanic cavity, causing interstitial inflammation and eventually atrophy of the mucous membrane, beginning with symptoms of deafness and tinnitus, the latter not absolutely constant. * * *

"The tube and tympanic cavity are wonderfully rich in arteries from many different sources, and we have direct arterial and venous communication between the nose, pharynx, and tube, which explain the rapid extension of congestion from the nose and pharynx to the tube and ear. Bearing this in mind, we should ever be on the alert for nasal affections, and insist on early treatment, for, with the advent of cocaine and our present knowledge, a new era in otology has dawned and the next generation should have a very large reduction in the number of its deaf."

It is well known that a complete nasal occlusion from inflammation or obstruction will often set up an otitis which may have a disastrous effect upon the ear, but it is rarely recognized that a small growth occupying the olfactory rather than the respiratory nostril may result in equally serious consequences, even to partial or complete deafness, severe and prolonged coughs, etc. It is therefore necessary in our surgical procedures in the nose that extreme care be used lest serious and unexpected intercurrent disease be set up in the adjacent organs.

A few months ago a young man came to me who had been under the treatment of a noted aurist of Washington, D. C., for deafness. His hearing was found to be perceptibly impaired and his septum narium was deflected so that it was bent double upon itself. On inquiry, I was surprised to learn that, although he had been under treatment for nearly six months, his attention had never been called to this fact, nor had he been told that any operation was indicated or that the restoration of his hearing was in any way dependent upon the correction of that deformity.

The following cases will prove the advisability of removing these obstructions and the restoring of the normal nasal calibre in cases of deafness and accompanying neuroses:

CASE I. *Cough of Long Standing Stopped by the Removal of an Osteoma of the Nasal Septum.*
In 1894 a young lady came to me for the relief of partial deafness. On examination, I could find no distinct cause for the deafness except a small bony protuberance on the posterior end of the septum in the left nostril. I advised its removal, but the pa-

tient, being of a timid disposition, refused to consent to the operation. Subsequently she visited New York, where she received treatment, but nothing was said to her about the advisability of removing the growth. In May, 1901, she returned to me with the request that I should remove the growth. I found that it had not changed materially either in size or in shape. The operation was done with the electric trephine, and an oil spray of menthol, eucalyptol, and petroleum was ordered her.

About a week afterward she informed me that for the past five years she had had a cough which lasted for two hours every morning, and that this had left her after the growth was removed. In this case the growth was so small and apparently interfered so slightly with respiration that I should not have advised its removal; in fact, I have frequently overlooked such growth as being unimportant, and being influenced by a desire to avoid any unnecessary surgery or mutilation of the nose. I did not know that she had the cough, and was not treating her for it, and I advised the removal of the growth only because it was a pathological condition, in the first place, and, second, because I thought that it hindered the current of air to a certain extent through the middle and upper meatuses, and therefore lessened the equable pressure on the tympanum. I shall hereafter always attach more importance to these growths because her hearing has improved greatly and her cough has never returned.

CASE II.—Removal of Hypertrophied Turbinate for Deafness. On October 22, 1900, a lady, aged twenty-two years, could hear with either ear the watch at four inches. Bone conduction was better than air conduction. The right inferior turbinate was much hypertrophied with synechial adhesions. On the 26th I cut through adhesions and opened the inferior meatus with the electric trephine. On November 6th, her hearing not being improved, the Wigmore engine was used for massage with Politzerization. On the 9th I repeated the treatment. Hearing was six inches in each ear. On the 14th, the same treatment. Hearing, right ear, ten inches; left, eight inches. In order to retain the patency of the right nostril repeated operations have been necessary; her hearing at this date, however, is, right ear, twenty-four inches; left, twelve inches, and she is greatly pleased with the result.

CASE III.—Removal of a Nasal Polypus for the Relief of Deafness. A lady, aged about seventy years, stated that she had been entirely deaf in the right ear for twenty years and partially deaf in the left. On examination, a small polyp was found on the posterior end of the middle turbinate in the left nostril. After the removal of this, to my intense surprise she said that she could hear better in the deaf ear than she could in her good ear.

I can form no explanation of how the removal of a polypus from the posterior nasal space in the left nostril can affect or improve the hearing in the right ear after a period of deafness of twenty years, and yet it cannot be doubted that the lady was quite honest in her assertion, because she was as much surprised as I was, and came to me only with the hope of

benefiting or retaining the hearing of her good ear.

CASE IV.—Polypi Followed by Bulbous Enlargement of the Middle Turbinate Bone, Simulating Ear Disease. In 1888, a lady, aged about fifty years, came to be treated for nasal obstruction. A large number of polypi were found in both nostrils and were removed. In 1898 the same patient returned, complaining of deafness and disagreeable noises in her ear. Examination showed no return of the polypi and no pathological condition in the ear. In the left nostril was found a bulbous enlargement of the anterior end of the middle turbinate, with pus pouring freely from its lower surface. The electric globe showed no distinct umbra over the antral or ethmoidal sinus. The entire end of the turbinate was removed, and proved to be a tumor of about the size of the first phalanx of the index finger. Shortly after this all noises and disagreeable sensations disappeared from the ear.

In 1900 the lady returned to me, when I found that the whole condition had reappeared. The turbinate had again become swollen to almost more than its former proportions, and the pus discharge was again set up. Her ear symptoms had also returned, for which as before she came to be treated. The operation was repeated; the ethmoid cells were opened and curetted thoroughly. As before, all unpleasant symptoms disappeared, and in each instance the lady had such perfect relief that she forgot that it was the ear and not the nose for which she had come to be treated. At this date the lady's health is excellent.

This case is reported because the lady never at any time attributed her trouble to disease in the nose or seemed conscious of it, and yet the curetting had to be done repeatedly before I could stop the pus discharge entirely.

CASE V.—Abscess of the Ear Relieved by Opening an Obstructed Nostril. In the summer of 1900 a lad, aged sixteen years, came for treatment of abscess of the ear and difficult respiration. There was a free discharge from the ear, and the nasal septum was found to be greatly deflected, producing considerable obstruction of one nostril. The septal deflection was corrected with the Asch operation, and the left (obstructed) nostril opened. After the operation, the respiration being restored, the lad confessed that his hearing had been gradually growing worse for a long time. The otorrhœa disappeared altogether without any local treatment whatever to the ear. His health began to improve, and his father was very much pleased that I had done the major operation in the nose rather than the simple local treatment to the ear.

These cases of deflected septa and their sequelæ are very common, and I could easily report a great many of them, but I have selected these simply as illustrative cases. I often make my diagnosis before looking into the patient's nose, either by the symptoms which he gives or by the facial deformity; because, while a deflected septum does not al-

ways show on the outside, still the patient generally acquires the habit of pulling the end of the nose to the opposite side from that to which the sæptum is deflected, in order to enlarge the calibre of the obstructed nostril, and a marked deformity results. The symptoms are also equally plain. The patient will generally complain of severe brow-ague; perhaps the removal of large green scabs from one side and not from the other, insomnia, and inability to lie on one side, indicate obstruction of one nostril, and it must either be due to a deflection of the sæptum or to the presence of some growth. When necrosis of the ethmoid cells has taken place from previous inflammation or from over-use of one nostril, and pus is found pouring out continuously, the nasal mucous coming in contact with it will be coagulated, and this, again, forms another link in the evidence of nasal obstruction due to deflected sæptum complicated with ethmoid disease.

Among the extraordinary reflex phenomena which the nose is credited with causing, none is more remarkable than that exercised upon the female genital organs or upon regions so far distant as the sacral region of man. Many observers have called attention to these facts before, but it has remained for Schiff, Weil, Gomperz, and Grossman, to make certain definite statements in relation to them which, if we are to accept them as correct, will render further proof unnecessary as to the overwhelming influence which the nose exerts upon the system generally, when in a state of excitation. The *Journal of the American Medical Association* quotes from the *Wiener klinische Wochenschrift* for January 17th and 24th as follows:

"Relations Between the Nose and the Female Genital Organs. A. Schiff.—By cocaineization of the four genital spots in the nose Schiff succeeded in curing thirty-four out of forty-seven women of dysmenorrhœa. Mechanical and hysterical dysmenorrhœa were not affected, but all the cases of nervous origin, with or without palpable lesions in the genital sphere, and also the extramenstrual sacral and abdominal pain were cured. The facts observed indicate that the pain in many cases of dysmenorrhœa and similar conditions is not actually genital, but originates in menstrual or other irritation of the genital points in the nose, and is projected thence into the sacral and abdominal regions. The cocaineization should always be done as a differentiating measure in cases of dysmenorrhœa in which the pain does not cease with the commencement of the flow, in order to distinguish between the purely genital and the projected pains. In case of a positive result, the genital points should be cauterized or, better still, treated with bipolar electrolysis. The points must be determined through the speculum and thoroughly anesthetized, preferably with a

twenty-per-cent. solution of cocaine. He found it possible in a number of women to cause severe pains in the sacral or abdominal region by excitation of the genital points in the nose, thus corroborating the close connection between them. Weil has observed pain appear in the sacral region in men on tamponing the nose, and has cured forty cases of dysmenorrhœa in women by cocaineizing the genital spots in the nose, the influence of suggestion being completely excluded. Gomperz has had a similar experience, but found that the pains were never arrested for more than a year, after which they again required intervention. Grossman has also cured epilepsy in a man of forty-five, arresting the seizures for five weeks by galvanocauterization of the inferior turbinated bone, but they recurred later. He has also succeeded in curing neuralgia of the first and second branches of the trigeminus and three cases of acute lumbago in men by treating the nose. In his experiments on animals, excitation of the superior laryngeal or of the first and second branches of the trigeminus nerve, augmented the blood pressure in the left auricle, with dyspnœa. This corroborates the connection which has long been noted between asthma and affections of the nose."

We should be disposed to treat these observations with absolute incredulity were it not that the reliability of the testimony is beyond question, and the thought here presents itself, that if so great an effect is produced upon organs at a distance, how much more rational is it that organs like the eye and ear should be affected and disorganized by acute and chronic diseases of the nose? It would be impossible for me to quote for you the mass of testimony in substantiation of the influence which the diseases of the nose have upon the eye. Yet, how often have violent and prolonged headaches, orbital neuralgia, and other clinical phenomena affecting the eyes been put down to eye-strain and glasses prescribed, which, by resting the muscles involved, may give temporary relief to the symptoms, while the whole cause of the neuralgia might be relieved by the removal of a sharp spur from the sæptum or the opening of abscesses of the ethmoid or sphenoidal cavities! As before stated, nothing but the fear of taxing your patience prevents me from quoting for you authorities in proof of these facts, but they can easily be produced for any one who may desire to see them.

Representation of the Philippine Board of Health at the American Public Health Association.—Colonel Charles R. Greenleaf, assistant surgeon-general, has been detailed to represent the Superior Board of Health of the Philippine Islands at the annual meeting of the American Public Health Association, to be held in Buffalo, N. Y., from September 16th to 20th.

ATROPHIC RHINITIS IN ITS PURELY CLINICAL ASPECT.*

By CARL SEILER, M. D.,

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It is not my intention to fatigue you with any recapitulation of the well-known and frequently reiterated theories in regard to the ætiology, pathology, or bacteriology of atrophic rhinitis, as it would be simply a waste of time both for you and for me. What I wish to convey to you all, as being interested in the various forms of nasal disease, is only my personal unbiased conclusions, unbiased by any of the numerous theories advanced by writers on rhinology in regard to the causation, pathology, and symptomatology of this more rare than commonly supposed to be variety of intranasal diseases; and as the sound of the trumpet will waken up the long-forgotten martial spirit in the old war horse who has spent his declining years before the plow, so may these remarks of mine act like the sound of the trumpet to recall forgotten facts and observations in some of you, which were forgotten only because of the splendor and dazzling brilliancy of the modern teachings of enthusiastic bacteriologists (not to say pathologists) which make it so easy to account for the different phenomena and symptoms in a given case without the trouble of searching further than for the pathogenic micro-organism which is alleged to be the cause of the disease, and, when found, with absolute certainty determines the diagnosis without further consideration of the various pathological changes which may be present in a given case.

In my extensive experience, both in the out-door clinic of the University of Pennsylvania Hospital and in the Northern Union Dispensary of Philadelphia (which, by the way, I am the founder of), I for a period of fifteen years kept tally of the various cases of nasal diseases which came under my notice as chief of the nose and throat departments, and I found that, contrary to the general belief, atrophic rhinitis, from whatever cause, was a comparatively rare disease, averaging about fifteen to one thousand of the other forms of nasal catarrh.

I also found that the different nationalities and races showed, numerically speaking, a marked difference in the frequency of the occurrence of the disease among them.

Thus, I found that the American-born male children of Irish parents were largely in the majority; next came the Irish-born, then the Italian-born, the French native, and the German, and the smallest contingent was furnished in my statistics by the negro race. Other nationalities, such as the Slavic,

were too small in number to be taken into account as to the prevalence of atrophic rhinitis among them.

Another most interesting and valuable observation which I was thus able to make was that, contrary to the assertion of many authors, the occupation of the parents had no significant influence upon the causation of the disease, except in those very rare cases which presented themselves in employees of chemical manufacturing establishments, and I made the observation that particularly those persons employed in the manufacture of cinchona preparations and quinine, as well as in those who were employed in the manufacture of bichromate of potassium, furnished instances of influence of occupation. In the latter I found that a perforation of the septum very soon occurred after the usual symptoms of the formation of dry scabs in the anterior nasal chambers, a fact which I pointed out years ago, and one which may be due to the influence of the chromic acid vapor as a destructive agent to cartilage, as well as to the mechanical traumatic injury inflicted upon the septal mucous membrane by the finger-nail of the patient in his endeavor to remove, even temporarily, the obstruction to nasal respiration occasioned by the hard scabs accumulating and adhering to the mucous membrane, for want of sufficient secretion from the atrophic turbinate tissue, due to the astringent action of the chromic acid vapor.

Another observation which I, as well as others, have frequently referred to in writings, was that not infrequently persons presented themselves who were afflicted with unilateral atrophic rhinitis and in one or the other of the nasal chambers presented the well-known characteristic feature of the disease, and were even to a greater or less extent afflicted with that prominent and disagreeable symptom ozæna. These cases I did not include in my statistics, for the reason that I found the pathological conditions to be due invariably to a mechanical obstruction to nasal respiration in the other anterior nasal chamber, which could be quickly and permanently relieved by operative interference.

I will here say but a few words in regard to the prominent symptom ozæna, which has given rise to the popular belief that this form of nasal catarrh which we have under consideration is far more frequent than it really is. In fact, the older writers describe a disease which they called "ozæna," and which they recognized and diagnosticated by the peculiar and extremely disagreeable foetid breath, which odor, however, was and is unperceived by the patient. But ozæna, like dropsy, is but one of the symptoms of various and often extensive pathological changes of the system, may be present in a variety of different nasal diseases, and is by no means an infallible and ever-present diagnostic sign of atrophic rhinitis, although even to this day both

*Read before the Eastern Section of the American Laryngological, Rhinological, and Otological Society at the annual meeting in Buffalo, June 22, 1901.

ozæna and dropsy are considered to be distinct and individual diseases by the laity and, I am almost ashamed to say, by not a few of the members of the medical profession.

Taking for granted that the pathology and ætiology of the disease are perfectly familiar to you all, I will add a few remarks as to my experience in regard to the treatment. As a matter of course, I at first was imbued with the generally accepted *ex cathedra* statement in all the text-books and the current literature of the early days of rhinology that dry catarrh, as it was called, could not be cured and the prominent symptom, ozæna, could only be held in check in its obtrusiveness upon the sense of smell of others than the patient by the liberal use of carbolic-acid washes and other so-called antiseptics, which by virtue of their own more or less disagreeable odor simply masked, for the time being, the fœtid breath of the patient without in the least removing its cause. I need hardly mention that I faithfully tried every new remedy which in the course of time was recommended in medical literature, and carefully observed the effects upon the condition of the patient, but in spite of my carefully and faithfully carrying out of the various methods of treatment, none of them seemed to have any advantage one over the other. And I may add here, in parenthesis, that I found that the lower class of dispensary patients, of whatever nationality, were by far the best subjects in carrying on such comparative investigations, because they, not being accustomed to think and imagine for themselves, have a far greater respect for the wisdom of the chief of the dispensary and will carry out implicitly and carefully the directions he may give them, while private patients and the better class of people, who really should not be treated as paupers in the dispensaries of our great cities, far too often think they know better than the physician, and not only do not carry out his directions, but also annoyingly prevaricate and color their statements so that but scant reliance can be placed on what they say.

After a number of years of such fruitless experimentation I came to the conclusion, or rather was forced to it, that the proper and effective treatment for atrophic rhinitis consisted, first, in the removal of the dried secretions of the mucous membrane in the nose, not by forcible removal with instruments or a stream of water under high pressure, as from the nasal douche or the postnasal syringe, but by the gradual solution and loosening of them by a solvent in liquid form, to which should be added some of the ethereal antiseptics, such as thymol, menthol, eucalyptol, etc., to overcome, if even only temporarily, the objectionable, and to the operator often sickening, odor of ozæna; secondly, after the scabs have there been removed, in the reestablishment in some way, to as great an extent as possible, of the normal

capacity and configuration of the anterior nasal breathing channels, at the same time supplying the necessary moisture to be absorbed by the inspired air as in the normal condition; thirdly, in producing a regeneration of the atrophied turbinate tissues by some kind of stimulation to the mucous membrane which would in time reestablish the normal functions of the nose and even cure the invariably present ozæna.

Along these lines of logical reasoning I succeeded in accomplishing the first proposition—namely, the gradual removal of the scabs and with them the ozæna, by means of the solution which is known as my antiseptic nasal wash, the formula for which I first published in a paper on *The Surgical Treatment of Hypertrophic Rhinitis*, read before the New York Academy of Medicine, and which later, for the sake of convenience, as well as for the purpose of insuring greater accuracy in its use, I transformed into what are now universally known as the “Seiler antiseptic pastilles,” which solution fully met my expectations in its action, whether made by the formula I gave or from the pastilles, which I am glad to say, are now for the *first* time in all these years put upon the market made strictly according to the formula which I devised. Heretofore they have been made by innumerable manufacturing chemists and put upon the market without authority and from formulas of their own. These latter preparations, although they may have been of service in some cases, are not the ideal preparation which I had in mind and which after many tedious but always scientifically and not empirically worked out combinations I succeeded in devising. The details of these experiments I gave to the students of the fourth-year class of the Medical Department of the University of Pennsylvania in a clinical lecture some years ago, which, however, has been but recently published.

After accomplishing the removal of both scabs and ozæna, it was a comparatively easy task to devise a simple means of accomplishing the two other propositions, although even that required some experimentation and close observation, but with the hints from Bresgen Frankfurdt, who advocated chemical stimulation of the nasal mucous membrane by means of nitrate of silver triturate diluted with starch or, as I use it now with better effect, with stearate of zinc, and from Golstien, of Berlin, who, I believe, was the first to suggest the cotton nasal plug for the same purpose, I found that the greater majority of cases of atrophic rhinitis readily yielded to treatment, and frequently in an astonishingly short time.

The action of the Golstein plug is probably not fully understood and appreciated, and for this reason and also for the theoretical, but in my experience absolutely erroneous, reason that patients cannot be induced to reintroduce it persistently as it should be

done, so little use is made of it and it has been cast aside as useless and fanciful, but it is, nevertheless, an extremely useful and efficient means for producing not only stimulation of the excretory glands of the nasal mucous membrane by mild but continuous mechanical irritation, but also for bringing about a near approach to the normal calibre of the nasal respiratory tract and, above all, for absorbing, retaining, and giving off the inspired air current what little moisture there is excreted by the mucous membrane, and in this threefold capacity preventing the reformation of dried scabs of mucus and the recurrence of ozæna.

By a little instruction as to how to make and introduce the plug into the proper place in the nasal cavity—namely, in place of the atrophied lower turbinate, the patients, with very few exceptions, learn to make the plugs and put them into position, frequently better than the operator himself is able to do, and the comfort and ease which they derive from both the proper use of the antiseptic solution to cleanse the mucous membrane and the wearing of the cotton plug in the intervals of washing out the nasal cavities is such that they are not willing to do without either.

Correspondence.

LETTER FROM TORONTO.

The Canadian Medical Association and the British Columbia Medical Association.—Institutions for the Care of Consumptives.—Canned Goods as a Cause of Disease.—A Proposed New Hospital Building in Montreal.—The United States' Exclusion of Undesirable Immigrants through Canada.

TORONTO, August 17, 1901.

The British Columbia Medical Association will hold its second annual meeting in Victoria on the 5th and 6th of September. It was the original intention to have this take place in August, but, on account of the Canadian Medical Association meeting in Winnipeg during the last four days of that month, it was decided to make the change. After the meeting at Winnipeg, a large delegation from the eastern portions of Canada will go on an excursion to the Pacific coast, and the profession in the Province of British Columbia has offered them a cordial invitation to attend their meeting and take part in the discussions.

The executive committee of the National Sanitarium Association met at the Muskoka Cottage Hospital on the 7th inst. They inspected the grounds and buildings and expressed great satisfaction at the state they were in. The capacity of the institution they found greatly taxed, and the physicians reported an increasing number of applicants in

whom the disease was too far advanced for successful treatment. The committee also visited the building site of the Muskoka Free Hospital for Consumptives, which is located half a mile nearer the town than the present building. The work on this is now pretty far advanced, and it is expected that it will be open for patients by the 1st of November. This new institution will be supported by voluntary contributions, and is intended for poor consumptives in the early stage of the disease. The plans of the Toronto Home for Consumptives were also discussed. The prospects are favorable for the early completion of these plans. When completed, this hospital will offer opportunity for clinical study of the disease.

In 1890 the Department of Inland Revenue at Ottawa sent out to 4,348 medical men throughout the Dominion of Canada circular letters asking whether any cases of illness had come under their notice within recent years that they could attribute to the use of canned goods. To these circulars there were received 1,313 replies. Of those who replied, 1,059 answered in the negative and 254 in the affirmative. The department now recommends the adoption of the following precautions in the interest of the public health: Imported canned goods should be subject to inspection. Vessels of glass or earthenware should be used instead of tins or cans. The date of filling and the name of the factory and the name of its proprietor should be stamped thereon. Purchasers should use up the contents within twenty-four hours after opening the cans, and their sale should be prohibited after they have been kept a certain length of time. Canned goods should be stored in refrigerators, and not on grocers' shelves or exposed to the sun's rays. The number of cases of disease occurring in Canada from tinned goods for an average period of seven years would be about 138 per annum. Fifteen cases have terminated fatally.

Montreal is likely soon to have another new hospital building. For some time it has been felt by those in charge that the continued prosperity and financial success of the Western Hospital would warrant a new, larger, and more modern building. The governors are now discussing the plans for the erection of a new building at a cost of \$100,000. The plan which seems to meet with the favor of the majority of the governors would result in the erection of four large wings joined to one another by passages, which would be covered, so that if found necessary any one of these wings could readily be isolated. The question is under consideration as to whether the new building shall be situated in the suburb of Westmount.

The question of the admission of immigrants into the United States *via* the city of Montreal is rapidly

becoming an important one. On the 14th inst. this question received exemplification when seven Syrians were brought before Inspector Francis for examination. Dr. Hesier, who is the United States immigration officer for the Province of Quebec, was present, inspected the eight foreigners, and at once pronounced five of them to be suffering from trachoma. In spite of inspectors, agents, and others, they managed to reach the boundary line at Rouse's Point, but they were there arrested and lodged in jail pending instructions from the government at Washington. When these arrived, the Syrians were returned to Montreal, where they still remain. A report dated August 17th comes from Washington that the office is to be abolished. The inspectorship was only established at Montreal a year ago, and Dr. Hesier selected for the appointment as being one of the most experienced medical officers in the employ of the United States government. Canada admits immigrants with trachoma, favus, and hernia, but the United States does not.

Therapeutical Notes.

A Cooling and Antipruritic Ointment, useful in erythematous, papular, and squamous eczema, and in lichen planus, pruritus, etc., is given by Dr. Jay F. Schamberg (*Therapeutic Gazette*, June) as follows:

R Menthol..... 5 to 10 grains;
Carbolic acid..... 10 to 20 "
Rose water ointment..... 1 ounce.

M.

This produces primarily a mild burning sensation followed by an agreeable refrigerating effect.

Cutaneous Cosmetics.—The *Journal des praticiens* for July 27th gives the following formula:

1. Cold Cream.—

R White wax..... 2I grains;
Spermaceti..... 2I "
Oil of sweet almonds..... 3 drachms;
Orange-flower water..... 1½ drachm;
Rose water..... 1½ "
Oil of roses..... 12 drops;
Essential oil of bitter almonds. 15 minims;
Oil of bergamot..... 1 drachm;
Oil of neroli..... 45 minims.

M.

2. Virgin's Milk.—

R Tincture of Tolu..... 7 parts;
Rose water..... 565 "

M. From a half to one teaspoonful, in a glass of water, as a lotion.

The Antiseptic Ointment of Reclus.—The *Monde pharmaceutique* for August 5th gives the following formula:

R Pulverized iodoform..... 15 grains;
Salol..... 30 "
Powdered boric acid, } of each, 75 "
Powdered antipyrine, }
Pure vaseline..... 650 "

M. This ointment is said to be at once antiseptic, antiputrefactive, and analgetic. It is suitable for the dressing of all wounds, but particularly a sepsis.

For Subacute Vesicular Eczema.—Dr. Jay F. Schamberg (*Therapeutic Gazette*, June) has obtained the most excellent results from the application of the following paste:

R Carbolic acid..... 10 grains;
Calomel..... 20 "
Powdered starch, } of each, 2 drachms;
Powdered zinc oxide, }
Petrolatum..... ½ an ounce.

M.

This ointment is a safe and generally useful application in all except the very acute eczemas.

Compresses of Sodium Bicarbonate in Suppurations.—M. Wladimirov (*Gazette des hôpitaux; Revue médicale*, June 19th) says that in burns, compresses of sodium bicarbonate rapidly arrest suppuration and promote cicatrization even in cases rebellious to all other treatment. Moreover, this dressing gives excellent results in wounds which heal rapidly without suppuration, by causing the resulting scar to be almost inappreciable. In abscess and panaritium the results are equally satisfactory. Compresses may be applied as moist dressings, either renewed every day, or by moistening *in situ* twice or thrice daily or again by placing between the compress and the outer covering a compress covered with boric vaseline to prevent evaporation; in this last case, the dressing may be left in place for two days. The principal advantages of this dressing are its absolute innocuousness and its analgetic and antiseptic action, which render it invaluable in practice with children.

A Lotion for Eczema.—Dr. Jay F. Schamberg (*Therapeutic Gazette*, June) says that, in acute erythematous or papular eczema, the following lotion will be found most grateful:

R Carbolic acid..... 30 grains;
Boric acid..... 1 drachm;
Glycerin..... 1 "
Zinc oxide..... 2 drachms;
Water, enough to make..... 6 ounces.

M. In more chronic cases it may be employed in greater strength.

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THE NEED OF POST-GRADUATE INSTRUCTION
IN FRANCE.

That there are some of our professional brethren in France who realize that their country has, for a time at least, lost her preeminence as a source of medical information is shown by the lengthy and elaborate argument with which, in the *Presse médicale* for July 24th, M. Jules Auffray leads up to his proposal of a special measure for the restoration of French prestige. Virtually M. Auffray's idea, but not precisely his proposed embodiment of it, was advocated eleven years ago by M. F. Jayle, who now commends it anew in the columns of the journal mentioned. It is pointed out by M. Auffray that the difficulties which have lately been put in the way of the attainment of the Paris degree in medicine by foreigners, while they have cut down foreign competition with French practitioners, have practically driven foreign students away from the French capital, where but a few years ago they constituted from a sixth to a fifth of the entire number of students.

Other centres of medical education have profited by this result, and the renown of French teaching is on the wane. Naturally, students who betake themselves to the schools of any given country see and hear more of the scientific achievements of that country than of any other, and M. Auffray goes so far as to intimate that in Germany French medicine is studiously ignored. There is one branch, he maintains, in which it cannot be ignored, and that is bacteriology. This he attributes largely to the influence of the Pasteur Institute, whereupon he concludes that a municipal institute would prove the most effective agency in carrying out the measure which he proposes as a means of restoring French

ascendency in medical teaching and French renown in medicine. He would call the establishment the Municipal Institute of Applied Medicine. He lays down a number of specifications for its management. To carry them out would make the institution what in this country is generally called a post-graduate school.

Didactic teaching is now very much the same thing all the world over, and it is doubtful if preeminence in it will ever again be so decided in any one country as to exert the prime influence in giving that country the leading position in medicine. It is the special courses, whether for graduates or for undergraduates, that most impress those who attend them, and naturally those for graduates attract men of a class who, more than the undergraduates, are likely to spread the professors' fame. There can be no doubt, we should think, that liberal provision for post-graduate teaching would go far to make Paris again popular as an educational resort, and it is quite conceivable that such provision could most readily be brought about by the establishment of a municipal institute of the sort that M. Auffray advocates.

THE EFFECT OF MUTILATIONS ON LONGEVITY.

One may readily realize that certain mutilations may, by interfering with the normal capability of eluding personal injury or by precluding the amount of physical exercise generally assumed to be requisite for the maintenance of health, have the effect of shortening life. But the medical examiner in life insurance has to go deeper into the subject than that conception. It is from such an officer's point of view that Dr. John Homans, of Boston, has recently dealt with it (*Medical Examiner and Practitioner*, August). Apparently little has before been written on it that would materially affect the force of what Brinton wrote more than thirty years ago. Dr. Homans quotes from Brinton as follows: "The effect of the loss of a limb or a special sense it is rarely necessary to estimate. Amputation of a limb for disease is said to confer an increased risk of visceral—especially of pulmonary—disease. But here the previous malady would itself enter into our calculations, as well as the present health (including any appearances of latent mischief) of the person examined. Amputation for injury or accident is

also said to be often followed by a plethoric state and a tendency to corpulence that are attended with increased risk to the constitution. These, however, would also be visible facts that could scarcely escape notice. And in respect to these mutilations, as well as to complete blindness, deafness, and the like, we may sum up their other chief indirect effects in the general statement that whatever interferes with the exercise natural to a healthy individual, or deprives him of the proper guards against accident which Nature furnishes, of course increases his risk of disease and injury respectively. But how far it will do so must be judged of from the details of each case—in other words, the habits and circumstances of the individual. In the affluent classes the care and attention that wealth can secure often reduce the influence of such accidents to a minimum that may practically be overlooked altogether."

Dr. Homans has been able to turn to account certain data from the Army Medical Department relative to the results of major amputations in the war of secession. It appears from these data that the loss of an arm has a more serious influence on longevity than that of a leg, and the nearer the site of the amputation to the thorax the more decided is the effect. Dr. Homans thinks that the loss of an arm might affect the respiratory power of the thorax in certain attitudes, and that the loss of both arms might cripple the breathing capacity by depriving the subject of the ability to support and rest himself by suspension or by bearing or leaning on his arm. As to the loss of a hand, in a person able to pay for life insurance, it would not in itself, he thinks, be a sufficient cause for declining the risk, but he remarks that there are in this mutilated condition, as in others, mental depression and dissatisfaction at times, that is to say, more of a moral risk than in the unamputated. He adds the interesting statement that several of his fellow-soldiers in the war of the rebellion who suffered amputations of various kinds and degrees afterward became intemperate in the use of alcohol or morphine, and all of them that he now recalls, whether they were subjected to excision or to amputation, are now dead. He thinks that civilians who have suffered amputation of a limb are better risks than soldiers; their habits are apt to be better and their injuries to have been less numerous. It may almost be taken as a matter of course that, as Dr. Homans points out, an amputation done

on account of mechanical injury implies less depreciation of the expectation of life than a like amputation done for disease, and anybody who has lost a limb by reason of cancer, sarcoma, or tuberculous disease should be declined, for there is always the danger of recurrence of the disease even after many years.

Concerning certain other injuries and diseases than those calling for amputation of a limb, Dr. Homans speaks without the definite support of recorded data, but his great experience as an examiner in life insurance and as a surgeon gives great weight to his impressions. He thinks that a person who has had a fracture of the skull with loss of brain substance or of bone would not be an "average good risk," but that if there was no loss of substance, and no symptoms remained, he would be as good a risk as any one else. If a person should recover from a fracture of the spine, an injury that is generally fatal, his expectation of life would probably be curtailed. The resection of small portions of one or two ribs for acute empyema, followed by recovery, does not necessarily shorten the person's life, provided the lung has become well expanded and its functions are well performed.

Persons whose stomach, spleen, liver, or kidneys have been "meddled with surgically" or removed, do not promise a longevity that would justify their insurance. Operations for the removal of gall-stones, provided there is no cancer, do not in themselves shorten the expectation, but the disease is very prone to recur. Suppurating kidneys are usually tuberculous, and this fact, together with the degree of functional capability of the remaining kidney, must be taken into consideration in the case of an applicant who has undergone nephrectomy. When a portion of intestine has been excised for a neoplasm, the probability of recurrence is so great that the person is not likely to be long-lived. Ovariectomy does not interfere with longevity, provided the growth was really benign, but malignancy and recurrence are not uncommon; consequently applicants who have recovered from ovariectomy should be rejected unless from the pathological and histological standpoints the history is well known and perfectly satisfactory. Hysterectomy for fibroid tumors seldom curtails the life of the individual, though occasionally cancer develops in a fibroid uterus—the author has seen three instances in 200 abdominal hysterec-

tomies. On the whole, he thinks that women who have suffered such extensive mutilations as abdominal section and removal of the uterus and ovaries cannot be considered as quite so likely to be long-lived as healthy women of the same age who have undergone no such mutilation.

A QUASI-EPIDEMIC OF PURULENT INFECTION.

Every practising physician realizes the advantage of keeping himself informed as to the diseases that are prevailing in his district, for such information now and then enables him to arrive at a speedy diagnosis in a case that without it would be puzzling. It must be exceedingly rare for knowledge of this sort to be productive of unnecessary alarm, yet a temporary dread seems to have been produced by it in Colorado last winter. However, the district to which it applied was immensely larger than would be covered by the practice of any one individual, including, indeed, more than one State. The Oriental plague was known to have reached California, and during its existence in that State there were observed in several places in Colorado cases of illness highly suggestive of the plague, especially as two cases somewhat analogous occurred in Chinamen. It was soon settled, however, that these cases were not examples of the plague, and then it became singularly important that their occurrence should be made known to the profession in general, and especially to the physicians of Colorado. The duty of making it known has been realized by Dr. J. N. Hall, of Denver, professor of medicine in Gross Medical College, who at the close of his article entitled *An Outbreak of Pyæmia Suggesting Bubonic Plague*, published in the August number of the *Denver Medical Times*, says: "I feel, as do the physicians who have so kindly aided me in making this report, that the presence of these cases should be widely known, because of their obscurity when seen singly."

Dr. Hall's article includes short accounts of thirteen cases which formed the subjects of an investigation made by himself in conjunction with the executive officer of the State board of health, Dr. G. E. Tyler. It is explained that the data concerning several of them were not obtained until some time after the fatal termination, and that this fact accounts chiefly for the incompleteness of the bacteriological report. Dr. Hall and Dr. Tyler observed

one case in the Colorado Fuel and Iron Company's hospital in Pueblo. It was that of a middle-aged worker in a rolling-mill who several weeks before had bumped his head against an overhead iron rafter in the mill. A single drop of blood was reported to have been lost as the immediate result of the concussion, but the little wound gave absolutely no further trouble, and Dr. Hall thinks it may be excluded as an avenue of infection. Careful questioning failed to disclose any other source of septic poisoning, such as sore throat, gonorrhœa, ear disease, abdominal trouble, urinary disorder, osteomyelitis, or suppurating glands. The man had an abscess in the right upper arm and one in each forearm, and these were followed by empyema of the right side. A bacteriological examination made by Dr. William C. Mitchell, the State board of health's bacteriologist, gave a pure culture of *Streptococcus pyogenes*. The patient had one or two more abscesses, but recovered slowly.

Dr. W. C. Marmaduke, of Pueblo, furnished the investigators with full reports of four other cases, and Dr. Hall gives abstracts of them. One was that of a middle-aged machinist who, without any known channel of infection, had high fever with delirium, severe sweating at night, and slight enlargement and tenderness of the liver and spleen. After these symptoms had lasted for several days, half a pint of thin pus was evacuated from the axillary region, and the discharge continued for five weeks. No other abscesses formed, and the man slowly recovered. Dr. Marmaduke's three other cases are of particular interest, since they all seem to have originated in the same house and since the first of them gave rise to some difference of opinion between Dr. Marmaduke and Dr. Hall. A machinist had a chill; the next morning he had sore throat with high fever; on the fourth day, a drenching sweat having occurred during the preceding night, he had a "typical scarlet-fever rash" over the entire body; on the day of the outbreak of the rash he had another chill and was delirious; the action of his heart was irregular, with a murmur that was thought to be endocardial. For the next ten days he had fever and repeated chills, with abscess of a wrist and of the legs. A profoundly septic condition set in, and he died on the nineteenth day. This man's wife, who bathed him during his illness, had a chill, with high fever, followed by an abscess in the ball of each thumb, to-

gether with some axillary adenitis. Although she was still having occasional slight chills and was delirious at times, she took her husband's remains to the East, and the termination of her case is not known. As she kept her thumb-nails exceedingly short, Dr. Marmaduke believes the thumbs were the avenues of infection. This pair had a boarder, a laborer. When his hosts became seriously ill, he sought quarters in another house, but in a few days he had a slight chill, fever, redness and swelling of the wrist and ankle of one side, and extensive lymphangitis, with many abscesses. He died in eleven days.

It is in regard to the pathology of the first of these three cases that Dr. Marmaduke and Dr. Hall are not fully in accord. The former gave his diagnosis as "pyæmia resulting from malignant endocarditis occurring in the course of scarlet fever"; the latter suggests—but with hesitation founded on the evident carefulness with which the case had been observed—pyæmia resulting from a streptococcus infection of the throat, "the rash and the endocarditis being explained by the sepsis," and he gallantly adds: "I admit, however, the force of his [Dr. Marmaduke's] argument." There was no bacteriological examination.

Two cases were reported by Dr. G. G. Duggins, of Pueblo, in one of which a pure streptococcus infection was shown by Dr. Mitchell's bacteriological examination; Dr. F. H. McNaught, of Denver, sent notes of several cases, in one of which antistreptococcus serum was tried in vain, and in another of which (not quite of a character to be classed with the other cases which form the subject of Dr. Hall's article) the serum was of decided service; another case, observed in the Arapahoe County Hospital, is reported by Dr. Hall himself; and a case is reported by Dr. Shippey, of Orient. It seems needless to go further into the details of the clinical histories of these cases, but some of their points may be set forth to advantage. Barring the one instance already alluded to as not quite in line with the others, they were all examples of purulent infection without any known traumatic source, unless the most trivial injury (in one case a slight scratch on the leg from stepping on a chico bush) may be regarded as the source. Dr. Hall thinks that the pathogenic germ must have been in an unusually virulent state. In only two of the cases was even a slight injury

known to have occurred. There had been sore throat of streptococcal origin in but one of the cases, though sore throat came on early in another case, the one concerning which there was a difference of opinion between Dr. Hall and Dr. Marmaduke. In one case a small traumatic ulcer may have been the site of infection. Of the thirteen cases, four terminated fatally and in one the result is unknown. One of the cases was complicated with facial erysipelas.

Although Dr. Hall uses the word pyæmia in the title of his article, he disclaims the idea that it can strictly cover all the cases; his own impression is that many of them originated in a streptococcal sore throat which was not of sufficient severity to be noticed. We regard Dr. Hall's article as a most substantial addition to the data from which our further knowledge of purulent infection is to be worked out.

THE YERSIN SERUM IN MANILA.

In the *Journal* for August 17th, in an article entitled *The New Army Circular on Tropical Diseases*, we said, having reference to the Oriental plague: "In the treatment, Yersin's serum, as obtained from the Marine-Hospital Service, has been found useless in Manila, but recently a small quantity of serum brought from Tokyo was used on three patients, and two of them recovered." We are quite sure that in this statement Assistant Surgeon Calvert, of the army, was simply contrasting the Yersin serum with the Japanese article. It has been suggested, however, that it might lead to a misapprehension. To prevent any such occurrence, we may state now, on the authority of Surgeon-General Wyman, that the only Yersin serum that the Marine-Hospital Service has sent to Manila, or has ever used, was obtained from the Pasteur Institute in Paris.

THE ALLEGED APHRODISIAC ACTION OF YOHIMBINE.

In our issue for August 10th we cited certain trials made by Krawkoff going to show that yohimbine was destitute of the aphrodisiac virtue that had been attributed to it. In the July number of *Therapie der Gegenwart* A. Loewy, of Berlin, reaffirms the statements of its aphrodisiac power, and even says that it operates on dogs that have been castrated.

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general, during the week ending August 24, 1901:

Smallpox—United States and Insular.

California....	San Francisco....	Aug. 8-11....	2 cases.	
Georgia.....	Pickens Co.....	July 1-Aug. 10.	37 cases.	
Illinois.....	Chicago.....	Aug. 10-17....	1 case.	
Massachusetts.	Boston.....	Aug. 10-17....	2 cases.	
Nebraska.....	Omaha.....	Aug. 3-10....	1 case.	
New Jersey...	Jersey City....	Aug. 11-18....		1 death.
"	Newark.....	Aug. 10-17....	4 cases.	
New York....	Elmira.....	Aug. 3-17....	4 cases.	
"	New York.....	Aug. 10-17....	36 cases.	
Pennsylvania.	Philadelphia....	Aug. 10-17....	6 cases.	1 death.
"	Pittsburgh....	Aug. 10-17....	2 cases.	
Utah.....	Salt Lake City..	Aug. 10-17....	4 cases.	
Washington...	Tacoma.....	Aug. 4-11....	1 case.	
Philippines...	Manila.....	June 22-July 6.	1 case.	

Smallpox Foreign.

Austria.....	Prague.....	July 27-Aug. 3.	1 case.	
Belgium.....	Antwerp.....	July 27-Aug. 3.		1 death.
Colombia.....	Panama.....	Aug. 5-12....	7 cases.	
France.....	Paris.....	July 27-Aug. 3.		8 deaths.
Great Britain..	Glasgow.....	Aug. 2-9....	2 cases.	
"	Liverpool.....	July 27-Aug. 3.	1 case.	
"	London.....	July 27-Aug. 3.	13 cases.	1 death.
India.....	Bombay.....	July 16-23....	2 cases.	2 deaths.
"	Calcutta.....	July 13-20....		6 deaths.
"	Karachi.....	July 14-21....	1 case.	1 death.
"	Madras.....	July 6-19....		16 deaths.
Italy.....	Messina.....	July 27-Aug. 3.	11 cases.	4 deaths.
Mexico.....	Mexico.....	Aug. 4-11....	1 case.	
Russia.....	Moscow.....	July 22-27....	5 cases.	1 death.
"	St. Petersburg..	July 13-27....	3 cases.	

Yellow Fever.

Colombia.....	Bocas del Toro..	Aug. 6.....	8 cases.	Total to date.
Costa Rica....	Port Limon.....	Aug. 3-10....	4 cases.	2 deaths.
Cuba.....	Regla.....	Aug. 7.....	1 case.	
"	San Antonio de los			
"	Banos.....	Aug. 6.....	1 case.	
Mexico.....	Vera Cruz.....	Aug. 3-10....	2 cases.	1 death.

Cholera.

India.....	Bombay.....	July 16-23....		10 deaths.
"	Calcutta.....	July 13-20....		23 deaths.
"	Madras.....	July 6-19....		2 deaths.
Japan.....	Yokohama.....	July 13-20....	1 case.	1 death.
Java.....	Batavia.....	June 29-July 6.	33 cases.	23 deaths.

Plague—Foreign and Insular.

Australia.....	Brisbane.....	March 1-31....	8 cases.	1 death.
"	April 1-30....		7 cases.	2 deaths.
India.....	Bombay.....	July 16-23....		107 deaths.
"	Calcutta.....	July 16-20....		11 deaths.
"	Karachi.....	July 14-21....	7 cases.	1 death.
Philippines...	Cavite.....	July 6.....	3 cases.	
"	Concepcion.....	July 6.....	1 case.	
"	Malabon.....	July 6.....	3 cases.	
"	Malalos.....	July 6.....	3 cases.	
"	Manila.....	June 22-July 6.	43 cases.	18 deaths.
"	Naic.....	July 6.....	3 cases.	
"	Paranaque.....	July 6.....	3 cases.	
"	Santa Rosa.....	July 6.....	1 case.	

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending August 24, 1901:

DISEASES.	Week end'g Aug. 17		Week end'g Aug. 24	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever...	56	12	64	16
Scarlet fever....	120	9	90	11
Cerebro-spinal meningitis....	0	7	0	5
Measles.....	72	2	72	5
Diphtheria and croup.....	136	27	102	24
Small-pox.....	36	6	18	8
Tuberculosis.....	271	164	222	138

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending August 22, 1901:

BECK, J. E., Hospital Steward. Granted leave of absence for three days from August 13th, under Paragraph 181, of the Regulations.

BERRY, T. D., Assistant Surgeon. Relieved from duty at Cienfuegos, Cuba, and directed to proceed to Louisville and report to the medical officer in command for duty and assignment to quarters.

CARTER, H. R., Surgeon. The leave of absence granted him by Bureau letter of August 16th is revoked.

COBB, J. O., Passed Assistant Surgeon. Granted ten days' extension of leave of absence.

FRANCIS, EDWARD, Assistant Surgeon. Relieved from duty at the Immigration Depot, New York, and directed to proceed to Washington and report to the director of the Hygienic Laboratory for duty.

FRICKS, L. D., Assistant Surgeon. Relieved from duty in the Philippine Islands and directed to proceed to San Francisco and await orders.

GWYN, M. K., Assistant Surgeon. Relieved from duty at Louisville, and directed to proceed to the San Francisco Quarantine Station and report to the medical officer in command for temporary duty; thence to proceed to Manila, Philippine Islands, and report to the chief quarantine officer for duty.

HICKS, W. R., Acting Assistant Surgeon. Granted leave of absence for ten days from August 15th.

STONER, J. B., Passed Assistant Surgeon. Granted leave of absence for seventeen days from September 2d.

TROXLER, R. F., Hospital Steward. Granted leave of absence for one month from August 20th.

WATTERS, M. H., Hospital Steward. Granted leave of absence for seventeen days from September 3rd.

YOUNG, G. B., Passed Assistant Surgeon. Granted eight days' extension of leave of absence from August 22d.

Board Convened.

Board convened to meet in Philadelphia, August 21, 1901, for the physical examination of an applicant for appointment as lieutenant in the Revenue Cutter Service. Detail for the board: Surgeon H. W. AUSTIN, chairman; Assistant Surgeon J. S. BOGESS, recorder.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending August 24, 1901:

BURR, C. R., Assistant Surgeon. Detached from the *Monongahela*, ordered home, and granted one month's leave of absence. His resignation accepted, to take effect at the expiration of that period.

CARPENTER, D. A., Passed Assistant Surgeon. Detached from the *Franklin* and ordered to the Norfolk Hospital, Virginia.

MORGAN, D. H., Passed Assistant Surgeon. Detached from Norfolk Hospital, and ordered to the *Monongahela*.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army from August 17 to August 24, 1901:

BULLOCK, EARL S., Contract Surgeon, is granted leave of absence for one month, to take effect August 20th.

MUSGRAVE, WILLIAM E., Contract Surgeon, will proceed to Hot Springs, Arkansas, for duty.

TEN EYCK, B. L., Captain and Assistant Surgeon, is granted leave of absence for one month, on account of sickness, with permission to apply for an extension of two months.

THOMPSON, LOUIS A., Contract Surgeon, is granted leave of absence for two months on account of sickness.

WHITE, J. SAMUEL, Contract Surgeon, will report for duty as transport surgeon of the Army transport *Meade*.

Changes of Address.—Dr. E. N. Bradley-Byström, from Paris to The Palivista, Dobbs Ferry-on-Hudson, N. Y.; Dr. A. Jacobi, to No. 19 East Forty-seventh Street, New York; Dr. Adolph Rupp, to No. 359 West Thirty-fourth Street, New York.

The Genesee County (N. Y.) Medical Association held its regular quarterly meeting at Batavia, N. Y., on August 14th.

The Arkansas Colored Medical Association closed its seventh annual meeting at Hot Springs, Ark., on August 15th. Members of the profession from all sections of the State were in attendance. Dr. C. M. Wade, of Hot Springs, was re-elected president and Dr. G. W. Hayman, of Little Rock, was elected secretary.

Montclair, N. J., Plans War on Mosquitoes.—The board of health of Montclair, N. J., has given the authorities power to purchase oil to begin the work of exterminating mosquitoes. The stagnant pools and swamp land will be attacked first. The plan adopted by Professor Howard, in South Orange, of pouring the oil on the surface of the water will be adopted.

The Chicago Eye, Ear, Nose and Throat College.—We are informed that this institution has provided for a number of free beds in its hospital for charity cases. The demand for the beds is large and arrangement must be made in advance for allotment of them for use. Members of the profession interested in this subject may communicate with the secretary, Dr. J. R. Hoffman, Trude Building, 67 Wabash Avenue, Chicago.

Honors to an English Military Surgeon.—Surgeon-major-general W. A. Thomson, M. B., who is Honorary Physician to King Edward, has been selected for a good-service pension of one hundred pounds a year. It is nearly fifty years since he received his first commission as an army surgeon. He has served in many parts of the world, and at the time of his retirement in 1892 he was Principal Medical Officer in India. He was appointed Honorary Physician to Queen Victoria in 1895.

The Enno Sander Prize.—The Association of Military Surgeons of the United States announces that the Enno Sander Prize for this year has been increased by its founder so that it consists of a gold medal, valued at \$100, and \$100 in cash. The prize is for an essay, and the subject is The Most Practicable Organization for the Medical Department of the United States Army in Active Service. Information as to the conditions of the competition may be obtained of the secretary, James Evelyn Pilcher, Carlisle, Pa.

The Medical College of the State of South Carolina has established a third year's course in the College of Pharmacy, upon the completion of which the student is to receive the degree of doctor of pharmacy. This added year in the College of Pharmacy will necessitate a change somewhat in the faculty and one of the new professors will be Professor George H. Ashley, who is with the College of Charleston in the chair of biology and geology. Professor Ashley will give a portion of his time to the College of Pharmacy and will lecture on pharmacognosy and botany. The medical college is in a flourishing condition.

Vaccinators Held to be Entitled to their Pay.—Judge O'Gorman, of the Supreme Court, recently handed down a decision holding that the action of the civil service commissioners in refusing to sanction the payment of the forty-five physicians appointed health board inspectors to vaccinate the people of New York was illegal, and that they were entitled to be paid. At the time their pay was stopped, about a month ago, they gave up their duties, but when John B. Sexton, president of the board of health, was notified of the decision, they were immediately reappointed public vaccinators, and were notified to resume their duties. The physicians were taken from the school medical staff, where they were being paid \$60 a month, and were appointed inspectors of the health department at salaries of \$100 a month.

Washington Hospital Ambulances Forced to Reduce their Speed.—Dr. H. L. E. Johnson, the executive head of the Emergency Hospital, Washington, D. C., recently called upon Commissioner Ross in regard to orders received by the hospital authorities from the police department calling attention to the alleged excessive speed of the automobile ambulance. Dr. Johnson stated to Commissioner Ross that the health department, the water department, and the fire department were granted certain concessions in regard to the matter of speed of vehicles, and he thought that by all means these privileges should be extended to the hospitals when their mission is to save human lives. Commissioner Ross told Dr. Johnson that he would take the matter up with Major Sylvester, the superintendent of police. Meanwhile the ambulance is being run at slow speed. It is understood that the matter will be laid before the board of trustees of the hospital, which includes many of the prominent business men of the city, and the surgeons at the hospital believe that they will eventually succeed in having the objectionable order rescinded.

To Test Dr. Koch's Theories in Chicago.—A test of Dr. Koch's theory that bovine tuberculosis cannot be communicated to human beings is about being undertaken under the direction of the Chicago Health Department. Two Chicago physicians, Dr. Adolph Gehrmann, director of the City Laboratory, and Dr. W. A. Evans, of the Columbus Medical Laboratory, have evolved a plan for this test which uses a method apparently overlooked by other scientists as well as by Professor Koch himself. The plan is to make the experiment with skin tuberculosis, lupus. Just as satisfactory a test, it is asserted, can be secured by inoculating the skin of the human being with the bacillus from the animal as could be obtained from experiments with pulmonary tuberculosis and there is no danger of loss of life. Preparations are under way to carry this plan into effect so as to prove or disprove the theory which Dr. Koch announced recently in London. Two persons have already been secured who have consented to be inoculated. An effort was made to secure Dolinski, the condemned murderer, but it failed, the condemned man saying that he preferred the gallows.

Professor Schenck Outlines His Sex Theories.

—At the session of the Zoological Congress at Berlin on August 15th, Professor Schenck, of Vienna, repeated his belief that the sex of an unborn child could be influenced by suitable diet. He said that the diet treatment could only be successfully applied to women, not to men. He added that the question now is at what period the dieting should begin. He suggested that it should be as early as possible. Dr. Schenck declared that he did not seek to adapt his theory to business purposes.

A Medical Degree Offered for \$10.—Governor Voorhees, of New Jersey, has just had laid before him by Dr. J. M. Mitchell, of Red Bank, secretary of the State Board of Health, a fac-simile letter bearing the signature and address, "J. W. Norton-Smith, M. A., Ph. D., S. D., LL. D., President of the Central University of Medicine and Science, 68 Montgomery Street, Jersey City," and containing a confidential offer to confer a degree and diploma on Dr. Mitchell, who seems to have been unknown in his official capacity to the writer, for the special reduced consideration of ten dollars. Governor Voorhees said that if there was no law now or method of procedure sufficient to suppress the scheme, there surely would be soon. In the meantime the public should be advised of the character of the work of the alleged university.

Deaths from Smallpox in New York During July.—There were eighty deaths from smallpox in New York during the month of July. This is shown in the tabulation of the mortality bulletin of the State Board of Health for July, which is now in course of preparation. In Yonkers there were five, and in the rest of the State fifteen, swelling the total to 100. This is the greatest number of deaths in a single month from this disease in the history of the State Board of Health. Of the deaths in New York, eight occurred in Manhattan and seventy-two in the Bronx. The reason for the greater proportion in the Bronx is because cases of smallpox, when discovered, are sent to North Brother Island. For the first six months of this year there were 1,680 cases reported in New York city. In May the cases were most numerous; then they began to drop off, and during August have fallen to about thirty-six cases a week. In the entire State there have been about forty cases a week during this month. All the new cases since the first of the month have been in places where the disease existed in July. This, the State board looks upon as favorable.

The Results of the Abolition of the Army Post Canteen.—Mrs. J. C. Sanford writes to the *New York Times* from Charleston, S. C., where her husband, a captain in the U. S. Engineer Corps, is stationed, that without exception, so far as she knows, the line officers regard the abolition of the army post canteen as utterly ill-advised in every way. Mrs. Sanford states on the authority of the commanding officer at Fort Frémont, S. C., that, within the last six weeks, three soldiers out of a garrison of ninety have died from the effects of the whiskey sold to them by negroes living on the

outskirts of the post. In each case death followed within four hours after the stuff was swallowed, and the symptoms were those produced by violent poisons. This is not at all remarkable, since the liquid imbibed was composed of one part of the cheapest whiskey obtainable, two parts of kerosene, a liberal quantity of extract obtained by boiling tobacco, lesser amounts of red pepper and sulphuric acid, and the rest water. This is the amazing mixture compounded by the negro dive keepers, and sold by them to the soldiers who once patronized the post canteens. Only a week ago, at Sullivan's Island, in Charleston Harbor, there was a murder and quickly following suicide, committed by a soldier driven mad by "whiskey" like this, obtained just outside the military lines. These are direct consequences of the abolition of the canteen, and the evidence concerning them cannot be impugned or denied by clerical committees. Of course they will have no weight with those who, when confronted by a compulsory choice between small evils and great ones, eagerly choose the latter if by so doing they can avoid the dread necessity of admitting that their theories of life are incompatible with its facts, but others will heed the lesson, and even Congress, in time, may muster up enough courage to act upon its knowledge of the army's needs instead of on its fear of political antagonism from the fanatics.

The American Electro-Therapeutic Association will hold its eleventh annual convention at Buffalo on September 24th, 25th, and 26th. This society was the first electro-therapeutic society of any prominence in the world, and is the parent of all such societies. It was founded to determine the exact value of the electric current to be used in medicine and to rescue medical electricity from the domain of charlatanism.

The labors of this association, since its formation, have done much to secure exact therapeutic standards, values and results in illness by the proper use of the current. European and national societies of subsequent formation are in active correspondence with this, their parent association. There is hardly a new method of adoption in the various modifications of the current, or an advanced method of application, that has not come under the judicial and intelligent examination of the society.

The association appoints, out of its membership, committees on induction coils, electrodes, meters, electric light apparatus for diagnosis and X-ray therapy, static machines and condensers, cataphoresis and constant current generators and controllers, and when possible endeavors to secure from manufacturers such uniformity in construction that dosage and application may be trustworthy. This association is national and international in scope and ramification, and annually convenes in the various cities of the United States, on invitation and election. Its officers for this year are: President, Dr. Ernest Wende, of Buffalo; first vice-president, Dr. Frederic H. Morse, of Melrose, Mass.; second vice-president, Dr. D. R. Brower, of Chicago, Ill.; secretary, Dr. George E. Bill, of Harrisburg, Pa.; treasurer, Dr. R. J. Nunn, of Atlanta, Ga.

At the forthcoming convention the association expects to have a very largely attended meeting, at which a full and interesting programme will be presented. The convention will be held in the Armory of the Seventy-fourth Regiment, and the headquarters will be at Hotel Niagara.

Obituary.

THOMAS MASTERS MARKOE, M. D.

By the death of Dr. Markoe the medical profession loses a member who had long been conspicuous as a surgeon and as a teacher. Although not a New Yorker by birth, Dr. Markoe received his medical education here, being a graduate of the College of Physicians and Surgeons, of the class of 1841, in which institution, after having lectured in the Castleton (Vermont) Medical College, he soon became adjunct professor of surgery, and was subsequently made a full professor. Early in his professional career he was appointed one of the surgeons to the New York Hospital, and he served the hospital faithfully and most creditably for many years, giving clinical instruction of a very high order of merit. He continued in active practice almost to the end of his life. He died at his country place, on Long Island, in the eighty-second year of his age.

Dr. Markoe was not a voluminous writer, but his contributions to medical literature were substantial additions to our stock of knowledge. He was the author of a *Treatise on Diseases of the Bones*, published in 1872, which has always been regarded as an excellent work. The most notable of his other writings were an article on Median Lithotomy, published in this journal in 1866, one on "Through-Drainage" in the Treatment of Open Wounds, published in the *American Journal of the Medical Sciences* 1880, and one entitled *Œsophagotomy for Foreign Bodies in the Tube*, which appeared in this journal in 1886. We think he was the first to practise Allarton's operation of median lithotomy in this country; at all events, he was its most prominent advocate. Perhaps his best-known surgical device was a method of draining wounds by what he termed "through-drainage," in which he made extensive counter-openings and kept them open and freely discharging by means of a long wisp of oakum or other fibrous material acting by capillary attraction, which was passed through the entire tract of the wound and was pulled farther in at intervals, so as constantly to present to the traumatic surfaces clean material. Chiefly in an advisory capacity, he took part in the medical service of the Union army in the civil war.

Dr. Markoe's didactic lectures were notable for the precision of his language and the absence of unnecessary words, and the same feature was noticeable in his ordinary speech. But as a teacher he was at his best in the hospital wards and the operating-theatre. He was distinctly a man of artistic feeling, especially fond of music and himself an excellent violinist. He was a genial companion and always a pattern of courtesy. The versatility of his talents and the courtliness of his bearing were well shown when, in the winter of 1863-'64, the medical officers of a Russian squadron anchored in the harbor were

given a reception at the New York Hospital, and Dr. Markoe recited before them an address of welcome which he had written in excellent French. Coupled with his many graces, Dr. Markoe had in perfection the sterner qualities of mind that one needs in order to deal with the ever-changing situations of a medical career. He did his work with skill, dignity, and tenderness, and the world has profited by his having lived.

Births, Marriages, and Deaths.

Born.

CHAMBERLIN.—In New York, on Friday, August 23rd, to Dr. and Edwin C. Chamberlin, a daughter.

GODFREY.—In Brooklyn, on Thursday, August 8th, to Dr. Guy C. M. Godfrey, United States Army, and Mrs. Godfrey, a son.

Married.

BEAUDOIN-BENNETT-MARTIN.—In Hewlett's, Long Island, on Wednesday, August 21st, Dr. Mortimer Roland Beaudoin-Bennett, of Jackson, Michigan, and Miss Jean Martin.

CUTLER-DAVISON.—In Boston, on Saturday, August 10th, Dr. Ephraim Cutter, of New York, and Mrs. Anna L. Davison.

FRAZIER-GARDINER.—In Northeast Harbor, Maine, on Wednesday, August 21st, Dr. Charles Harrison Frazier, of Philadelphia, and Miss Mary Gardiner.

GORHAM-BLACKBURN.—In Caledonia, N. Y., on Wednesday, August 21st, Dr. Fordyce Clark Gorham, of Coudersport, Pennsylvania, and Miss Gertrude A. Blackburn.

MANCHESTER-AUSTIN.—In Cleveland, on Thursday, August 15th, Dr. William Case Manchester, of Alliance, Ohio, and Miss Ida M. Austin.

PARKER-SCHLESINGER.—In Brookline, Massachusetts, on Friday, August 23rd, Mr. James Alfred Parker and Dr. Helen Schlesinger.

WATTERSON-CASANOVA.—In Philadelphia, on Thursday, August 15th, Lieutenant Henry Watterson, Jr., and Miss Blanca Ester Casanova, daughter of Dr. Juan J. Casanova, of Havana, Cuba.

WAXHAM-WELLS.—In Detroit, on Monday, August 12th, Dr. Frank E. Waxham, of Denver, and Miss Alice Elizabeth Wells.

Died.

BOWLSBY.—In Brooklyn, on Monday, August 26th, Dr. William H. Bowlsby, in the seventy-third year of his age.

BUTLER.—In Harrisonburg, Virginia, on Sunday, August 18th, Dr. William W. S. Butler.

COOPER.—In Galesburg, Illinois, on Thursday, August 15th, Dr. E. Sterling Cooper.

DANA.—In Bronxville, N. Y., on Thursday, August 22d, Dr. Alfred S. Dana.

DAY.—At Iona Island, N. Y., on Tuesday, August 27th, Dr. George H. Day, in the sixty-ninth year of his age.

DOWNS.—In Kansas City, Kansas, on Tuesday, August 13th, Dr. Henry M. Downs.

HOWARD.—In Fairmont, West Virginia, on Monday, August 19th, Dr. James Howard, Jr., of Masontown, Pennsylvania, in the twenty-fourth year of his age.

MARKOE.—In East Hampton, Long Island, on Tuesday, August 27th, Dr. Thomas Masters Markoe, of New York, in the eighty-second year of his age.

MORGAN.—In New York, on Monday, August 19th, Dr. Edward F. Morgan.

TURNER.—In Mackinac Island, Michigan, on Tuesday, August 20th, Dr. Thomas J. Turner, United States Navy, retired, in the seventy-first year of his age.

VON DER LUHE.—In Brooklyn, on Saturday, August 24th, Dr. Margaretha B. Von der Luhe, in the seventy-third year of her age.

WARREN.—In Macon, Mississippi, on Tuesday, August 13th, Dr. Mark M. Warren.

Pith of Current Literature.

Philadelphia Medical Journal, August 24, 1901.

Slow Pulse, with Special Reference to Stokes-Adams Disease. By Dr. Robert T. Edes.

The Intimate Action of the Silver Nitrate Injections in the Treatment of Phthisis. By Dr. Thomas J. Mays.—The author concludes that the mechanism of the silver nitrate injections is of such a nature that it arouses the vagi from a feebleness to a more vigorous station, and that in this way they create an antagonism to disease which diffuses itself throughout the extensive ramifications of these nerves.

Peliosis Rheumatica. By Dr. T. Avery Rogers.—The author reports a case. The disease was first described by Schönlein. The report seems to indicate that, in some cases at least, the cause is a systemic infection from the presence of a pyogenic focus.

Is the Central Fissure Duplicated in the Brain of Carlo Giacomini, Anatomist? A Note on a Fissural Anomaly. By Edward Anthony Spitzka.

The Foundation of Faith in Medicine. By Dr. A. W. Crane.

Journal of the American Medical Association, August 24, 1901.

Pernicious Anæmia. Report of the Progress of Cases Presented to the Association in 1900, and Report of a Case with Diffuse Spinal Cord Lesions, and Post-mortem Findings. By Dr. Frank Billings.

The Value of Conservative Treatment of the Uterine Appendages as Observed in the Later Results of Resection of Ovaries and Opening of Tubes in Ninety-seven Cases. By Dr. A. Goldspohn.—The author believes that it will be difficult for any operator, from his own entire experience, to find one hundred consecutive cases in which he has removed both ovaries, with or without the uterus, where approximately eighty-five per cent. will be found to be as free from pain and from distressing nervous and circulatory disorders, and to enjoy as good general health as that proportion of the cases he mentions. Pregnancy occurred in ten per cent. of the cases, and in the absence of wilful pernicious interference, its normal termination was substantially assured in all except one case.

Puerperal Eclampsia. By Dr. T. J. Beattie.—In this matter the prophylactic treatment is of the greatest importance. It is the physician's duty in assuming charge of a case of pregnancy to keep himself informed of the patient's general condition. Hygienic measures embrace moderate outdoor exercise, good food, frequent bathing, and watching the action of the kidneys, liver, skin, and bowels. Examinations of the urine should be made often enough to keep one informed of its specific gravity, whether there is a diminished elimination of urea.

Cæsarean Section as a Method of Treatment for Placenta Prævia. By Dr. William J. Gillette.

—The author believes that Cæsarean section, if generally adopted for placenta prævia, will reduce the fearful mortality which we now have, to at most ten per cent. The classical section can be adopted where the uterus contracts firmly, where there is no probability of infection, and where the patient is in a condition to withstand the shock necessitated by a prolonged operation; but, on the other hand, where the uterus does not contract firmly, thus rendering further hæmorrhage and sepsis probable, or the patient is unable to withstand additional shock, then the Porro-Cæsarean section is the only procedure warranted.

The Chemical and Microscopic Examination of Blood. By Dr. W. D. Kelly.

Leucocyte Counts in Hæmorrhage. By Dr. George Douglas Head.—In dogs a diminution in the number of white blood cells in the circulating blood immediately follows a profound hæmorrhage. This initial leucopenia is followed, sooner or later, by an increase in the number of leucocytes in the circulating blood. This is the so-called post-hæmorrhagic leucocytosis of all writers. This leucocytosis of hæmorrhage continues for at least seven days, and in some cases longer. The author believes that what he has demonstrated in dogs will prove to be true also for human beings.

The Antenatal Treatment of Hæmophilia. By Dr. J. W. Ballantyne.

The Prevention of Pulmonary Tuberculosis in Predisposed Children. By Dr. John A. Robison.

Tuberculosis of Animals in Some of its Relations to Human Tuberculosis. By D. E. Salmon, D. V. M.

Relations of Hyperchlorhydria to "Bilious Attacks," Some Forms of Eczema, Gout, and Muscular Rheumatism—Preliminary Report. By Dr. Graham Chambers.

Uric Acid Inflammations of the Middle Ear, Membrana Tympana, and Mastoid. By Dr. Cornelius Williams.

American Medicine, August 24, 1901.

An Ideal Colony for Epileptics, and the Necessity for the Broader Treatment of Epilepsy. By Dr. William P. Spratling.—The author, in a valuable article, gives, not only his own ideas, but also those of others, and he refers to epileptic colonies where these ideas are carried out. When every State shall have established a colony for epileptics, planned, built, and maintained on model principles, then the entire American people may feel justifiable pride in having provided for contraction instead of expansion in its territory of human suffering. He expresses the hope that the time may come when the federal government itself will be justified in establishing such a colony, open to all, irrespective of race, section, political bias, or religious creed for whoever fought at any time under its flag.

Cerebral Concussion, With Retinal Changes. By Dr. L. A. W. Alleman.—The author believes that, in the event of severe direct trauma, the ex-

planation offered by Berlin, of ciliary hemorrhage, may be correct. He is not able to accept irregular lenticular astigmatism, however, as an explanation of the visual impairment. We must confess a comprehensive ignorance of the causation of retinal concussion.

Indications for and against Total Removal of the Human Stomach. By Dr. George Childs-MacDonald.—The author would limit the operation to men under fifty-five, and to women under sixty, years of age. A high percentage of white cells would certainly be an unfavorable prognosis for surgical intervention. The absolute integrity of the heart must be considered. Other things being equal, working men and women furnish a more favorable prognosis than those who follow a sedentary occupation. We must be certain that there is a gastric cancer. The most favorable indications are a moderately dilated viscus with a freely movable tumor situated to the right of the median line.

The Outlook of the Medical Man To-day. By Dr. John Milton Dodson.—An address to the graduating class of Rush Medical College, at the end of the winter quarter, 1901. To the young man who is ambitious for a career which will gratify a high ideal of success, which will bring him contentment and the satisfaction of good work well done, no profession offers a more inviting field to-day.

Statistical Note Concerning the Contagiousness of Tuberculosis Pulmonalis. By Dr. E. L. Shurly.—A series of one hundred and thirty cases is considered. Nine are doubtful. Of the one hundred and twenty-one remaining cases, there is a possibility of nine only having originated through ordinary natural communicability, while, upon further analysis, there is a possibility that five only so originated. Of the one hundred and thirty cases, one hundred and twelve were immediately preceded by some acute or subacute disease.

Carcinoma of the Breast. By Dr. Carl V. Vischer.—The author believes that in multiparæ, past the age of lactation, it would be far safer to remove all breasts which are the seat of neoplastic formation. In breasts that have had abscesses, any enlargement should be sufficient cause for their removal.

Peculiar Nervous and Urinary Manifestations Following La Grippe in the Aged. By Dr. D. P. Kernodle.—The author finds that aged persons suffer more violently from grippe than younger and more vigorous persons; the manifestations are more marked and profound in the aged, and never entirely disappear; nephritis and urinary disturbances are more pronounced and lasting, and there is a more decided tendency to recurrence, resulting in death.

Medical Record, August 24, 1901.

The Prognosis of Traumatic Hysteria, Based upon the Subsequent Histories of a Number of Litigated Cases. By Dr. Pearce Bailey.—The chances for recovery from traumatic hysteria in a previously healthy person, not over thirty-five

or forty years of age, are generally very good, but are not absolutely certain. With increasing age the prognosis becomes rapidly worse. The exact definition of the word "recovery" in this sense is hard to give. It is diametrically opposed to the teachings of psychology to suppose that a fixed idea, which has persisted for several months or years, can vanish immediately without leaving a trace. If immediately after an accident a patient could be isolated, and could be cared for by a physician who understood the significance of the symptoms and the best way of treating them, we should hear very little of persisting traumatic hysteria.

Infantile Typhoid Fever. By Dr. August Adrian Strasser.—The author gives two cases of "infantile typhoid fever." Interest attaches to them because of their comparative novelty and the alleged infrequency of their occurrence. In one case the diagnosis was corroborated by bacteriological investigation; in the other, although the Widal test was negative the first time, the clinical manifestations of the disease were beyond dispute.

A Series of Mastoid Operations. By Dr. Charles H. May.—The author reports eight cases in no wise unusual, but interesting as being illustrative of what Schwartze and others have pointed out—that in a great many cases one cannot be certain of the exact findings, even when the indications for opening the mastoid are pronounced.

The Zoological Distribution of Tuberculosis. By Dr. Woods Hutchinson.—Altogether, the conclusion to which the author's preliminary survey of the question of the distribution of tuberculosis points is that it is a matter of vigor, endurance, and resisting power, rather than of race, food, or exposure to infection; and as these powers are usually higher in flesh eaters than in vegetable feeders, the former possess a marked relative immunity.

Bifocal Lenses; What Area Shall be Devoted to the Shorter Focus? By Dr. John E. Weeks.

Medical News, August 24, 1901.

Further Notes upon the Diagnostic Test of Tuberculin. By Dr. Edward O. Otis.—The author presents thirty-five cases of the tuberculin test in syphilis. The smallest amount of tuberculin used was two milligrammes, the largest, ten milligrammes. There were six undoubted reactions, and five "abortive" reactions, in which there were symptoms of a reactive nature, but which could not be called genuine reactions. In twenty-six cases of suspected or proved tuberculosis the results were disappointing, and the author says that when a case of tuberculosis not far beyond the incipient stage, with tubercle bacilli in the sputum, fails to react, one's confidence in the test is apt to be shaken. It is well to bear in mind, however, that in all such investigations there is always a chance of error, and as yet we do not know what the minimum efficient dose is—not unlikely it may vary for each individual. One thing is certain—that up to ten milligrammes, there is no injurious result to be feared.

A Study of Burns, with a Plea for Their More Rational Treatment. By Dr. Frederic Griffith.—Burns are the commonest of injuries, and of all wounds they are treated least in accordance with now universally taught and accepted surgical principles. The pathology of burns is the pathology of inflammation of the part locally affected with almost all the morbid changes possible in the complications which result. Early death and internal complications after burns are due to the direct action of heat, with fragmentation and vital changes in the blood corpuscles; later effects are due to infection taking place from the burned area. The condition of the granulations during the healing of burns is the determining factor in the amount of contraction and subsequent deformity which takes place. Friction, caused by irritation from any source, is an unfavorable influence. The burn wounds should be cleansed of as much dead, burned tissues as possible. Hydrogen dioxide is the best antiseptic at our command. Rubber tissue in strips should be laid on the wound, to prevent contact with the absorbent dressing. The use of splints to secure relaxation and retention in obtaining rest for a burned part is of much importance. The internal treatment of burns should be stimulating until reaction from shock has taken place, when it should become supporting. Opium fulfils the indications for pain, internal inflammations, and diarrhœa. The bowels and kidneys must be continuously kept open, but enemata only should be employed. Watchful attention must be paid for early signs of internal complications of the viscera.

Carbolic Acid in Burns. By Dr. Otto L. Muench.—In the three reported cases, the author has met with encouraging results from the use of carbolic acid in burns. He finds that, in burns treated in this manner, there is complete exclusion of air and coagulation of the serous effusions, and the healing process takes place with much less suffering and in a shorter time than by any other method.

Inertness of Petroleum Compounds when Given Medicinally. By Dr. Robert Reyburn.

Strangulated Hernia of the Bladder; Ruptured Sarcoma of the Testis Mistaken for Strangulated Hernia. By Dr. Thomas H. Manley.

Boston Medical and Surgical Journal, August 22, 1901.

Some Surgical Lessons from the Campaign in South Africa. By Dr. Sir William Thomson.—The address in surgery at the annual meeting of the British Medical Association at Cheltenham, July-August, 1901.—The author notes that whereas in the American Civil War of forty years ago, the killed were eighteen per cent. of those hit, in the recent war in Cuba the killed were only eleven and nine-tenths per cent. of those hit, and the proportion in the South African campaign indicate that, of those hit, fourteen and eight-tenths per cent. were killed. However, the world is still without experience of what would happen with great bodies of men handled according to European methods, as in the Franco-German war.

Extreme rapidity of repair was characteristic, in the recent wars, of all wounds of the soft parts. While it is not probable that asepsis was secured, as some contend, by the heat generated in the bullet itself, the author has no doubt that the bullet received a thorough cleaning in the rifle, and, practically, penetration was effected by a piece of clean very hard metal. The early application of the first dressing also contributed to the rapid repair, which was further aided by the climate, high temperature, and a dry atmosphere particularly free from germs hostile to the surgeon's work. As for wounds of bones, the greater the velocity, the greater the destruction. The cancellous tissue presented a more or less elastic obstacle to the bullet and yielded to the impact, but, in the case of the shaft, much of the force of impact was expended in breaking the denser obstruction into minute pieces. The author speaks very favorably of the services of the Royal Army Medical Corps, and he points to the fact that, of all branches, including orderlies and nurses, nearly four hundred medical helpers have fallen victims to their labors.

Treatment of Delirium Tremens. By Dr. J. Frank Perry.—The author considers delirium tremens one of the easiest of the apparently grave affections to manage, and, when uncomplicated and intelligently treated, recovery ought to occur within forty-eight hours, and the victim be not only out of bed, but below stairs and out of doors if the weather permits. The nearest approach to a sure premonitory symptom is the continuous dilatation of the pupils for about twenty-four hours before delirium commences. The alcohol should be withdrawn gradually. Sleep must be induced. Chloral hydrate holds first place, but is contraindicated when the heart is weak. Hyoscine hydrobromide is effective, but it should be used with caution; a much safer remedy is musk, and in desperate cases, its prohibitive cost should not be seriously considered. Force should be used in extreme cases only, to restrain the patient, and the attendant should ever be cool, firm, and fearless.

On the Effect of Alcohol. By Dr. H. G. Beyer.—The author refers to experiments proving that the influence of alcohol is exerted through the nervous system. He disapproves of the serving of alcohol to soldiers or sailors in regular rations, and he brings forth facts to prove that the endurance of fatigue improves markedly when the use of alcohol is abolished.

The Management of Delirium Tremens, with the Report of a Case. By Dr. V. A. Ellsworth.

Myomectomies for Fibroids During the Child-bearing Period. By Dr. W. H. Baker.

The Lancet, August 17, 1901

The Diagnosis and Surgical Treatment of Carcinomatous Stricture of the Colon. By W. J. Walsham, F. R. C. S. Eng.—The author states that the common form of carcinoma of the colon, viz. the columnar-celled, is of comparative benignity, and may remain for considerable time a purely local disease limited to the wall of the bowel, and therefore that its early diagnosis is of

great importance. The symptoms which should arouse suspicion of carcinomatous stricture in the early stage are: (1) Indefinite symptoms of abdominal disturbance; (2) attacks of pain or spasm referred to the colon, having no special connection with the time of taking food; (3) nearly always liquid stools with rarely a formed motion; (4) slowly progressive loss of weight; and (5), constant desire to defecate. If the growth has been discovered, either by palpation, or exploratory incision, before obstruction has taken place, it may be removed at once, and the ends of the bowel united. In cases of acute obstruction, the author advises, first the formation of an artificial anus, and then, when the patient has recovered from the immediate effects of the intestinal obstruction, he says that the growth may more safely be removed. Several successful cases treated in this manner are reported.

Sero-therapeutics of Plague. By John Brownlee, M. A., M. D. Glasg.—The author reports seven cases of plague occurring in Glasgow, which were treated with injections of Yersin's serum received from the Pasteur Institute in Paris. Of these seven cases, three recovered and four died; one of the patients, however, did not come under treatment until the fourth week of the disease.

A Case of Primary Hæmorrhagic Otitis Media. By H. J. Curtis, B. S. Lond., F. R. C. S. Eng.—The author reports a case of severe hæmorrhage from the left ear in a healthy young woman thirty-five years of age, following in about six hours after the onset of noises and excruciating pain referred to the occipital region. There had been no previous history of exposure to cold, ear-ache, or otorrhœa. The pain was somewhat relieved by the discharge of blood, but continued for sixteen days. Examination of the left membrana tympani at that time showed a large perforation and a blood clot. The treatment consisted in gentle syringing with warm boric-acid solution. Several attacks of headache and giddiness occurred subsequently, but at the end of ten months from the first attack the patient was well, and hearing was normal on both sides.

Experiments with the Danysz Rat Bacillus. By E. Klein, M. D., F. R. C. S., and Herbert Williams, M. D. Lond., D. P. H. Cantab.—These experiments, conducted both in the laboratory and in warehouses, showed that, while this bacillus was very fatal to rats when injected subcutaneously, it did not possess a high degree of virulence when the rats were fed with substances containing it.

A Case of So-called "Fœtal (or Congenital) Rickets." By Hone Acland, M. D., F. R. C. P. Lond.

A Case of Typhoid Fever with Relapse; Perforation and Operation. By G. Thornton, M. D. Edin., M. R. C. P. Lond., and Herbert J. Godwin, M. B., B. S. Durh., M. R. C. S. Eng., L. R. C. P. Lond.—In the case reported, the relapse occurred fifteen days after the temperature had been normal, and was typical, with a fresh crop of rose spots. Six days after perforation occurred on

the eighteenth day of the relapse, and an operation was performed within two hours under local anæsthesia by the use of cocaine without pain. There was no peritonitis, but a small perforation was found. This was closed and the patient did well except for a severe bronchitis, which caused death on the eighth day after the operation. The sutured portion of the gut was found to be both water-tight and air-tight, and there were no signs of peritonitis. The lungs showed a hypostatic pneumonia.

The Comparative Virulence of the Tubercle Bacillus from Human and Bovine Sources. By Mazyck P. Ravenel, M. D.—The author, after a long series of carefully conducted and exhaustive experiments, has reached the following conclusions: 1. That the tubercle bacillus from bovine sources has, in culture, fairly constant and persistent peculiarities of growth and morphology, by which it may tentatively be distinguished from that in man. 2. That cultures from the two sources differ markedly in pathogenic power, affording further means of differentiation, the bovine bacillus being very much more active than the human for all species of experimental animals tested, with the possible exception of swine, which are highly susceptible to both. 3. That tuberculous material from cattle and from man corresponds closely in pathogenic power to pure cultures of the tubercle bacillus from the two sources, for all animals tested. 4. That it is a fair assumption from the evidence at hand, and in the absence of evidence to the contrary, that the bovine tubercle bacillus has a high degree of pathogenic power for man also, which is especially manifest in the early years of life.

Atypical Empyema in General Practice, with Illustrative Cases and Critical Notes. By C. C. Baxter Tyrie, M. B., M. C. Edin.

An Improved Method of Photographing Pathological Specimens. By J. Effie Prowse, M. B., Ch. B. Glasg.—The author mentions the difficulty of obtaining satisfactory photographs of pathological specimens in the ordinary manner, and states that the disadvantages may be removed by photographing all specimens "under water." This is accomplished by having the camera fixed vertically, the lens down, and placing beneath it the specimen in an open glass jar with plain bottom and straight sides, and of sufficient depth to allow the specimen to be covered with water. The water must be perfectly clean and free from air bells.

British Medical Journal, August 17, 1901.

Enteric Fever: Its Natural History, Modes of Dissemination, and Prophylaxis. By A. C. Houston, M. B., D. Sc.—This paper, which opened the discussion upon enteric fever before the Section of State Medicine at the sixty-ninth annual meeting of the British Medical Association, reviews the experimental work that has been recently done to isolate the typhoid bacillus and determine its presence in sewage, soil, water, and various articles of food. From these experiments, and by logical inference, it has been absolutely

proved that the disease may be transmitted by water, milk, and shell fish propagated in water polluted by sewage containing typhoid organisms.

The spread of the disease by means of contaminated air may be considered to be extremely doubtful.

The author thinks that, while it is doubtful if a "non-sporing bacillus," such as the *Bacillus typhosus*, can remain dormant for long periods in the form of dust, yet it is probable that, when food or drink is contaminated by dust from excreta particles of soil or the "fluff" of soiled linen of comparatively recent origin, the disease may be propagated. It has not yet been shown how far flies, insects, and vermin may convey contagion, but under certain circumstances the danger is probably a real one.

Experiments have shown that the urine of typhoid patients contains enormous numbers of bacilli and asserts that this is a very fruitful source of contagion.

Under the head of prophylaxis the results from the preventive inoculation with Wright's vaccine are stated to have been encouraging in India.

It has been demonstrated that urotropine will destroy the typhoid bacilli in the urine, and its use in thirty-grain doses daily throughout the disease is advocated.

Sand filtration for water merely lessens the danger, and absolute protection is only obtained by sterilization or filtration through a filter of the character of the Pasteur-Chamberland filter.

Vital Statistics of Enteric Fever. By F. A. Dixey, M. A., M. D.—A summary of this paper by the author is as follows: 1. "The death-rate from enteric fever in London is a fluctuating one, but has, on the whole, materially diminished, the most marked descent having occurred about sixteen years ago. 2. The seasonal relations of enteric fever remain fairly constant from year to year, but there seems to be a tendency, at least in years of low general prevalence, toward a progressive flattening of the autumnal maximum. 3. A comparison between London and New York in respect of their climate and enteric death-rate, indicates that some meteorological conditions, especially perhaps temperature, are factors in the activity of the enteric infection. The relation, however, is not of such a kind as to make itself apparent from year to year in one given locality. 4. It is probable that the diminution in the death-rate of enteric fevers is really somewhat greater than it appears to be, from the inclusion in former times of enteric cases under other heads, notably typhus and simple continued fever. This source of error, however, was never very important, and is now practically non-existent. 5. The case mortality of enteric fever is almost stationary, and seems likely to remain so."

Neutral Red in the Routine Bacteriological Examination of Water. By William G. Savage, B. Sc., M. D. Lond., D. P. H.

Notes on Arsenical Beers Recently Examined. By J. A. Wanklyn, M. R. C. S.

A Discussion on Diseases of Occupations.—I. General. By T. M. Legge, M. A., M. D. Oxon., D. P. H. Camb.

II. *Chronic Brass Poisoning.* By William Murray, M. A., M. D.

III. *Glass Polishing.* By H. D'Arcy Ellis, L. R. C. P.

IV. *Railway Work.* By Alexander Scott, M. D.

V. *The Causation of Phosphorus Necrosis.* By W. F. Dearden, M. R. C. S., L. R. C. P. Lond., D. P. H. Vict.

VI. *Infant Mortality and the Employment of Malarial Women in Factories.* By George Reid, M. D., D. P. H.

VII. *Plumbism Cases in Carriage Works.* By C. A. Greaves, M. B., LL. B.

Port Sanitary Administration and the Control of Plague in the Port of Bombay. By P. Targett Adams, M. R. C. S., D. P. H.—The author, who was Assistant Port Health Officer of Bombay, gives in detail the method of supervision and disinfection for the crews of vessels departing from Bombay, their luggage, bedding, etc., and states that it has been very successful in preventing the spread of plague from that port. The author believes that such cases as have occurred in ships leaving Bombay have been due to infected clothing, which has been smuggled in in spite of all precautions, and not to rats, which he considers of secondary importance in the spread of plague.

Fallacy of the Permanganate Disinfection of Wells (Hankins Method). By M. L. Dhingra, M. D., D. P. H.—The author, who has conducted a series of experiments upon the wells in India, does not believe that the introduction of two or three ounces of potassium permanganate into a well can produce any result in diminishing the number of cholera vibrios.

Gazette hebdomadaire de médecine et de chirurgie, August 8, 1901.

Total Hysterectomy for Uterine Rupture.—M. Cornelius Cristeanu has three times performed this operation without a single death. Comparing this method with the others in which the mortality is from thirty to fifty-six per cent., he naturally advocates it. It must be done as soon as possible after the accident. The foetus must be extracted through the abdominal wound, if it has entered the peritoneal cavity. The Trendelenburg position is then resorted to, total hysterectomy is performed, the peritonæum is sutured after perfect hæmostasis is secured. Saline infusions are done before, during, and after the operation. The uterine artery on the injured side must be tied. If it cannot be found easily it must be searched for in the depths, or failure to discover it must result in ligating the hypogastric artery on the same side.

August 11, 1901.

Acute Post-operative Thyreoidism.—M. Thévenot says that the phenomena of thyreoid intoxication following removal of the gland are a hyperthermia (103° to 104° F.), without any disturbance of the general condition, the temperature returning to normal in from eight to ten days and an unusual acceleration of the pulse with nor-

mal characteristics. An important element appears to be the relation which exists between these phenomena and the extent of injury to the gland during the operation. Symptoms of depression or convulsions may appear, as in the case reported. The author regards these signs as those of a "pseudo-Basedowism."

The Pulse and Arterial Tension in Small-pox.—M. Cotte says that the pulse in small-pox is rapid during the stage of invasion and becomes very markedly so in the suppurative stage. The pulse and the temperature usually run a parallel course. Arrhythmia is sometimes seen, but appears to have no special significance. Dicrotism may or may not be present. An anacrotic pulse is a great exception. The tension is always lowered even during convalescence, but the tension is in no way indicative of the prognosis. In children the very rapid pulse offers no criterion as to the outcome. In them, the blood pressure is almost impossible to determine on account of the œdema of the tissues.

Wiener klinische Wochenschrift, July 25, 1901.

Antilytic Sera. By Dr. Julius Donath and Dr. Karl Landsteiner.

Pathology of the Omphalo-mesenteric Duct.—Dr. Ernst R. von Karajan reports a case of persistent omphalo-mesenteric duct with occlusion at the umbilicus which resulted in an inflammation of the diverticulum and intestinal obstruction; another of a Meckel's diverticulum which became attached to the omentum of the large intestine resulting in an internal incarceration; and a third case in which a Meckel's diverticulum became attached to a hernial sac.

August 1, 1901.

Respiratory Excretion of Chloroform.—Dr. Konrad Büdinger shows by his examinations that chloroform is excreted by the lungs for a considerable time after the narcosis. In one case it could be found forty-eight hours after the operation. A distinct relation between the quantity used during anæsthesia and the amount found in the expired air could be demonstrated. The author thinks it likely that the chloroform may be held, in part, in the lungs by the mucus.

Hæmagglutinines in the Milk.—Dr. Rudolf Kraus demonstrates by his experiments that immunizing hæmagglutinines are excreted by the milk, but the immunizing hæmolysines are not excreted by the breasts or the kidneys. The latter are, however, transmissible from mother to child. The former are not passed from mother to child during nursing.

Case of Aneurysm of the Aorta. By Dr. Anton Krokiewicz.

Münchener medicinische Wochenschrift, July 30, 1901.

Dilatation of the Retinal Vessels. By Dr. C. Fürstner.

Vaginal Puncture and Incision.—Dr. K. Franz recommends vaginal aspiration of tumors lying

in Douglas's cul-de-sac. If the fluid obtained by aspiration will not run through the needle, incision is advised by drawing the cervix forward thus putting the posterior vaginal wall on the stretch. Drainage with a drainage tube and iodoform gauze, with irrigations every three or four days, complete the treatment. Recovery is the rule in from two to three weeks.

Specific Blood Changes after Injections of Urine. By Dr. A. Schattenfroh.

Iso-agglutinines and Isolysines. By Dr. M. Ascoli.

Urinary Infiltration in Labor.—Dr. F. Horn reports a case of a woman in long labor in whom the foetal head caused a vesico-vaginal fistula. There was a simultaneous urinary infiltration throughout the entire pelvis, which the author attributes to a communication of the bladder with the uterus, which was infected. Death resulted with deep sepsis and necrosis of the pelvic bones.

A Case of Chronic Acid Poisoning.—Dr. Hans von Bæyer records a case of accidental chronic acid poisoning. There were dryness of the mouth and vomiting, præcordial pain, colic, and diarrhœa, followed by depression, dyspnœa, and slowness of the pulse. Later, there was swelling of the tongue and pharynx which were of a yellowish color. Greenish vomiting with some blood took place, diarrhœa became more intense, great prostration and thirst were noted, and intense pain in the abdomen and lumbar region appeared. A rise of temperature, collapse, and oliguria closed the scene.

Hygiene in Ancient, Papal, and Modern Rome. By Dr. Oscar Schwartz.

Centralblatt für Chirurgie, July 20, 1901.

Safe and Simple Operation for Prolapse of the Uterus. By Professor Duhrssen.

Toxicity of the Urine.—Dr. Alfred Gænner has conducted some experiments in this direction. He finds that the urotoxic coefficient of the urine of eclamptic women is much reduced. This would correspond to the belief now generally held that the toxic element of eclampsia is concentrated in the blood. In his experience, in favorable cases, the toxicity of the urine increased as the patient progressed toward recovery.

Wiener klinische Rundschau, July 7, 1901.

Biological Differentiation of Blood.—Dr. Ivan Honl says that by the injection into an animal of human blood or that of another animal, an anti-serum can be produced which will cause precipitation of the latter. This antiserum can be used for the certain diagnosis of the blood of different species. The normal serum of the same species does not cause, in physiological solution, a precipitation.

Pneumonotyphoid (conclusion). By Dr. Adolf Hoff.

Berliner klinische Wochenschrift, July 27, 1901.

Cystoscopic Experiences.—Dr. B. Goldberg says that it is advisable, when abnormal urethras are met with, to anoint the end and bend of the cystoscope with olive oil as well as glycerin, to facilitate its introduction. Bladders which contract too readily, should first receive an injection of a drachm of a five-per-cent. solution of anti-pyrine, and this should be left in for from ten to twenty minutes in case subsequent irrigation is to be undertaken. When hæmaturia, tumors, or tuberculosis is present, an injection of a weak solution of silver nitrate should always follow the examination.

Riforma medica, July 10, 11, and 12, 1901.

Gastro-enterostomy in Bilocular Stomach. By Dr. Attilio Frada.—Bilocular stomach (*stomaco a clepsidra*; *estomac en bissac*), is a rare condition, and the author reports a case which was operated on by Tricomi, who performed, in 1898, the first gastro-enterostomy by Roux's method on a patient with bilocular stomach. The author recapitulates the collections of cases of bilocular stomach in literature, and finds that altogether there are 154 cases of this kind on record. He gives the histories of two cases operated on by Tricomi, and previously reported, and of one new case. This was that of a woman, aged forty years, whose present illness began ten months before admission. She complained of pain in the epigastrium, radiating toward the spine; of a sense of fulness after meals, and of the regurgitation of acid material. Her pain was worst immediately after eating, became better after the eructations, and ceased on vomiting. She could support nothing but liquids, and even these were vomited soon after ingestion. There never had been any hæmoptysis. On examination she was found to be emaciated and her stomach tube dilated. Chemical examination of the contents showed free hydrochloric and lactic acid. The diagnosis was simple gastric ulcer. The actual condition was only discovered on operation. The stomach was divided into two cavities, like a sand-glass, the partition extending from the small to the large curvature. The upper sac was larger than the lower, and the opening of communication was sufficiently large. Gastro-enterostomy by Roux's method, with two Murphy's buttons was performed, amastomosing the jejunum with the most dependent portion of the cardiac portion. The patient made a good recovery. Of the 154 cases on record, 43 were congenital and 101 acquired, so that the latter form is much more frequent. No efficient methods of diagnosis have as yet been formulated for bilocular stomach, and inflation is not at all a conclusive method of testing for the presence of this condition. The surgical treatment is the only one that can give good results, and the statistics, so far, are very favorable to a good prognosis. Of 24 patients operated on, 22 recovered and two died. The best method is, without doubt, gastro-enterostomy.

July 13, 1901.

On the Physiology of the Orbital Lobe. A Preliminary Note. By Dr. Luigi Ferrannini.—

Very little is known concerning the functions of the orbital lobe, and the results obtained by various investigators vary greatly as regards its significance. The author has undertaken to study the question whether the orbital lobe is to be regarded as an important part of the olfactory centre, or as a cortical centre of the other special senses. For this purpose he removed the orbital lobe in dogs by trephining in the temporal region and scraping the lobe away with a small Volkmann spoon. The dogs usually bore the operation well. After they had recovered from the shock of the operation, their eyes were tied and one nostril was plugged with cotton. They were then given an alcoholic solution of thymol, pieces of meat and cheese, and pieces of coal and wood to smell. The sense of taste was tested by touching the gums of the dogs with a solution of quinine; it was found that dogs did not leave uneaten pieces of meat saturated with a solution of quinine or thymol. Each eye was bandaged alternately, the nostrils were plugged, and, by presenting pieces of meat to the dog, one could determine the sense of sight. In seven dogs thus tested, the results were as follows: No alteration in vision, and a marked diminution in the sense of smell on the side of the lesion. As regarded the sense of taste the author found that in some dogs no reaction was obtained by the application of quinine to the gums on the side of the lesion. In the others the sense of taste gradually disappeared on the side of the lesion. There were also paralytic phenomena in the forward extremities of these dogs on the side opposite to the lesion, but in all cases these were only temporary. The author is now engaged in a histological study of the changes produced by the operations.

Gazzetta degli Ospedali e delle Cliniche, July 14, 1901.

Experimental Researches on the Utility of Adding an Antiseptic Substance to the Serum-gelatine Used in Hæmostasis. By Dr. Enrico Giordano.—The author studies the question indicated in the title and concludes that the ordinary serum-gelatine which is now used for the purposes of hæmostasis is a very good culture medium for pyogenic germs, though not so good as broth-gelatine. He recommends the addition of 1:3000 corrosive sublimate.

A Case of Multiple Cysticercus of the Brain. By Dr. Agostino Rizzo.—In this case there were no symptoms that pointed to the existence of cysticerci in the brain.

Ankylostoma and Pellagra. By Dr. G. Piseni and Dr. S. Mandolesti.—The endemic erythematous affection of Italy, pellagra, is often accompanied by grave anæmia. The authors found in the fæces of pellagrous patients numerous eggs of the *Ankylostoma duodenale*. A number of observations convinced them that the anæmia of pellagrous patients depended usually upon the presence of ankylostoma.

Injections of Mercurialized Artificial Serum in Severe Syphilitic Infection. By Dr. G. Franceschini.—This form of treatment is indicated, according to the author who devised this method,

in certain selected cases of tertiary syphilis. He recommends daily injections of small quantities of artificial serum in which therapeutic doses of mercury have been dissolved. The quantity of serum varies between 10 and 50 grammes, and the author believes that the mercury has a more prompt and energetic effect when given in this manner. He has found that the therapeutic effects of mercurialized serum are far more marked than those of the analogous injections of corrosive sublimate. The combination of artificial serums with mercury represents the union of a well-known general reconstructive agent with the specific remedy for syphilis. The author reports the histories of ten illustrative cases.

The Harmlessness of Intramuscular Injections of the Bichloride of Quinine in Malaria. By Dr. Giovanni Setti. As the result of his clinical experience, the author concludes that intramuscular injections of quinine are perfectly harmless, and are not fraught with danger as Bluemchen would have it. This method of administration is not indicated in the ordinary cases of malarial fever, but in those in which there is an urgent need for energetic treatment. The technics of these injections is very simple, and the solutions in distilled water are easy to keep. Small quantities of solutions, however, should be ordered at a time. The amount of pain and of local reaction following the injection varies with the individual as well as with the muscle or group of muscles, just as in the injections of other drugs. In exceptional cases only (five per cent.), there are local swellings, which soon disappear and are of no greater severity than those produced by the injection of any other drug in general use.

Vratch, July 7 (July 19, New Style), 1901.

On Rupture of the Uterus During Labor and its Treatment. By V. N. Orloff.—The author reports two cases of incomplete, and four cases of complete, rupture of the uterus during labor. The treatment of these cases varies with the completeness of the rupture. In incomplete ruptures it is, or may be, conservative, while in complete ruptures, operative treatment is indicated. The conservative measures may consist in tamponing in order to arrest the bleeding and to drain the wound, or in uterine douches. In the author's cases operative treatment was employed in three instances—in two incomplete, and in one complete, rupture; in two (incomplete) cases uterine douches were used, and in one (complete), the uterus was packed with iodoform gauze. The former two patients recovered, the latter died. In selecting the method of treatment one should not adopt any routine, but be guided by the circumstances of each case. Thus, packing is indicated when there is a continuation of the bleeding after the birth of the child; drainage should be used in those cases where there is no bleeding but a purulent discharge a few days after the labor, and uterine douches in cases where there is neither bleeding nor a foul discharge. Both cases of incomplete rupture reported by the author ran their course with high temperature and the formation of an exudate in the broad ligament corresponding to the wounded side. In three of the author's cases of complete rupture, laparotomy

was performed. The uterus was left *in situ* in all these cases. In one, the cervical tear was sutured through the vagina and the tear in the body through the abdominal wound; in the other two, the rupture was sewn through the laparotomy wound. In a fourth case the cervical tear was not sutured at all, but the ruptures in the broad ligaments and the space of Douglas were closed by sutures. Of the first three cases, one died of septic peritonitis, the others recovered. The preservation of the uterus should be the first aim of the operator next to the saving of the patient's life. If it is impossible, as often is the case, to suture the ruptured organ, a supravaginal hysterectomy must be performed (Porro's operation), or the whole organ must be removed. The mortality depends, not so much on the extent of the tear, as on the cleanliness of the parts and the subsequent asepsis in operating. When a case of uterine rupture occurs in such surroundings that it would be difficult, if not impossible, to secure the proper operative facilities, it is better to content ourselves with the conservative treatment, as statistics show that good results have been obtained by these methods, according to Klien. The exceptions are, of course, those cases in which we must perform laparotomy whether we wish to do so or not—cases in which the foetus has already escaped into the peritoneal cavity and cannot be drawn out of its position by any means at our command, and cases in which the hæmorrhage from the torn vessels cannot be arrested by vaginal methods. It must be remembered that dragging the foetus and placenta through a uterine tear in trying to extricate the foetus from the peritoneal cavity makes the prognosis worse, for it tends to enlarge the rupture.

Staraya Roossa. By Dr. N. N. Makaveyeff.—An article dealing with a Russian watering place.

The Hygiene of the Air in the Dwellings, Courts, and Streets of St. Petersburg. By I. M. Yakovlev.—In St. Petersburg the lowest limit of the air breathed by the inhabitants is the level of the cellars in which persons are permitted to live, the upper is practically the level of the sixth story, as there are no dwellings higher than six stories in the city. The high mortality of St. Petersburg (twenty-two to thirty to the thousand), shows that the sanitary conditions of that city are very poor; and one of the most important defects is the condition of the air. The sewerage system of the city is very defective in all hygienic respects. Thus the sewage from the water-closets and sinks is allowed to flow from the reservoir connected with the plumbing of each house into the wooden drainage canals, which were destined by Peter the Great, the founder of the city, to drain rain water away from the Neva toward the seashore and toward four canals that cross the city. This primitive arrangement is, of course, against all sanitary principles, and the result is that the air of the city, as well as its soil, is more or less saturated with noxious gases. The author gives an account of a series of experiments which enabled him to demonstrate the continuous presence of sulphuretted hydrogen and of other gases in the atmosphere of courts, dwellings, etc., in St. Petersburg.

Letters to the Editor.

DR. KNAPP'S TEST FOR LACTIC ACID.

136 EAST SEVENTY-EIGHTH STREET,
NEW YORK, August 24, 1901.

To the Editor of the *New York Medical Journal*:

SIR: Dr. P. M. Miller, in his zealously to criticize, omitted to take exact note of what I did describe. It almost looks as if my critic either well memorized things studied or wanted me to know that he also knew where to read up Uffelmann's test. Uffelmann's test is Uffelmann's test, but my method is not Uffelmann's test. Yes, theory and practice are two different things. All I can say is that Dr. P. M. Miller should read again and study my method of testing, practically; he will then easily find the difference between my test and Uffelmann's test. To put my critic on the track, I will mention again, for his sole benefit, that my test consists in *floating* the ethereal extract, not the residue after its evaporation, on the iron solution, and that at the junction of the ethereal extract with the iron solution, both of these solutions being colorless, a canary-yellow ring appears. This canary-yellow ring may appear instantly or, if the lactic acid is present in but very minute quantity, the formation of this ring will take a few minutes, even half an hour or more.

MARK I. KNAPP, M. D.

Book Notices.

International Clinics. A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pædiatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose, and Throat, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the World. Edited by HENRY W. CATTELL, A. M., M. D., Philadelphia. Volume IV. Tenth Series. Philadelphia: J. B. Lippincott Company, 1901. Pp. vii-312.

This volume contains many interesting and valuable papers. Potain, in one entitled Indications and Contraindications for the Use of Digitalis in Heart Disease, has given us a rational working method of using digitalis. The indications for its use are: 1. Tachycardia and irregular unequal action. 2. Inadequate contractile energy of the myocardium, resulting in anasarca and peripheral stasis.

The high arterial tension of Bright's disease or endarteritis should not be an obstacle to the use of digitalis when the heart's action itself calls for the drug.

The chief contraindication to its use lies in a condition of myocarditis so advanced as to render the muscle incapable of reacting to the stimulation. Therefore, great care must be used in giving the drug to old people.

Another interesting paper, by Douglas Graham, of Boston, relates very material improvement in a case of Raynaud's disease in which threatening gangrene was averted by systematic massage. If one

accepts vasomotor spasm as the cause of the local difficulty, certainly the treatment is rational.

Professor B. Grassi, of Rome, summarizes in an interesting and convincing way the life history of the malarial organism. It can live, he says, only in human beings and *Anopheles* mosquitoes.

Of the genito-urinary section, perhaps the most instructive paper is by Dr. Félix Guyon, On the Use of the Fixed Catheter in Urinary Infection and Prostatic and Urethral Hæmorrhage. The influence of constant drainage on the temperature curve in urinary infections is shown to be most satisfactory.

Professor Demetrius Roncali, of Rome, feels that he has advanced one step in determining the ætiology of cancer since, by planting pure cultures of blastomycetes found only in malignant neoplasms, he has succeeded in developing a neoplasm which showed metastases and the other evidences of malignancy.

The remainder of the volume is devoted to a monograph on The Ætiology and Morbid Anatomy of Various Diseases, by the editor.

The Students' Manual of Venereal Diseases. By F. R. STURGIS, M. D., Sometime Clinical Professor of Venereal Diseases in the Medical Department of the University of the City of New York, etc. Seventh Edition, Revised and in Part Rewritten by F. R. STURGIS, M. D., and FOLLEN CABOT, M. D., Instructor in Genito-urinary and Venereal Diseases in the Cornell University Medical College, etc. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. xii-17 to 216.

This concise and practical little book was originally intended chiefly for students in the Medical Department of the University of the City of New York. The authors feel, however, that the revised edition, including as it does so much new matter, will meet with a more extended field of usefulness, a conclusion which is fully warranted. Dr. Sturgis has revised the chapters on chancroid and syphilis, while the task of bringing those on gonorrhœa up to date has fallen to the lot of Dr. Cabot. The work should be popular with medical students.

Diseases of the Anus and Rectum. By D. H. GOODSALL, F. R. C. S. (Eng.), Senior Surgeon to the Metropolitan Hospital, etc., and W. ERNEST MILES, F. R. C. S. (Eng.), Assistant Surgeon to the Cancer Hospital, Brompton, etc. In Two Parts. Illustrated. Part I. London, New York, and Bombay: Longmans, Green, & Company, 1901. Pp. 311.

This excellent little book first introduces us to the general anatomy of the regions, and we are materially assisted in the proper understanding of the anatomical arrangement by a number of schematic drawings. Following in natural sequence we find a chapter on general diagnosis. Further on, in Chapter iii, may be found a full consideration of the different varieties of abscesses occurring near or around the rectum, with their proper treatment. Chapters iv and v are devoted to the subjects of ano-rectal, recto-urethral, rectovesical, and rectovaginal fistule, all of which are treated in a most interesting and instructive manner. In the concluding chap-

tors the pathological conditions met with in anal fissures and hæmorrhoids are fully considered and appropriate treatment is advised. Chapters on ulceration, strictures, syphilis, tuberculosis, and new growths are to appear in the second part of the work. If the volume to follow is as attractive as the present, the whole will make a useful and attractive addition to any library.

Bericht über die acht und zwanzigste Versammlung der ophthalmologischen Gesellschaft. Heidelberg, 1900. Unter Mitwirkung von E. VON HIPPEL und A. WAGENMANN. Redigirt durch W. HESS und TH. LEIBER. Mit 17 Tafeln und 8 Abbildungen im Text. Wiesbaden: J. F. Bergmann, 1901. Pp. ix-242.

The twenty-eighth meeting of the German Ophthalmological Society at Heidelberg opened with an address by Leber and with the award of the von Graefe prize, an order of scientific merit established in honor of the great founder of the society and of the *Archiv für Ophthalmologie*. By unanimous vote of the judges, the prize was divided between Stephan Bernheimer for his investigations on the intracerebral visual paths, the innervation of the ocular muscles, and the arrangement of the oculomotor nuclei, and Carl Hess, whose experimental research in the domain of accommodation, on the position of the ciliary processes in action and under eserine, and on lenticular focussing, has been of the greatest service.

The report of the scientific work of the meeting fills quite a large volume, so that but one or two of the many able and interesting papers can be cited. Among those of a timely, practical nature are the review by Grunert, of Tübingen, on the results of "sympathectomy" (Jonnesco's operation) for glaucoma, giving the procedure a guarded recommendation on the strength of statistics which show nearly fifty per cent. of failures; Wessley's report on the action of suprarenin in ocular affections; statistics of cataract operations with open-wound treatment by Sattler; intra-ocular disinfection, especially in desperate tuberculous processes and traumatic iridocyclitis by means of iodoform pencils introduced into the anterior chamber, by Mayweg; and Fuchs's paper on chorioidal detachment after cataract extraction, showing that this complication is less uncommon than is generally believed, but fortunately disappears spontaneously and quite rapidly in most cases.

Other demonstrations and papers by Wintersteiner, on traumatic iris-cysts; Uhthoff, on infectious optic neuritis; Birch-Hirschfeld, on the pathogenesis of methyl alcohol amblyopia; Reuss, on asthenopic visual fields; and Schmidt-Rimpler, on lens dislocations are of interest from the scientific and theoretical point.

Das Selbstbewusstsein: Empfindung und Gefühl. Von FRIEDRICH LEHM. Wiesbaden: J. F. Bergmann, 1901. Pp. 42.

In this small monograph the author devotes himself to a consideration of the "ego." The "ego" is divided into all its various parts, and its relations to its own parts and to the universe are considered. It is a contribution of value to those who are interested in psychological problems.

A Text-book of Urine Analysis for Students and Practitioners of Medicine. By JOHN H. LONG, M. S., Sc. D., Professor of Chemistry and Director of the Chemical Laboratories in the Schools of Medicine and Pharmacy of the Northwestern University. With Numerous Illustrations. Easton, Pa.: The Chemical Publishing Company, 1901. Pp. iv-249. [Price, \$1.50.]

The purpose of this work is that of supplying students with a book for systematic class work. It gives the usual tests for the urinary elements, and is rather more complete than most of the similar works which have been issued with such profusion of late. References are made here and there to the clinical significance of abnormal findings, but the author restricts himself quite closely to the subject of analysis. The illustrations are scarcely above the average.

Ueber Migräne. Von Dr. ALEXANDER SPITZER, in Wien. Jena: Gustav Fischer, 1901. Pp. 119.

In this monograph the author reviews the theories given to account for the origin of migraine, and proposes a new one—that attacks of migraine are due to an acute, transitory closure of the foramen of Monro, with consecutive swelling of the brain itself, probably congestion, and that the symptoms follow from this anatomical basis. The work is purely theoretical and interesting as a review of a dark and ill-understood subject.

Uric Acid as a Factor in the Causation of Disease. A Contribution to the Pathology of High Blood Pressure, Headache, Epilepsy, Mental Diseases, Paroxysmal Hæmoglobinuria and Anæmia, Bright's Disease, Diabetes, Gout, Rheumatism and other Disorders. By ALEXANDER HAIG, M. A., M. D. Oxon., F. R. C. P., Physician to the Metropolitan Hospital, etc. Fifth Edition, with Seventy-five Illustrations. Philadelphia: P. Blakiston's Son & Company, 1900. Pp. xvi-846. [Price, \$3.]

From time to time during nearly twenty years the author of this book has been a frequent contributor to the medical periodicals, writing on the influence of uric acid in the causation of disease, but it was not until 1892 that he brought these various contributions together in a single volume. The fifth edition of the work is considerably enlarged, and contains a detailed statement of the author's labors and of the epoch-making conclusions he has drawn from them. He tells us that he was first led to a study of the subject by having been all his life a sufferer from migraine. He seems early to have noticed a direct relationship between his painful symptoms and the condition of arterial tension now so familiar to all of us, but at that time little understood. He thus found himself engaged in the solution of the problem which had so long occupied the attention of some of the ablest men in the profession. Having noticed a relationship between the clinical history of migraine and that of gout, he suspected that uric acid probably stood in a causative relation to arterial tension, and since then has devoted his life to a study of uric acid and its influence upon the human body. His conclusion is that "uric acid really dominates the function, nutrition, and structure of the human

body to an extent which has never yet been dreamed of in our philosophy," and that uric acid itself and the condition of arterial tension produced by it stand in a causative relation to a wide range of morbid states—headache, vertigo, some hysterical states, epilepsy, diabetes, anæmia, gastric and intestinal dyspepsia, rheumatism and gout, and various morbid mental states, such as bad temper, melancholia, neurasthenia, and so on.

Not that uric acid is the sole cause of these, but that it is a cause much more frequently than most physicians suspect. This is Dr. Haig's thesis.

To those who are not acquainted with the details of Dr. Haig's work and conclusions we earnestly recommend a careful study of this book. It is full of suggestion and will amply repay any time that is put upon it, and this is especially true of those physicians whose patients are residents of large cities, where physical exercise is so small, and generous feeding so large, a factor of men's daily lives.

After glancing through the chapters devoted to a discussion of the theory and its application to various diseased states, we turned to that on treatment with a hope that in rewriting it Dr. Haig had found time to condense into a few pages the results of his ripe experience. Here we are disappointed. This chapter has been almost doubled. Sixty-two pages are devoted to it, and this, too, in spite of the fact that frequent reference to treatment occurs throughout the earlier chapters. Dr. Haig has now come to be an authority in his chosen field. He has earned the right to speak *ex cathedra*, and we had hoped he would do so. The busy practitioner to whom his views should most strongly appeal has not the time to do more than become familiar with an outline of this vast subject and to learn in the briefest possible form the lines of procedure best calculated to combat the various manifestations as he meets with them. All else is a weariness to the soul. In spite of this drawback, the book deserves the attention of every physician who would perfect himself in his profession.

BOOKS, ETC., RECEIVED.

The Ready Reference Handbook of Diseases of the Skin. By George Thomas Jackson, M. D. (Col.), Chief of Clinic and Instructor in Dermatology, College of Physicians and Surgeons, New York, etc. With 80 Illustrations and 3 Plates. Fourth Edition, thoroughly Revised. New York: Lea Brothers & Company, 1901. Pp. 5 to 642.

Traité de médecine et de thérapeutique. Publié sous la direction de MM. P. Brouardel, Doyen de la Faculté de médecine de Paris, etc., et A. Gilbert, Professeur agrégé à la Faculté de médecine de Paris, etc. Tome huitième. Maladies des plèvres et du médiastin. Maladies de l'axe cérébro-spinal. Par MM. Landouzy, M. Labbé, Galliard, Menetrier, Boinet, Achard, Ballet, P. Marie, Lévi, Klippel. Paris: J. B. Baillière et fils, 1901. Pp. 5 to 848.

Treizième congrès international de médecine. Comptes rendus. Publiés sous la direction de A. Chauffard, Secrétaire-général. Comptes rendus des sections de dermatologie et de syphiligraphie—Neurologie—Chirurgie générale—d'Anatomie descriptive et comparée—d'Histologie et d'embryologie—Physiologie, physique et chimie biologiques—Médecine et chirurgie militaires—Pathologie générale et pathologie expérimentale—Thérapeutique, pharmacologie et matière médicale—Pathologie interne—Stomatologie—Ophthalmologie Laryngologie et rhinologie—Otologie—Psychiatrie—Médecine de l'enfance—Chirurgie de l'enfance. Paris: Masson et cie, 1901.

Mount Sinai Hospital Reports. Volume II. For 1899 and 1900.

Miscellany.

Trephining Practised in Prehistoric Ages.—

The skull of a prehistoric man, says *American Medicine* for August 10th, which had a trephine opening 71x60 millimetres in size, has been recently discovered in France. A similar discovery was made in Berlin three years ago, the opening in that case being 65x58 millimetres, and the callus on the edges showed that the operation was a success. This latter skull dated from the late stone age, and is consequently somewhat older than the recent French discovery.

Errata.—We regret that some typographical errors crept into Dr. Stanley S. Cornell's article on Angiosarcoma (not "Angeo Sarcoma") of the Nose, printed in our issue for August 24th. It should be corrected as follows: Page 348, first column, 20th line from the foot, for "globules," read *lobules*; second column, 14th line from the head, for "temperature," read *temperament*; 23d line, after "inch," insert *in length and half an inch in diameter*; page 349, second column, 12th line from the head, for "March," read *July*.

Transplantation of a Toe.—Nicoladoni (*Wiener klinische Wochenschrift*, No. 8, 1901; *Treatment*, May) reports a case of transplantation of the second toe of the right foot to replace a thumb, lost by an accident, by a mechanic. The skin-flap from the dorsum of the foot was cut in a trapeziform manner. The extensor tendon of the second toe was united with the stump of the extensor longus pollicis. By silver sutures the phalangeal stump of the thumb and the first phalanx of the toe were united. The flexor tendons of the foot were united to each of those of the thumb. The result was good. Sensation was slowly returning at the time of the report.

For Relief against Insect Pests.—A physician in an article on Insects as Carriers of Disease, published in *Munsey's Magazine*, gives the following method as that in use by the Hudson Bay Company: "Pyrethrum powder is moistened, shaped into little cones like a chocolate drop, and dried in an oven. When these are burned in a tent or a room, they smolder slowly and stupefy all insects, which fall to the floor and may be swept up and burned. For personal relief the woodsman will neglect any part of his toilet sooner than his tar oil for his face and hands, and if he has work to do, he will set his birch bark smudges where the breeze will blow the fumes toward him."

A Scourge of Mosquitoes at Sea Reported to the Marine-Hospital Service.—

A scourge of mosquitoes on a ship remote from any land is the story brought into port by two vessels which arrived at southern quarantine stations recently. The matter has been officially reported to the Marine-Hospital Service, Washington, D. C., by the surgeons at the South Atlantic station, the report being made in accordance with the theory that mosquitoes sometimes spread infectious and contagious diseases. One of the vessels whose passengers were attacked by swarms of mosquitoes was the ship *America*. The ship was about ten miles from Chandeleur Island, in the Gulf of

Mexico, when the pestiferous insects appeared. The other case was considered more remarkable. It was that of the Spanish bark *Maria Blanquer*. This vessel was twenty-two days out from Rio de Janeiro, several hundred miles from any known land, when great swarms of mosquitoes seemed to rise up out of the sea, so sudden was their appearance. Life on the ship was made miserable. Some of the apartments were fumigated to kill the mosquitoes, and then the pests were gathered up by the shovelful and thrown overboard.

A Sixpenny Doctor.—The *Chemist and Druggist* for August 10th quotes from *The Broadway or Westminster Hospital Gazette* an amusing sketch of the "Sixpenny Doctor," which it says, although perhaps slightly exaggerated, serves to throw a lurid light on the condition of dispensing in many doctors' establishments. The writer relates how, immediately after qualifying, he took over a practice in a small industrial centre in Lancashire. His patients were miners principally, who suffered from "ballywahrch" and kindred complaints, and for whom the young medico was at first in the habit of writing out prescriptions. The prescription method was not appreciated by the grimy sons of toil, who preferred to receive "a sup o' summat, same as Dr. Baggs does." The patients, he found, did not care a hang for advice so long as they got medicine at a reasonable figure. So the newly-fledged fitted up a dispensary under the advice of a neighboring druggist, and, conjuring up visions of the scorn of the chief dispenser at St. Anthony's Hospital (from which he graduated) when contemplating his former pharmaceutical efforts, the young doctor essayed to make a batch of pills. He was wrestling manfully with a sticky paste which he was vainly endeavoring to persuade to leave the mortar and forswear its allegiance to the pestle, when a knock came to the door, and Dr. Baggs, the popular sixpenny doctor, introduced himself. The pen-picture of Dr. Baggs is not flattering. Short, stout, fat, red cheeks, side-whiskers, bleary eyes, and tremulous lips. Grease-besprinkled frock coat, dilapidated silk hat, yellow-metal watch-chain, numerous rings, and nails in mourning. Dr. Baggs had come to offer the newcomer his practice at a sacrifice. Meanwhile he offered various suggestions on the making of pills, and the arrangement of a dispensary. He suggested that the sticky pill-mass might by the addition of a little more syrup be sent out as a confection. He was very scornful of all the bottles in the new surgery.

"You don't want to buy things like that," he said. "The tip is to write for samples—Tomkin's cocaine, Bluff's beef-biscuits, Pincher's peptones, and all that lot. For the price of a few postcards you can get in enough stock to last you a month. . . . I never buy anything but laudanum and 'sacch ust.'—one must have these. Odd thing they don't put 'saccharum ustum' into the Pharmacopœia, isn't it, considering it's about the most useful drug we have?"

"But how do you manage about the new synthetic remedies?" queried the "new chum." "Don't you find them rather confusing?"

"Not a bit; it's as simple as A B C. They're all

either anti-neuralgic, dose fifteen grains, or iodoform substitutes. . . . Of course, one makes mistakes sometimes. They sent me some stuff called exalgine once, and I gave a man fifteen grains of it. I signed him up as apoplexy. Another time, after I'd been using one of the things on a sore, I found the maker had meant it for a diuretic. It was rather a pity, for it was the best dusting-powder of the lot. . . . You'll find it a good move," he said, as a parting shot, "when your practice gets bigger, to do as old Sloggins"—an old-established practitioner in the town—"did, advertise for a coachman who can also dispense."

Shortly afterward the young doctor looked in at Dr. Baggs's surgery and found him "dispensing." He began by putting up a dozen powders of "hyd. c. cret." The practice of weighing twelve grains and dividing the powders by guess, the young *Æsculapius* pleaded guilty to himself, but Dr. Baggs improved on that method by guessing the twelve grains. He had no scales, and his only measure was a two-drachm graduate with the foot broken off. Dr. Baggs used four-ounce bottles, graduated in ounces, for his mixtures, and if he wanted one drachm of anything he filled the bottle one-eighth of the way up to the first mark. Dr. Baggs never washed his bottles, and stuck a new label on top of the old one. He pressed his corks by rolling them on the floor under the sole of his boot. He had one spatula (a piece of stick) for all the ointments, which he transferred from one pot to another without troubling to wipe it. He shook out a little pinkish powder on a paper.

"What do you give calamine for?" the young man asked; "I thought it was only used for making a lotion." Dr. Baggs looked surprised. "Oh, you mean 'black wash.' But people take it too; it's a purgative.

"Calomel, not calamine."

"Why, what's the difference?"

The younger man explained.

"Well, do you know," Baggs said, "I thought when I found it in the cupboard there was something wrong with it. It was some that was left by the man that was here before me. Calomel should be white, shouldn't it? By the way, I fancy there's something up with my Dover's powder, too. I gave a woman ten grains a few days ago, and she nearly vomited up her immortal soul," and he handed out a bottle labelled "Pulv. Ipecac."

A few specimens are then given of Dr. Baggs's ignorance of surgery, and the sketch concludes with the dramatic flight of the sixpenny doctor from the town to escape the wrath of his maltreated patients.

The Denver (Col.) Health Commissioner Appeals to Sufferers from Tuberculosis to Refrain from Spitting.—The following is the text of a circular recently sent out by Health Commissioner Clough, of Denver, Col., requesting sufferers from tuberculosis to refrain from expectorating on the sidewalks and streets, and in public places:

"Mortality statistics show that one-seventh of all the deaths in the civilized world are from tuberculosis. There is no fact more clearly demonstrated in medicine than that tuberculosis of the lungs, or 'consumption,' is chiefly communicated from person to person by the germs

of tuberculosis contained in the sputum of the one afflicted with this disease.

"A consumptive is a safe person to associate with only when he or she realizes this fact and acts accordingly. To act accordingly is understood to mean that the consumptive should so take care of his or her sputum, that the moment it leaves the body, it should be placed under such conditions, that it could not by any possibility, become a means of infecting another individual.

"To this end, the Denver Department of Health respectfully asks the aid of all those persons afflicted with tuberculosis. They are especially requested not to expectorate on the pavements, the streets, or in other public places. The habit is a filthy one; besides, it is dangerous. The sputum of the consumptive, always containing some germs, and at times an incredible number, becomes dried and the germs are scattered in the air and inhaled. Thus the seeds of the disease are spread broadcast and an abundant harvest is always at hand, as is testified by the enormous death rate from tuberculosis.

"It is also dangerous for the afflicted individual to swallow the tuberculous sputum, as by so doing there is danger of setting up consumption of the bowels.

"The only safeguard against these two evils—of re-infecting one's self, on the one hand, or infecting one's neighbor on the other—is to carry and use a portable pocket spittoon, of which there are several varieties on the market. A cheese cloth roller bandage may be used to great advantage by expectorating in the free end and gradually rolling up this end after the manner of a scroll. The contaminated bandage should be burned, as should also the cloth or other material used in the pocket flask to absorb the sputum. The pocket spittoon should be washed daily with some of the various antiseptic solutions, a good one being bichloride of mercury, 1 to 1,000.

"This appeal is made to the reason and fair-mindedness of consumptives, in the hope that they will realize that they are their brother's keepers in so far as pertains to the spreading of consumption.

"It may entail some inconvenience to the afflicted person to properly dispose of his or her sputum, but this is as nothing to the hardship, sickness, and death to which they are exposing their family and their neighbor by a neglect of so simple a sanitary proceeding."

Daily Enemata Among the Natives of the Ivory Coast of West Africa.—*La Caducée* for July 6th states that these natives use daily enemata of pimento. They crush this between two polished stones, mix up with water the paste thus formed, and obtain a reddish liquid which serves for the enema. A gourd with a very long neck is used as the instrument. It is pierced with a hole at either end, and the pulp expressed. The neck is then plunged into the vessel containing the fluid and the gourd filled by suction with the mouth, and closed with the forefinger as a pipette is closed. If the subject administers it himself, he bends himself over with the head as low as possible and the nates elevated, and, inserting the

neck of the gourd into his anus removes the finger to let the fluid pass by atmospheric pressure. When, however, it is administered by another, the subject either squats upon all fours, or lies over the operator's knees. The latter then inserts the gourd and blows the fluid into the rectum with his mouth through the upper opening. A photograph of the operation sent by Inspector-general Kermorgant accompanies the article.

The Ætiology of Acute Hæmorrhagic Pancreatitis.—Dr. Eugene L. Opie (*Johns Hopkins Hospital Bulletin*, April to June) concludes a most interesting and exhaustive article as follows:

(1) A small gall-stone impacted in the diverticulum of Vater may occlude the common orifice of the bile duct and duct of Wirsung and convert them into a continuous closed channel. Bile enters the pancreas by way of the pancreatic duct and the pancreas becomes the seat of inflammatory changes characterized by necrosis of the parenchymatous cells, hæmorrhage and the accumulation of inflammatory products. Anatomical peculiarities of the diverticulum of Vater do not permit this sequence of events in all individuals. (2) Injection of bile into the pancreatic duct of dogs causes a necrotizing hæmorrhagic inflammation of the pancreas resembling the human lesion, and, like it, accompanied by fat necrosis. Necrosis of the parenchymatous cells and hæmorrhage represent the primary action of the bile; an inflammatory reaction rapidly follows. (3) The frequent association of cholelithiasis with hæmorrhagic and gangrenous pancreatitis is the result of impaction of gall-stones at the orifice of the diverticulum of Vater and penetration of bile into the pancreas.

Tea and Coffee Two Hundred Years Ago.—The *Polyclinic* for May makes the following interesting excerpts from a Treatise on Foods, published in Paris in 1702 by M. Louis Lemery, "Regent-Doctor of the Faculty of Physick at Paris." Of tea M. Lemery says:

"Tea is very wholesome, since it produces many good effects and few bad ones. It may be preferred before coffee; for the immoderate use of coffee is sometimes very pernicious, but we see some who will drink ten or twelve Dishes of Tea a Day without any hurt at all."

And again:

"It's good for the disorders of the Brain and Nerves. It refreshes the spirits, suppresses vapors, cures the Headache, prevents Drowsiness, helps digestion, purifies the blood; provokes urine and is good for phthisical and scorbutic Persons. We do not find that Tea produces any ill effects; however it may if taken too liberally make the blood grow a little more subtil. It agrees at all times with any age and constitution."

The virtues of coffee are thus summed up by the author:

"It fortifies the stomach and Brain, promotes digestion, allays the headache, suppresses the Fumes caused by Wine or other liquors; promotes urine and Women's terms, opens some Peoples Bodies, makes the Memory and Fancy more quick and people that drink it brisk. It

agrees when moderately taken especially in cold weather with Old People; with such as are phlegmatic and those who are fat and corpulent; but 'tis not so proper for bilious and melancholy persons. The use of Coffee to excess makes People lean, hinders them from Sleep, debilitates their Bodies, suppresses Venereal inclinations, and produces several other the like Inconveniences. Coffee drank to excess is at least as pernicious as the moderate use of it is wholesome to many persons. Many persons that have been used to drink too much coffee become infirm and paralytic as Willis and other physicians have observed."

Electro-plater's Dermatitis.—Dr. Arthur Hall (*British Journal of Dermatology*, June) says that out of a very large number of cases of trade dermatitis which he had seen at the skin department of the Royal Hospital, he had never previously seen one resembling a case he records; and as the number of "finishers" at the various electro-plating works is considerable, he visited some of the larger works and made inquiries as to the state of the men's hands employed there, and got the following information:

The material used is finely crushed lime mixed with a small quantity of olive oil. No moisture of any kind is applied.

The man works at a bench with a heap of this lime-dust by him; he continually applies fresh dust to the piece of work he is doing, which he then holds against a rapidly revolving small wheel. This brightens the electro-plate, and the old lime-dust that has been used gradually becomes black, and contains a certain amount of silver. His hands all day are covered thickly over with the lime-dust. Most of the workers say that as a rule the lime does not affect the hands at all except when they get a bruise or cut, in which case it "fester" unless they protect it. But it soon heals when protected, and they have very little trouble in that way. One elderly man who had several ulcers on the hands and had been liable to this for years, though it did not prevent his going on working, told the author an interesting and practical observation which he had made. When an ulcer begins he gets a pair of scissors and cuts all the epidermis off that hangs round the edge, so that the lime-dust cannot get underneath this, for if it does the ulcer spreads.

The author concludes that: 1. The lime-dust and oil is to most of the workers quite unirritating provided the epidermis is intact. 2. If, however, the epidermis is broken, the dust getting on to the moist surface forms a tenacious caustic paste, which tends to gradually cause an ulcer unless it is attended to. 3. In a certain number of workers the lime-dust acts as a chronic irritant in a double way: in the first place superficially causing hyperæmia, and tendency to fissures (as in chapped hands); and, secondly, by getting into the fissures and causing ulceration.

The author being struck by the adhesive properties of the lime powder mixed with olive oil used by the men, has since tried various powders prepared in this way for therapeutic use. He thinks that such a method of preparing powders for the skin in certain cases has distinct advantages over the powder alone. The proportion he has found satisfactory is about one drachm of oil to the ounce of pow-

der. The following dusting powder gives a suitable consistence:

R Prepared calamine,	} of each.... 2 ounces;
Zinc oxide,	
Prepared chalk,	
Starch,	
Olive oil (or almond oil).....	1 ounce.

The prepared chalk adds considerably to the smooth adhesiveness of the powder.

Chromic Acid in Epithelioma of the Skin.—Professor Douglass W. Montgomery, of the University of California (*Occidental Medical Times*, July), speaks very favorably of cauterization by means of pure chromic acid crystals in purely superficial cancerous growths of the skin. He brings it forward as an addition to the surgeon's armamentarium, and not as supplanting other measures, and credits Dr. J. Rosenstirn with having first called his attention to it. The crystals used must be very dry, and all friable diseased tissue should be well scraped away until the curette comes down on a hard solid base; and, before applying the acid, the wound should be allowed to dry perfectly. Suprarenal extract solution may hasten the drying of the wound. Sometimes it is necessary to wait till the next day after scraping, and the crust must be peeled off before applying the crystals. These are poured on the wound and tamped down with a pointed instrument. The chromic acid becomes dark red and fluid, and excess can be soaked up with dry absorbent cotton. A few filaments of absorbent cotton should be pressed into the cauterized surface and allowed to dry, no other dressing being applied. The filaments of cotton, the chromic acid, and the cauterized tissue form a tough, dense, leathery, tightly-adherent scab. All the micro-organisms of the wounded surface are killed, and no new ones can enter. It is an ideal antiseptic dressing, under which healing goes on without disturbance. A surface about the size of the thumb nail will heal completely in about five weeks. After a time the edges of the leathery scab begin to lift, and some pus formation usually takes place; but this generally occurs at a time when granulation is well under way, and when all danger of extensive infection is past. As the edges of the scab lift and curl up, they may be clipped away, and a dry powder, such as boric acid, dusted in under the edges, to absorb the secretions. On the first application of the chromic acid on the raw surface, the pain is quite sharp; but it rarely endures longer than fifteen or twenty minutes. The resulting scar is usually a good one. The advantages of chromic acid are that it penetrates into the tissues, and that it forms an impervious, tightly-adherent, and absolutely antiseptic dressing. Twelve cases are recorded.

The Detection of Cystic or Loculated Fluids in the Abdomen.—Dr. John G. Clark (*University of Pennsylvania Medical Bulletin*, May) says that in the abdominal tumors of women the combination of touch and palpation in the bimanual pelvic examination is by far the most efficient means of diagnosis at our command. In the author's experience the chief difficulty in the diagnosis in obscure cases has been in judging the consistence of a tumor or encapsulated mass as to whether it

was fluid or solid. This distinction is of vital importance in many cases. An adherent soft intra-ligamentary myoma, associated with inflammatory disease of the appendages, may closely simulate a pelvic abscess, and, even in skilled hands, a vaginal incision or puncture be made into a soft tumor mass with the idea that it is encapsulated pus; or a tense hydrosalpinx or pyosalpinx may be mistaken for a solid tumor, etc.

For the detection of fluid, in these obscure cases, the author has employed for the last two years or more a trimanual method of percussion, which has, in several cases, proved of signal value, at once clearing up an otherwise doubtful diagnosis. This method was first employed as a means of differentiation between fluid and solid pelvic tumors. On bimanual examination of a pelvic mass of questionable consistence, the intestines intervening between the anterior abdominal wall and the tumor may dissipate the percussion impulse of the abdominal hand, and although fluid may be present, a wave of sufficient intensity to be felt by the vaginal touch is not induced. To overcome this difficulty the tumor mass should be confined as closely as possible between the two examining hands, while the percussion is made by an assistant. With light, quick taps, even small collections of fluid may be detected by the quick, responsive, pulsatile wave passing from the abdominal to the pelvic hand. Since proving the value of this method in pelvic examinations, the author has systematically employed it in the diagnosis of abdominal tumors. In this way an adherent and distended gall-bladder may accurately be diagnosed, one hand pressing deeply in over the hypochondrium, while with the other deep counter-pressure is made just below the fixed ribs. If fluid is present, light percussion over the upper hand will give an unmistakable wave in many instances. In one case this method proved of considerable value in the diagnosis of an appendical abscess situated beneath the cæcum and the lower lobe of a downward displaced liver. Only through the employment of this method was it possible definitely to recognize the deep-lying encapsulated pus, the ordinary percussion wave being destroyed by the superimposed liver.

The Diagnosis of Extra-uterine Fœtation.—

Mr. George Cascaden (*Medical Press and Circular*, June 26th) says that in whatever part of the genital tract the pregnancy finally occurs, he thinks it is now an established fact that it commences in the Fallopian tube. The slightest dilatation of the tube causes pelvic pain, and this he has noticed to be one of the earliest symptoms. Should the ovum slip up into the tubo-abdominal region (ventral pregnancy), or between the folds of the broad ligament, becoming a mesometric pregnancy, the pain ceases—for a time, at any rate—until the tumor, from repeated hæmorrhage into its sac, becomes so large that it causes pressure on the neighboring parts and pushes the uterus out of its normal position. The pain is always confined to one side, and is of a throbbing character. Should the pregnancy take place im-

mediately after a menstrual flow, the chances are that no other symptom except pelvic pain is complained of until the next flow is due. The author has come to the conclusion that the onset of the menstrual flow marks the first symptom of decidual separation. Should the patient escape an abortion at this period, the odds are greatly in favor of her going another calendar month before signs of decidual discharge make themselves evident. He thinks, then, that after pain, decidual discharge is the next symptom, and, should the pregnancy be high up, say tubo-abdominal, the rupture of the sac into the abdominal cavity takes place at the date at which the menstrual flow should appear. Many women for various reasons keep the dates of their "period," and it is by referring to these that he has discovered the coincidence that the abortion takes place at one of these times.

On examination, a tumor on one side of the uterus, and, on bimanual palpation, a distinct pulsation, can be felt by the finger in the vagina. This pulsation conveys a well-marked bruit, aneurysmal in character. Whether or not any temporary cessation in child-bearing to the otherwise healthy woman causes a change in the tube it is a notable fact that the majority of extra-uterine gestations occur in women who have not borne children for several years.

Given then, the case of a patient who has missed a period, who has not had a child for several years, who complains of persistent pain in one side of the pelvis, we would naturally suspect the condition of extra-uterine gestation. Should sudden collapse and severe spasmodic pain supervene, then the diagnosis is absolutely established. Hæmatosalpinx, salpingitis with some fluid in the tube, an inflamed dermoid cyst of the ovary, an ovarian tumor with a twisted pedicle, an hydatid degeneration of the villi and chorion, or even an appendicular inflammation, might be mistaken for an extra-uterine gestation; but the author thinks that by paying attention to the symptoms described, a reasonable diagnosis may be made on the theory of exclusion.

Spinal Symptoms in Tea Intoxication.—Dr. Alfred Gordon (*Therapeutic Gazette*, July) recently exhibited before the Philadelphia Neurological Society a patient, a married woman, thirty-one years of age, who was operated upon seven years ago for a tumor of the uterus, and since then had not menstruated. Eight months later she began to suffer with pain and stiffness in lower limbs. Before the operation she used to drink about ten cups of tea daily, but for the past two years she had drunk about forty-five large glasses (360 ounces) a day. The tea was always black, and extremely strong; sometimes she drank it in infusion, but most of the time in decoction. She had been a pedler for the past three years, and was constantly exposed to cold.

Dr. Gordon, in a summary of the case, said that the patient presented undoubted symptoms of posterior and lateral sclerosis, except Babinski's sign and ankle-clonus, but she had clonus of the knee, wrist, and elbow instead. On the other hand, the hypæsthesia on the right upper half of

the body, including face, palate, and pharynx, rather suggested hysteria, if in addition to it we took into consideration the fainting spells without loss of consciousness and the emotional state of the patient's character. This would go hand in hand with the hyperæsthesia of the lower extremities, and even the exaggerated knee-jerk. But against this theory was the ataxia of the legs and the nystagmus. As to the involvement of the sphincters, this could be of spinal origin as well as of a functional character. The patient was certainly intoxicated by tea, for we could hardly admit that such an enormous amount of this beverage could leave the nervous system unharmed.

After citing cases and authorities to show that no mention of spinal symptoms had been made, Dr. Gordon said that theine and essential oils of tea were poisons to the nervous system. On the other hand, Schwann had demonstrated that tannic acid would leave a precipitate from digestive elements and render them inert; atony of the bowels and stomach was the result; self-intoxication might follow. Cooney said that black lead was used to give a bloom to black tea. Three sorts of poisons, therefore, if not more, took part in intoxication by tea. If other intoxications, like alcohol, lead, mercury, etc., were apt to produce spinal symptoms with involvement of the cord, he believed that the same might be expected from tea; it seemed to him that there was only a difference in degree.

If from the history of the patient the spinal symptoms could not be attributed to any other cause, and as we found here an extreme abuse of a beverage, we were led to attribute them to tea-intoxication. As to the disturbances of sensation, they might be of hysterical nature, although no other stigmata were found.

Death of the Physician Who Originated Present Life-saving Service.—Dr. William Augustus Newell, who died at his home in Allentown, N. J., recently, at the age of eighty-two years, was the originator of the life-saving service of the United States. It was he who conceived the idea of shooting a life line from the shore to a stranded vessel. This was the initial step in the establishment of the service, and from it has grown the thoroughly organized system by which more than 100,000 human beings have been rescued from death and many millions of dollars of property saved. Dr. Newell, then a member of the National House of Representatives, secured the first appropriation of \$10,000 in 1848, for a life-saving service on the New Jersey coast. With this money life lines, surf-boats, and the more crude appliances were provided. The system has grown until now there are 269 stations along the shore lines of the United States. Of this number, 194 are situated on the Atlantic and Gulf coasts, fifty-eight on the shores of the great lakes, sixteen on the Pacific coast, and one at the falls of the Ohio, Louisville, Ky. Dr. Newell was born in Franklin, Warren county, Ohio, on September 5, 1819. His ancestors were from New Jersey, and medicine was the prevailing profession in the family. He graduated from Rutgers

College in 1836, from which he afterward received the degree of LL. D.; he took his M. D. in the medical department of the University of Pennsylvania in 1839. He was elected to Congress in 1846 as a Whig, and served three terms. He was elected Governor of New Jersey for three years in 1856. He was again elected to Congress in 1864 as a Republican, serving one term. In 1877 he ran for governor against George B. McClellan, but was defeated. When John Quincy Adams fainted in the House of Representatives he fell into Dr. Newell's arms, and was attended by him until his death, thirty-six hours later. Dr. Newell attended Willie Lincoln during his last illness, and rendered other professional services in the White House.

St. Louis Health Commissioner Urges Municipal Legislation to Stamp Out Consumption.—In his annual report, to be submitted to Mayor Wells, Dr. Starkloff, health commissioner of St. Louis, computes that 90,000 persons out of a population of 600,000 in St. Louis, will die of tuberculosis. In order for the health department to battle successfully with the malady he recommends and urges upon the municipal assembly the passage of a bill, declaring pulmonary tuberculosis an infectious and communicable disease, dangerous to the public health, and that it be classed among the contagious diseases. For the year ending April 1, 1901, Dr. Starkloff's report shows that 1,353 deaths resulted from tuberculosis, of which 1,016 deaths were caused by the pulmonary form. Figuring that the average life of a person afflicted with tuberculosis is about eight years, the author calculates that at present there are about 10,824 cases of the disease in St. Louis. These figures are not given as representing all the cases of the disease or deaths from it in St. Louis, for the doctor says:

"The difficulty in obtaining correct statistics of deaths from tuberculosis is becoming greater each year, principally on account of the attitude of the insurance companies, many of which refuse to pay policies when tuberculosis is written as the cause of death in the death certificates."

He believes that the subject of the reduction of mortality from tuberculous disease, both from an economic and a humanitarian point of view, ought to receive the earnest consideration of all lawmakers.

Direct Infection with the Bacillus Tuberculosis.—Mr. Stanley Boyd, F. R. C. S. (*Medical Press and Circular*, July 10th), in a clinical lecture delivered at the Hospital for Consumption and Diseases of the Chest, Brompton, records three very interesting cases. In the first, a nurse fell when carrying a tray of used spittoons and cut her left wrist with one of the broken ones. In about a fortnight a little central hole was found in the scar and from around this infiltration of the skin slowly spread. The soreness then became more marked, and the central hole remained until August, at which date she had an area of thickened skin the size of a four-penny piece, red, dry, and somewhat warty on the surface, with a well-defined edge. The glands were not affected, and there was no evidence of spread of

the infection to the lymphatics of the forearm; the whole case would be summed up by saying that she had an inflammatory thickening of the skin at this spot. On cutting it out completely, and bringing the edges together, the little wound healed by first intention, and she became perfectly well. Microscopic sections showed that the disease was the result of infection by the tubercle bacillus.

The second case occurred in a lady thirty-five years of age who had been suffering for many years from chronic phthisis of the right lung. She caused a slight abrasion with a lump of sugar on the exterior aspect of the first phalangeal joint of the right index finger, which became infected as she used her handkerchief to spit into. A sore occurred, which gradually affected the internal supra-condylar glands, but did not suppurate. An elongated patch of infiltration then occurred just below the elbow over which the skin became adherent and reddened round the radial lymphatics. A similar patch formed on the dorsum of the hand. There also occurred a small lentil-like subcutaneous nodule, which seemed obviously to be in some lymphatic vessel. The edges of the sore were excised, the base scraped, and pure phenol and iodoform dressings applied. All affected glands, patches, and nodules were excised. Everything united by first intention except the finger; that did not heal, in spite of frequent and free applications of pure carbolic and iodoform. Ultimately it was completely excised. It then healed slowly but soundly—some sixteen months after the first operation. During most of this time fresh little shot-like nodules kept appearing along the course of the radial lymphatics. One by one they were excised under cocaine, seven or eight such operations being done. Once or twice an operation was repeated for recurrence *in loco*, possibly because the first excision was incomplete, for after the production of cocaine œdema all evidence of the little nodule to sight and touch was lost. The patient recovered from her local trouble and has been well for eighteen months, though there has been some increase of the chest disease.

As the author says, the lessons to learn from these cases are: (1) That timely excision of tuberculous sores is the proper treatment; and (2) that with patience and perseverance the disease may be arrested even where it has got a long start.

The third case is that of a hospital porter who accidentally ran into his finger a steel pen nib with which he was spreading, for staining, some sputum known to be virulent. He at once applied fuming nitric acid, but no doubt failed to reach the depth, for a hard lump gradually formed in the palm extending down to the ring finger which became flexed stiff and painful. There was a clear case of tuberculous tenosynovitis and complete removal of the diseased area was effected with a fair result, though extension of the finger is somewhat limited by the long scar on the palmar surface.

The Ideal University.—The Right Honorable Joseph Chamberlain in his speech at the first congregation of the new University of Birmingham, in England, is reported to have delivered the following admirable summary of the objects of an ideal university. He said:

"What should constitute an ideal university?

It may be presumptuous in me to attempt a definition, and yet when we are at the outset of our career it is necessary, it is desirable, that we should have some clear conception of the standard at which we are going to aim. And I would venture to lay down four qualifications as necessary to a perfect university. In the first place, it should be an institution where all existing knowledge is taught. Such a university may, perhaps, never yet have been attained; want of means may always prevent it, but at least that is the object at which we should aim, and we should never rest satisfied until we can say that no student desirous of instruction in any branch of learning shall be turned hungry away from the doors of this university. No doubt the enormous development of knowledge, and especially of its scientific side, during the present century requires a certain specialization in the teaching of that knowledge, and I think it may be desirable, I think it may be necessary, that universities also should be specialized, and that one university should pay more attention than another to particular studies; but I believe at the same time that it would be fatal if in our desire as a modern university to give a special development to the practical and thorough teachings of our scientific work, it would be a great mistake, I say, if we were to exclude or to neglect the older branches of learning. Well, then, in the second place, a university is a place where the knowledge that has been acquired has to be tested. And as to that I will only say that in the multiplication of examining bodies I hope that nothing will be done, either by us or by our successors, to lower the standards of proficiency, whether in the ordinary pass or in the highest honors. I conceive that common prudence should teach us to keep up the value of the degrees which we have begun to confer to-day, and nothing would be more unwise, more fatal to our reputation and to our ultimate success than that we should endeavor to multiply the number of our students at the expense of their quality. Then the third feature to which I would call attention, and which I am inclined to say is the most important of all, is that a university should be a place where knowledge is increased and where the limits of learning are extended. Original research, the addition of something to the total sum of human knowledge, must always be an essential part of our proposals. We want to secure that those who teach in this university shall never cease to learn, and that those who are students shall unite with them in the work of fresh and new investigation. And, lastly, a university is a place where the application of knowledge must be indicated and directed. That perhaps brings us nearer to what may yet be the distinctive feature of our university. At all events, we start with the belief that here we are going to combine theory with practice, and to see that in our university we shall combine both in one course of instruction, with due regard to the needs of our own time and of our own district. And now, if I may summarize in one sentence what I have been saying, it is that a university should be a place where knowledge is taught, tested, increased and applied."

The United States Marine-Hospital Service.—Many interesting facts concerning this important and efficient branch of the Federal Government are contained in a booklet recently issued. The Marine-Hospital Service is a bureau under the Treasury Department, conducted by a surgeon-general. The marine hospitals are maintained by a tax imposed on tonnage. The expense of national quarantines is paid by appropriations of Congress and the cost of suppressing epidemics is paid for out of a special fund. Marine hospitals existed under charters granted by King George III., but the service proper dates from July 16, 1798. In 1871 the service was reorganized with subsequent multiplication of its functions and extension of its activities so that its work is now that of a national board of health or public health service. The Marine-Hospital Service at present consists of a surgeon-general, 29 surgeons, 21 passed assistant surgeons and 56 assistant surgeons, a total of 107 commissioned officers, who are appointed by the President by and with the consent of the Senate. In order to become a commissioned officer of the service it is necessary to pass a competitive examination before a board composed of officers of the service. Officers of the service are not appointed to any special station, but are subject to change of station at any time in compliance with orders. There are 129 acting assistant surgeons, appointed by the Secretary of the Treasury for duty at ports where the amount of work does not justify the detail of a commissioned officer. There is a corps of forty-five pharmacists in the service, known officially as stewards. There are twenty-two United States Marine-Hospitals and 115 additional relief stations in the various ports of the country. These hospitals are on both the Atlantic and Pacific seaboards, on the Gulf of Mexico and the chain of Great Lakes, and at many of the larger river cities. A new hospital has lately been opened in Alaska, and relief stations have been established at San Juan and Ponce, in Puerto Rico, and at Honolulu. The reports of the service show that more than 50,000 sick and disabled seamen of the merchant marine are treated annually. A sanatorium for consumptive seamen has been established at Fort Stanton in New Mexico, in the heart of a dry, equable climate. Up to April 1st there were 144 patients on its records, of whom, it is stated, 17 have recovered, 33 improved, and 17 have died. In order to assist the home quarantines an inspection and information service is maintained at some of the foreign ports, especially those where epidemics exist or where infectious diseases are apt to prevail. It is the duty of the officers of the service stationed at these points to issue the bills of health to vessels leaving for the United States. For instance, sanitary inspectors are stationed at Hong Kong, Yokohama, Central and South American points, to keep plague, fever, and cholera from vessels bound to this country. Also, the service has insular quarantines and inter-State quarantines under its supervision. The prevention of the spread of yellow fever has been one of the chief works of the service since Congress passed the inter-

State quarantine law. All immigrants coming into this country must be examined by a surgeon of the Marine-Hospital Service, whose duty it is to detect those suffering from a dangerous, contagious or loathsome disease. All such patients are either sent back to their homes or are kept isolated in a separate hospital until they are cured and free from the danger of conveying infection. The hygienic laboratory of the service is one of the most valuable and important features. It is in the charge of a director, who is an officer of the service, and several assistants. The investigations of this branch of the service consist of studies into the cause and methods of spread of infectious diseases, of the value and strength of disinfectants, of the value of vaccines, of the method of manufacture of antitoxic serums, the pollution of water supplies, etc. During the last year the hygienic laboratory made and distributed over 100,000 doses of a vaccine against bubonic plague, which were distributed to the Philippines, Honolulu, and San Francisco. Bulletins are issued from time to time giving the results of the work done in the laboratory.

Abdominal Suture in a Pig: A Lay Operator.—

Dr. H. Hollis writes as follows to the *British Medical Journal* for August 3d: "A pig about twelve weeks old was six weeks ago gored by a cow in the left flank, making a wound in the skin two inches long, and a small round hole in the muscular wall of the abdomen, through which three or four feet of bowel protruded. Some of the laborers on the farm (the sewage farm) tried to put the intestine back but failed, so called the wife of the manager, who successfully reduced the bowel, closed the muscular wall with an ordinary needle and thread, then put a piece of lard on the wound and sewed the skin up in the same way. The pig was 'pined' on milk and water for a fortnight, and afterward allowed in the yard with the others. Some of the superficial stitches supplicated slightly; now the pig appears to be as well as the others of the same litter. The thread is hanging from the skin, but the wound has healed entirely."

The Practice of Medicine in China.—The

Gazette médicale de Paris for August 3d quotes from the penal code of China, Section 297, as follows: "When persons who practise medicine or surgery without a competent knowledge thereof, administer drugs or operate with any piercing or cutting instrument in a manner contrary to practice and the established rules, and in consequence cause the death of a patient, the magistrates shall summon other men of skill to examine into the nature of the remedy which has been given, or that of the wound that has been inflicted, which has been followed by such death of a patient. If it is found that only an error can be charged, without any desire to do injury, the physician or surgeon may obtain relief from the penalties inflicted for homicide in the manner laid down in cases of accidental killing; but the accused shall be debarred forever from again engaging in the practice of his profession."

Original Communications.

MODERN METHODS IN THE
MANAGEMENT OF TYPHOID FEVER,
IN NURSING, FEEDING, AND BATHING,
WITH SPECIAL REFERENCE TO THE
PRIVATE PATIENT.

By RUSSELL BELLAMY, M. D.,

NEW YORK.

In order to handle a case of typhoid fever successfully, the presence of thoroughly skilled professional nurses is an absolute necessity. We should choose at least one of our nurses graduating from a large hospital where the greatest attention is paid to the fever patient, and who has there passed through the prescribed course. Such a hospital service is attended by expert visiting physicians of large experience and has a resident staff composed of bright men who really win and retain their appointments on the merit system. These physicians on their daily rounds can impart many advantageous suggestions to the nurse, who after several months becomes easily efficient in realizing the severity of the fever and appreciates the significance of certain phenomena which often arise in the absence of the private physician. I say select at least one thoroughly drilled fever nurse, and if the ideal is realized, all the nurses should be from the same high-class training school. But, as this is sometimes impossible, secure at least one, in order that she may instruct the other nurses graduating from the smaller schools, and impart useful suggestions to the volunteer members of the family. Several years ago, while lecturing, at the New York Hospital, before an assembly of graduate nurses, members of the Associated Alumnae of Trained Nurses of the United States and Canada, on *The Nursing of Typhoid Fever*, I had an excellent opportunity to dwell on the essential qualifications of the expert fever nurse:

"She should be strong, well, vigorous, wiry, tactful, enthusiastic, alert, and at all times appreciative of her surroundings, but with not a tinge of the alarmist in her nature. She should have a will of her own, and, if necessary, be able to carry out any heroic order that might be necessary to execute in the absence of the physician. Extreme neatness coupled with sufficient energy, in order to perform the minute details of her never-ceasing work, should conclude her qualifications." I guard most carefully my nurses, and try to smooth over any friction between the family or the servants and the nurses; look especially that they get sufficient time for daily exercise in the open air and endeavor to treat them as a just commander treats his staff officers. Thoroughly appreciating that trust, confidence, and faith we place in our nurses, we go on to some of the

other important steps in the management of a case.

So much has been written about the choice of a room for the patient that we can run hastily over this important detail. Quiet, calm, tranquil surroundings are essential. The room selected should be so arranged as to give the nearest approach to seclusion and close enough to a bath-room or lavatory to facilitate an important part of the treatment. Our patient is placed on a single bed, probably we have two, of the average white, enamel-iron hospital beds 6 feet 6 inches long, of the usual width, and about 28 inches high. Two light screens are secured, and the patient is transferred to the new bed and immediately screened off. While the nurse guards the patient, the room is rapidly dismantled, everything is removed—pictures, curtains, chairs, tables, and books. A piece of crash or canvas is brought in. The bed is lifted, and the matting, rug, floor, or carpet is protected with the clean and serviceable floor-covering. A palm and flowers, and, when available, an electric fan in hot weather, are given space, and two small tables, one for medicine, the other for the nurse's charts, two straight chairs and a couch, wicker or covered with white dimity, comprise the furniture of the room. Quite often I have two beds, but last autumn discarded one of them, having an extra mattress, which, when not in use, was sunned or aired, compactly rolled and tied, and left in a corner of the room.

The screens are now turned back and our patient finds himself in his new and rapidly transformed quarters, no noise, no disturbance, all tranquilly done within a short time, and the patient has been undisturbed. Evening shades come on. The twilight is regulated by the screens, and the gas, candle, or electric light is shaded by the many little devices our nurses so ingeniously devise. The newest is the movable canopy, or sunshade, attachment for electric lights just arrived from England. We have asked for a few glasses, cups, feeding cups, spoons, a small portable ice-box, bed-pan, hot-water bag, douche bag, graduate, blankets, special pillows, sheets and a pair of rubber sheets, and a bath thermometer. The patient's bed is placed near the centre of the room, a position that is found most comfortable. He is resting on a thin hair mattress provided with a draw-sheet, under this a rubber sheet, and all resting on woven springs. Often, when the weather is very hot, I adopt the plan carried out when I had my fever service in Bellevue Hospital. There we simply covered the wire springs with a doubled blanket. This, of course, was covered by rubber and sheet. A bed made in this way easily adapts itself to the angles of the body and is very cool and refreshing. Our patient's head is comparatively low, resting on a thin hair pillow which should be often turned, and we have enjoined him

to remain absolutely quiet, to let us nurse him, nourish him, turn, lift, and raise him, care for every possible want, and talk to him. Fortunately, he has escaped the sensation of being away from his family, of being treated by the mechanical methods so common in many hospitals, and of making a journey on a litter or in an ambulance. On the contrary, he is in his own quarters and near those who love and cherish him.

The night orders are written and read aloud by the chief nurse. While studying the chart in the adjoining room and talking in low tones to the nurse, the words "*enteric precautions*" are read on the chart for the first time, and our nurse translates, so to speak, accordingly: "One usually understands nurse, the words "*enteric precautions*" are read on taken to prevent the spreading of the disease and also guarding the general cleanliness of the patient to insure a delightful and agreeable environment. The steps taken are almost innumerable. Opportunities constantly arise when it is necessary to exercise these measures nearly every moment while nursing a fever case. Some of the most important details are special drinking and medicine glasses for patient, thermometer, linen, and usual bedside requisites. There are required constant care of the teeth, tongue, and lips with the prescribed antiseptic and disinfection of all clothing, bed linen, or anything that comes in contact with the patient. In the New York Hospital they use formaldehyde, 1 to 5,000, and let articles remain in the solution one hour. Stools and all excreta are saturated with formaldehyde, 1 to 500, thirty minutes, before being thrown away. All plumbing fixtures are flushed with the same solution. The dusting of the room and cleaning of the floor should be with cloths wet in some antiseptic solution; generally bichloride of mercury, 1 to 500, is used.

The nurse should take special care to thoroughly cleanse and disinfect her hands each time after touching the patient. Personal care and personal precautions should be constantly exercised. These are some of the many things that confront one and are classed under "*enteric precautions*."¹

Our patient's temperature is 101°, 102°, or possibly 103° F., his pulse is below 100, slow as a rule, he has a dull headache, but is cheerful and seems prepared for a siege. He is amenable and says that his greatest difficulty is going to be to keep quiet, not to be able to lift or turn his head: we do it all. We cheer him, we brighten him, but we say very little to him; we are saving every atom of his physical and nervous strength, we are preparing for a battle—a fight probably requiring closer attention, greater care, devotion, and watchfulness on the part

of the physicians and nurses than in any other disease. A long struggle ensues—three weeks of absolute anxiety, which is only slightly lessened after three weeks more. We allow him large quantities of water, non-aerated as a rule, yet now and then a sparkling water. Sometimes a tablet of lithia gives pleasure, as well as bits of lemon or lime covered with finely shaved ice; a slice of cold lemon on the tongue is most refreshing, and cooled orange juice is often relished.

The nurse asks about diet. We decide on milk, notwithstanding what so-called authorities write about its harmfulness. We know it has stood the test of years. We change it, sterilize it, Pasteurize, boil or modify it in the laboratory, peptonize it, add lime water, a bit of coffee, cocoa or tea, vanilla or cinnamon flavor, soda, peppermint, carbonic-acid water or vichy, whiskey, or brandy. Very rich milk should always be avoided. Give it hot or cold in small quantities, slowly, but always in sufficient amount to nourish the patient. It is here we note the stools and sometimes administer small doses of beta-naphtholate of bismuth, and sometimes order oxalate of cerium. Buttermilk often varies the diet, while zoolak and kumyss are popular. Use beef juice carefully and eliminate beef tea, which I have found to be most unreliable. I advise chicken broth made by boiling down a small chicken covered by one quart of water to half the quantity and afterward straining and agreeably flavoring. In the cities have been opened several shops for supplying invalids with delicate foods. Albumenized water, oatmeal water, junket, toast water, oat-flour gruel, almond milk, and farina fluid are often temporarily substituted for milk. The amount of milk to be given in the twenty-four hours varies from twenty-four to forty ounces. It is usually taken from feeding-cups or through a tube. I believe in allowing patients large quantities of water and as a matter of fact, rather insist on their drinking it often. The temperature, pulse, and respiration are generally taken every three or four hours.

In discussing the question of diet, I feel that the remarks of Professor Bruce are virtually axiomatic: "Ready guides of the local fitness and success of the diet are the number and character of the motions and the physical signs over the abdomen."

We study our patient's temperament and adhere to no absolute rules. The personal equation under consideration ranks first and foremost.

Bathing.—We must now select some method to reduce the temperature, though it may be no higher than 102.5°. Some of the baths to be described not only lower the temperature, but often bring about a revitalization to the tissues by alternating stimulation and paralysis of the vasoconstrictor and di-

¹The notes were given by Dr. Bruce, of New York, and Miss Armsby, excellent nurse, of the New York Hospital.

lator nerves in turn, increasing the circulation, thereby sending fresh blood into every organ. The list of available hydrotherapeutic measures is long and I review them hastily:

Sponge baths, warm tepid, and at 65° , or much less if the patient is of the vigorous type, alcohol and water being used. In the south raw corn whiskey instead of alcohol seems to answer every purpose. Bed baths, slush baths, the cold packs of Baruch, all these have assisted many physicians in managing fever, the ice rub, first spoken of by Hare,

Duration of the Bath: It is well to begin with a bath of sufficient duration to evaporate a pint of water, and in subsequent baths to be guided, as to the amount of water to be used, by the effect of the previous one. In the later stages of typhoid fever, one should remember that the same patient is more susceptible to the action of cold than he was in the earlier stages.

Amount of Water Evaporated a Guide Rather than the Time Taken.—The time required for evaporation varies with the amount of moisture in

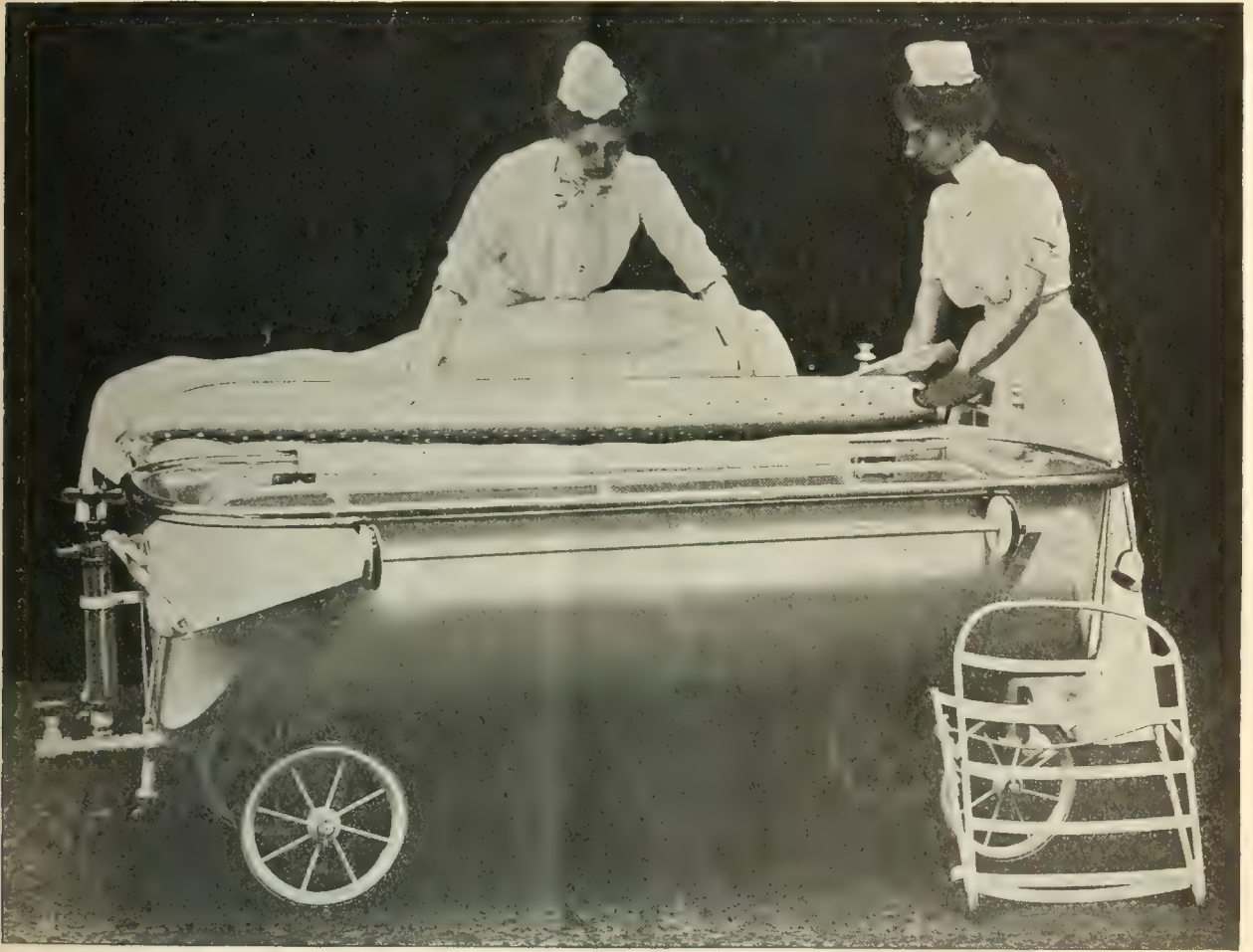


Fig. 1. Turning patient on his side, and preparing the stretcher.

and Williams's *evaporation baths*, which deserve to be popular.

Evaporation Baths.—Method of Giving a Bath: A rubber cloth or woollen blanket is put under the patient, strips of gauze suitable for surgical dressings are then placed on him, of size sufficient to go fully three fourths around each leg, each arm, and the trunk. When moistened they should cling close to the skin. There should be only one thickness of gauze. This is sprinkled with water at a temperature of 110° to 115° F. sufficiently often to keep the gauze wet, and the patient is fanned.

the air. If one pint of water is evaporated in a quarter of an hour, the patient's temperature will fall about so many degrees, but if there happens to be a high percentage of moisture in the air of the room, a longer time is required to evaporate the same amount of water, say half an hour, and there would not be quite so much lowering of the patient's temperature as when the evaporation occurred in the shorter time. Therefore it is better to be guided by the quantity of water evaporated rather than by the time.

Number of Degrees the Temperature may be Re-

amount of water evaporated from the patient may be varied by increasing the duration or frequency of the baths.

Hand-fanned Evaporation Baths.—The average reduction in temperature of twenty-two baths by hand-fanning, given to patients with typhoid fever during July, 1893, was 2.6° ; the time required for each bath varied from fifteen minutes to half an hour; and the amount of water evaporated was about a quart, at times much less, sometimes more. The temperature was taken in the mouth, and the lowest was sometimes not reached for one or even two hours after the bath; once the temperature fell four degrees and once five. The amount of moisture in the air while these baths were given was probably not far from 70 per cent. These baths are not so mild in their effects as to permit one to disregard the possibility of partial collapse in very weak patients, if pushed too far.

Sprinkling with water and the drip-baths are now seldom used and seem to have been discarded. The Brand bath, the cold coils of Leiter, the modified Brand bath, and, lastly, the writer's modification of Brand are now in use. All these methods, with the probable exception of the latter, are undoubtedly familiar to many of the profession. The ice rub has not proved a success in my cases. It seemed to chill the patients without bringing about the *necessary condition of reactionary stimulation*. Many of the above-mentioned measures have their supporters, and of these probably that of Brand is the most universally used, especially in the hospitals. Among the first to use it in America, and who are still enthusiastic over it, may be mentioned W. Gilman Thompson, Baruch, W. H. Thomson, Peabody, and Loomis in New York, Wilson, Tyson, and Hare in Philadelphia, and Osler at Johns Hopkins Hospital. To these gentlemen the profession owe a great debt of gratitude for the excellent way in which they fought their early battles when endeavoring to educate the people up to this system.

I believe that no one method will assist us more advantageously in giving our patient a rapid and uneventful recovery than that of *systematic tubbing on modern lines*.

In order that the reader may fully appreciate the modification of hydrotherapy in typhoid fever, it will be necessary to review some of the literature of the Brand bath as it is now given. Hobart Hare gives an excellent verbal picture of the procedure: "The method consists in immersing the patient every three hours, if his temperature reaches 102° or 102.5° , in a bath-tub of water at 70° F., and allowing him to remain there under friction for fifteen or twenty minutes, or until his temperature is reduced to 101° or 100° . Before the patient

enters the tub he is often given $\frac{1}{2}$ to 1 ounce (16.0-32.0) of whiskey in a little milk or water to prevent depression. The patient will generally complain bitterly of the cold, particularly at first, and will also appear blue and chilly after the bath, but these signs are not so dangerous as they are alarming. If there be persistent and prolonged coldness, then hot-water bottles may be applied to the feet and a little whiskey or brandy given. During all kinds of bathing an ice-bag should be kept to the head to prevent cerebral congestion. When the tub is used the patient should always be lifted into it and not allowed to step into it, for his strength must be preserved."

The writer watched the giving of a bath last autumn in one of the large institutions and believes that it is the method now in vogue in the principal New York hospitals. The essential part of this bath consisted in using a tub about 6 feet 6 inches long and 24 inches wide and deep, nearly filled with water at a temperature of 80° . A sheet was thrown over the patient, and, while an orderly took the head and shoulders, another took the feet. The female nurse leaned over the tub and managed the buttocks and back as best she could. In this manner the patient was lowered into the water and vigorously rubbed. His head was supported (cold cloths being used on the head) by a canvas slip under the neck. After ten or fifteen minutes the invalid was lifted (but by no means gently) into the bed. Hot bottles, stimulants, etc., were applied and administered if necessary. The house physician told me that hot milk or whiskey often preceded a bath and often followed it. A temperature of 102.5° or over usually is the index for the next bath.

The same method is carried out in the wards of Bellevue Hospital, as I described in the *Medical Record* for August 24, 1894. During my fever service it was my duty to be present at the baths and many hundreds were observed.

The following description by Dr. T. McCrae of the method adopted in the Johns Hopkins Hospital is found: "The night-dress and bed-clothes are removed under a sheet by which the patient remains covered. If he is sweating, he is rubbed dry. The bath-tub is filled outside of the ward to within six or eight inches of the top. Canvas strips are used to support the patient in the tub. These are thirty-six inches long and of a width varying from eighteen to thirty inches. They are fastened across the tub to the edges of the bath by clamps which are easily removed. The canvas strips are placed so as to form a sort of trough in which the patient lies. Their exact arrangement has to be made after the patient is in the tub. The strip at the head of the tub may be clamped all around the end so as to form a support. Two persons lift the patient, covered

by the sheet, into the bath. The attendant lifting the head slips his hands under the shoulder, and puts the patient's head in the hollow of the arm farthest away from the bath. A second attendant takes the feet, and the patient is directed to hold himself stiff when he is lifted into the tub and lowered gently into the water. The sheet is used as a covering. The strips should be so fixed that the water just covers the patient's chest. The head should be supported on a ring- or air-pillow. The patient is rubbed regularly, constantly, and systematically either with a bare hand, a rubber, or a mit-

At the end of the bath the patient is lifted back into bed, a dry sheet is held over the bath and beneath it the wet one is pulled to one side of the patient. He is lifted up as before, held to drip for an instant, and lifted into bed. The sheet is tucked around him, as is also the one that was previously put on the mackintosh sheet.

Generally a blanket is put over these; some patients like two blankets. The patient is left in the wet sheets ten minutes, after which he is rubbed dry. The sheets and mackintosh are removed, and the night-dress and bed-clothes are replaced."

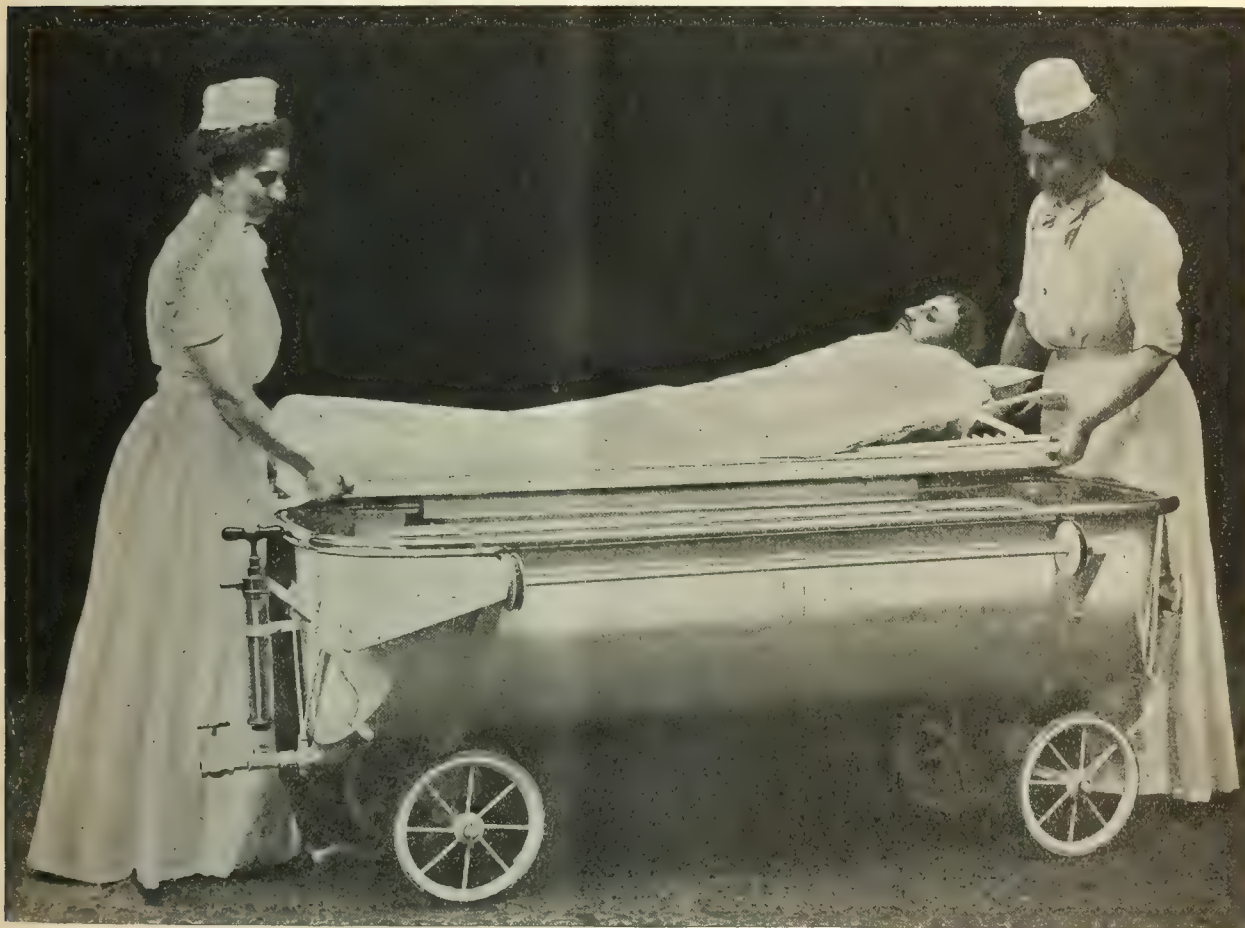


Fig. 2. -Nurses ready to lift the stretcher with the patient.

ten made of lint. The strength used depends on the feelings of the patient, and special attention should be paid to the hands and feet. The rubbing should be continued during the whole time of the bath. A cloth rung out in ice-water is placed on the patient's head when he is put into the bath-tub, and should be frequently changed. If pronounced nervous symptoms or high fever are present, ice-water is sponged freely over the head whenever the cloth is changed. The bed is prepared before the end of the bath as follows: Over the lower sheet a mackintosh is spread, and on this is put a linen sheet.

From these descriptions, it can easily be seen how much difficulty the pioneers in this treatment must have encountered. The only argument that was strongly in their favor was the low mortality rate.

The great difficulty of giving these baths, the large number of attendants required, the undoubted exertion on the part of the patient, blended with fear and anxiety, all go to show the heroism required in introducing this system. While the writer is perfectly willing to concede the many advantages the converts claim for Brand's idea, he is unwilling

to allow the method to escape censure when it can be easily proved how simple and comfortable it can be made when modified.

I recall the statements of a young naval officer who was subjected to over fifty Brand baths, and, as he put it, "the method was heroic, yea verily, barbarous." Many medical men speak in a similar way of this treatment.

In no disease does it seem so important as in this fever to give our patient absolute rest, and, above all things, the abdomen should be free from movement and strains. Those afflicted are adynamic and have very little power of resistance, and it should

Let the student carefully review the situation and re-read the writer's paper,² August 24, 1893, and consider the emphatic expressions of Stewart, of

"During the summer and autumn of 1873 many cases of typhoid fever were admitted to the wards of Bellevue Hospital, and in the different departments many methods of treatment employed."

Undoubtedly the method that yielded the best results was that of Brand, but, unfortunately, it cannot be extensively used in private practice on account of the great expense, often five nurses being required, two for night and two for day work, the fifth assisting at intervals. In hospitals this treatment can be used to much better advantage; but as now practised, and under the most favorable conditions, it has many drawbacks.

Having superintended and assisted in giving nearly twelve hundred baths, I had an opportunity to note that the system must be changed in order to lower the mortality, lessen the expense, and cause the patient less mental agitation.

The method of giving a bath in Europe, and as used in this city by Peabody at the New York Hospital and carried out extensively by W. Gilman Thompson at the Presbyterian Hospital, is used in the second medical division, under the supervision of visiting physician H. P. Loomis and assistant visiting physician C. S. Quimby.



Fig. 3. Nurses ready to lower the patient First bath. Temperature of water, 100° F.

be the aim of the practitioner to free his charge from the minutest exertion. One authority does not seem to agree to these thoughts, for he tells us that "the patient is instructed to hold himself rigid while the attendants raise and lower him into the tub." Let those familiar with the low, weak, yes, often adynamic state of typhoid when delirium is so often present and where tympanites is so frequently seen, try to imagine this physical condition of a patient endeavoring to remain stiff—think of the impossible; yet, if it does exist, think of the harm and the lost vigor and strength as a result, as well as the rapid waste of nerve force.

Present Method. The patient, after being stripped and covered by a thin sheet, is lowered by three and sometimes four nurses into a bath-tub and vigorously rubbed for fifteen or twenty minutes until the desired reduction in temperature is secured. He is then returned to bed, usually with considerable difficulty. If he is strong, the muscles are stiffened and the weight is raised with comparative ease. If the power of resistance is slight, as is usually found to be the case by the twelfth day of the disease, considerable difficulty is experienced in lifting him to the bed, and sometimes a serious traumatism has occurred. At times the patients complain of pain over the region of the body where they are handled; again, they complain of experiencing a tired feeling, and think the suddenness of being lowered into the water or roughly raised, too great a shock and rather a heroic measure.

The close relationship between the visceral and parietal peritoneum to the abdominal muscles is to be considered, especially during the period of the disease when hemorrhage is most likely to occur, since at this time even a mild traumatism to these muscles could do much harm. I am inclined to believe that many hemorrhages and severe attacks of peritonitis will be avoided if the bath can be given without the least pain or exertion on the part of the patient.

After going over the literature of typhoid fever and consulting many of New York's most prominent physicians, I found that some different mechanism for giving baths was desirable.

Montreal, and it will be easy to understand these deductions. "Death from perforation and hæmorrhage is more frequent under the Brand than any other method of treatment; relapses, however, are not more frequent."—Stewart, *Montreal Medical Journal*, February, 1899.

As can be easily observed, the difficulties are sometimes great of carrying out the method of Brand or the modified method adopted by some physicians. When one attempts to employ it in a private house, it is next to impossible to get a tub

the unpleasant features necessarily connected with it, there is no plan of treatment which gives such good results." Packard writes: "The object of the cold bath, as has frequently been pointed out, is not simply the reduction of temperature.

"Probably more important even than the reduction of temperature is the stimulating effect upon the circulatory, respiratory, and central nervous systems. If the same object in this respect can be accomplished by measures less repugnant to the patient and less difficult of application, especially in



FIG. 4.—Patient in the tub. Nurses rubbing the extremities and back.

large enough to give the bath as it should be given unless it is specially constructed—all this, to say nothing of the large number of attendants required and the great liability of having the treatment given improperly, tend to condemn Brand's idea in private practice.

Tyson's idea on this subject is as follows: "In private practice the difficulty of the treatment is greatly increased, sometimes impossible." Osler says (page 38): "The Brand method, as it is called, has steadily advanced in favor both in hospital and private practice, and, in spite of the difficulties and

private practice, and at the same time if milder hydrotherapeutic measures will control the temperature, it is difficult to see in what way the Brand method is superior to those more easy of performance."

Realizing fully what an important rôle rest plays in the successful treatment, especially of this disease, and vividly recalling the liability of injuring our patients and the rough methods used in transferring the invalided from bed to bath, and also the utter impracticability of the use in private practice, the writer wishes to present to the profession his

further modifications of his original apparatus and the marked modification in the use of water in this disease.

Typhoid Fever Bed Bath Apparatus. The apparatus which has been constructed for me by R. Kny & Co. consists of a white iron bath-tub—one of any desired material may be substituted—6 feet 4 inches long, 22 inches deep, and 20 inches wide (can be made to order in any dimensions). The supporting iron frame of this tub is on rubber wheels, and it is provided with a siphon exhaust-

iron, 2 feet long by 6 inches wide, is attached, and is used to bridge over the space between the tub and bed.

Method of Using.—The patient, naked and covered by a linen sheet, is placed upon a heavy rubber blanket, which is perforated. The bath-tub is brought to the bedside, and the nurse, standing on the outer side of the tub and gently drawing the sheet, brings first the patient's head, then the buttocks, and lastly the feet upon the steel mattress. A comfortable rubber pillow is placed under the



FIG. 5. Showing the stretcher perforated. Under framework. Movable head-rest.

pipe, so that every drop of water can be removed in a few minutes. Supporting a comfortable steel mattress, within the tub are four stout copper chains, passing over pulleys at either corner of the frame, and over a similar set under the tub. These chains are connected with an endless screw by cogs and a bicycle stop-chain. The mechanism is controlled by a crank, so that the mattress can be raised or lowered by reversing the wheel. The apparatus is so arranged that the mattress can be raised several inches above the top of the tub or lowered to the bottom. On one side a piece of white enameled

head. The crank is reversed and the patient lowered into the water suddenly or by degrees. The bath given, the mattress raised to the level of the bed, and the water having escaped through the holes in the rubber blanket, the patient is transferred to the bed in the same manner that he was moved to the bath.

The steel mattress can be detached and the whole apparatus thoroughly disinfected. It is white-enamel coated and is not clumsy. In devising this typhoid bath-tub, I had only hospital cases in view, and the manufacturer has so constructed this tub

that it is adapted to the average hospital bed. Its height evidently can be modified as desired.

When we consider that a bath can be given by one attendant, and the patient experiences no disturbance, either mental or physical, we feel that we have done something toward rendering the famous Brand system more generally available.

The adoption of the first apparatus by several of the hospitals throughout the country, and more especially by many army and navy hospitals in this country and the colonies, is a source of considerable gratification to the writer. The original is shown

one end on the outer side, near the top, are a shaft and gearing with cog-wheels working conjointly with two parallel shafts running most of the length of the tub. At the junction of the shaft a cog on either side is fitted. The long shafts have two four-inch wheels, deeply grooved, situated near either end of the apparatus. Over these wheels ply copper chains. These chains run through a grooved wheel and are attached to an iron framework which can be lowered to the bottom of the tub; fitting over this framework is a detachable metal stretcher nearly six feet long, agreeably curved and wide



FIG. 6.- Nurse emptying the tub with a powerful force pump. Longer hose can be attached.

in Fig. 1, and the improved apparatus by the manufacturer differs slightly.

Before discussing the details of the modified method, it seems advisable to thoroughly familiarize ourselves with the latest and best apparatus. This appliance consists essentially of a copper and steel copper-lined bath-tub, 6 feet 6 inches long, about 2 feet deep, and 23 inches broad at the top. The floor of the tub is gently curved as well as the ends. The border is covered by well curved nickelled moulding. This tub is mounted on rubber-tired wheels and arranged with an elbow handle so that it can be easily moved from place to place. At

enough to comfortably fit the body of the patient. There is a metal siding arranged so as to cover the space between the tub and the supposed nearby bed. A metallic head-rest, movable, is also a part of the invention. At the lower end of the tub is an exhaust-pipe with cock, and also there is a powerful pump for exhausting the water from the tub and carrying the refuse to a near-by lavatory. The apparatus,³ when placed by the side of a bed ready for

³The writer is greatly indebted to Messrs. W. & S. Schlesinger & Co., of New York, for their great interest shown in making the new appliance. The first one was presented to the Union Hospital, Fall River, Mass., by one of the writer's patients.

use, measures about 30 inches in height. The whole is of the very best workmanship and is painted with white enamel. The gearings are protected by metal covers which are detachable and are so adjusted as to make the raising of the patient an easy task. As can easily be seen by the illustrations, a patient can be removed from the bed and lowered slowly or rapidly into a tub and be raised to the level of the tub with the greatest ease. When it is found advisable not to remove the stretcher, the patient may be drawn over by means of a piece of perforated rubber sheeting which he has been lying on. The

95°. After the patient becomes accustomed to the novel treatment the water should be used at a lower temperature. The tub has been nearly filled with water and is drawn up close to the bedside. The metallic siding covers the space between the apparatus and the bed. Our patient is nude with the exception of the pubic region, this is covered with several layers of gauze or sheeting. The invalid is turned on his side. The perforated detachable stretcher, weighing only seventeen pounds, is laid by him, and he is gently turned back and the nurses grasp it firmly and lift it over to the framework



FIG. 7. The Brand method. Ordinary bath tub. Four orderlies and nurses required. A procedure requiring heroism on the part of the patient, the nurses and the physician. The old method.

perforations in the rubber and stretcher allow the water to drain from the patient's body before he is returned to the bed. As can easily be observed, an invalid can be transferred from a bed, not more than two attendants being required, given a bath, and returned to bed, never having received the least jar, strain, or discomfort. This tub is made especially large so as to allow freedom of movement of the patient and the hands and arms of the nurses while he is receiving the bath.

For at least the first three baths, the writer never advises the temperature of the water being less than

raised to the top of the tub. The movable, graded head-rest is easily adjusted, a rubber pillow slightly inflated and sometimes a horse-shoe rubber pillow is put under the back and a pillow put in place. The cranks are reversed and the patient is quickly or slowly lowered. Should a more decided reaction be desirable, the lower framework can be left at the bottom of the tub and the stretcher lowered suddenly the full depth. The bath thermometer registers accurately. Cold cloths and an ice-bag or pieces of ice are applied to the head.

The attendants carefully stroke the extremities

from below upward, never touching the abdomen or flanks, then use distinct rubbing and kneading movements. Soft brushes, mittens, or cotton gloves do for men, while my experience goes to show that the plain surface of the hand is quite rough enough for women. Friction increases water elimination, and it, together with the stimulus of cold, overcomes the paresis, and this increases heat dissipation (Baruch). Friction is greatly aided by the use of salt; as far as the writer is able to learn, its use in typhoid is undoubtedly new. Last autumn, while I was treating an exceedingly difficult case, it seemed hard to bring the blood to the surface, hence the adoption of salt. The coarse salt is used, about three pounds being added to each bath. Salt certainly aids in bringing about a reaction, and will undoubtedly be absorbed. The solution is antiseptic and, as I believe much in the powers of absorption of the skin, I certainly know of no solution that could be of greater advantage than a saline. After the third bath, I generally start with a temperature of 85° , and within ten minutes reduce it to 75° . The average bath lasts about twelve minutes.

The bath completed, the patient is raised to the bed level—this is easily accomplished, as the gearing is so arranged as to make it an easy task—and held dripping for a few seconds. The nurses arrange the blankets and hot-water bottles. I do not believe in allowing the patient to remain ten minutes in wet sheets. As a rule, some hot drink is given after the plunge. Black coffee is quite often ordered if the reaction does not seem sufficient, the temperature is taken half an hour afterward and the patient kept absolutely quiet. Often before a bath half an ounce of brandy and sometimes a few drops of tincture of capsicum or tincture of ginger are given.

Compare this procedure with those in which no apparatus is used. Note the ease, comfort, and, I feel like saying, pleasure experienced. Consider that only two attendants are required, and that in private practice how easy it is to rent the perfected appliance. Observe how easily it can be emptied and filled by using the powerful pump and necessary hose (Fig. 6). The writer believes he can state with the strongest emphasis that the modification described has robbed the method of Brand of its terrors and of its not always imaginary perils.

Sometimes it is found necessary to remove the patient quickly from the bath—the more important indications may be mentioned, as

- Signs of collapse;
- Cyanosis, especially noted in lips and ear tips;
- Convulsions;
- Nausea followed by vomiting;
- Involuntary passage of fæces;
- Hæmorrhage.

Brief Remarks on Other Plans of Treatment.

—In the first case in which it was my good fortune to use saline baths, after the patient had gone through two or three baths, the nurse called my attention to a slight irritation of the skin. At this time the patient had shown signs that the diet was not exactly of the right sort. The idea came to me that a temporary starvation would be advantageous, and, at the same time, that something must be done for the irritation caused undoubtedly by the salt. I suggested inunctions of olive oil over the extremities, back and breast. The temperature was ranging from 102.5° to 104.5° . The nurse reported that two ounces of olive oil had been rapidly absorbed, and the patient enjoyed the sensation. I gave a standing order, olive-oil inunctions every four to six hours while the patient was awake. At the same time I noticed that the patient's intestinal symptoms lessened. After twenty-four hours the amount of food given was about as usual. These inunctions of olive oil were kept up throughout the fever and the convalescence, the patient absorbing about two quarts of oil. After carefully considering the use of oil, I came to the conclusion that it acted most advantageously; the patient seemed admirably nourished and showed none of the signs of dry, callous-feeling skin. Her hair was luxuriant, and the nurse reported that she had not lost a single strand of hair. At the same time that the olive-oil inunctions were used, I suggested very slight, gradually increasing passive motion of the joints, including the hands, feet, wrists, ankles, elbows and knees. Although this patient was one of the sickest that I have ever seen, walking until the tenth day and then collapsing with a temperature of 105° , and hardly showing any signs of reaction to the writer's modification of the Brand bath until the addition of salt to the water, she had virtually no complications except a very slight hæmorrhage, and her convalescence was extremely rapid. In her case salt baths at a temperature of from 75° to 85° , olive-oil inunctions, passive motion of the extremities, and hot salt baths during convalescence were used with greatest advantage. The writer has found that an agreeable substitute for olive oil is a combination of lanolin, cocoanut oil, and almond oil flavored with oil of rose. Notwithstanding the fact that so many medical men state that they adhere to the idea of no medicines in typhoid fever, I must say that I have never seen a patient with typhoid fever that would have got well without the use of a fair amount of medication. No two cases are alike, and as one lives, in the treatment of typhoid fever, almost from hour to hour, between the tenth and twenty-first days, the writer certainly believes that the successful physician is the one who meets symptoms as they arise with the proper remedies. Certainly oil of turpentine has a distinct

action in cases where tympanites exists. Of course the urine should be carefully watched every day and the turpentine handled with care. Dionine, trional, and amylene chloral will often aid us greatly in quieting delirium. I believe the last mentioned to be the best hypnotic we have at our command, although in the autumn of 1893 trional proved itself an excellent remedy in quieting the delirious. Opium and calcium chloride are both factors to be relied on in cases in which hæmorrhage occurs, while laparotomy also bids fair to gain a high place in checking hæmorrhage. The writer has virtually eliminated the coal-tar antipyretics. Sweet spirit of nitre and in some cases Hoffmann's anodyne act agreeably, while nitroglycerin occasionally lessens resistance for a tired heart. Fluid extract of digitalis in minim doses often acts like a charm. Strychnine sulphate, ranging from a sixtieth to a twentieth of a grain, forms one of my stock remedies. Brandy, especially in cases with much diarrhœa, whiskey, and champagne as diffusible stimulants are undoubtedly, notwithstanding a lot of theoretical talk to the contrary, of the greatest advantage in adynamic cases, especially in alcoholic subjects. Hypodermic injections of camphorated oil, caffeine, sparteine, digitalin, ether, and Siberian musk can be resorted to. Very strong black coffee was suggested to me by the late Alfred L. Loomis in cases with much depression, and I saw it act splendidly during his service in the hospital.

Rectal injections of normal salt solutions can undoubtedly be resorted to, but it seems to the writer that men are becoming too enthusiastic over that plan of treatment. Too much attention is often paid by members of the profession to single methods. The best results are got when the *tout ensemble* is a consideration.

William Bellamy, of North Carolina, has had for thirty-five years a very low mortality rate in typhoid. He tells me that he uses quinine sulphate in nearly every case—in many cases to the physiological effect. Virtually all of his cases are of the double-infection type, typhomalarial. Tincture of gelsemium is a favorite remedy of his, and is especially active in the typhomalarial cases.

To consider the complications, sequelæ, and relapses of this fever would require so much space that the writer wishes to postpone it for another paper.

Immunization.—T. Wilson, of the Netley Hospital, seems to have had the largest experience with this method. He states that his conclusions are that, if the immunizing serum does not render the bacillus innocuous, it will at least modify favorably an attack. He believes that it is advisable to inoculate the troops before they go to South Africa. They

should abstain from alcohol three days at least. On the fourth day an aperient should be administered, and they should be inoculated on the fifth morning. A cubic centimetre and a half is injected into the groin. Marsden tells us that by the use of serum one can give an increased power of resistance against typhoid infection.

Convalescence.—When the temperature reaches the normal mark, the same care and consideration should be paid to the patient as has been shown him during days of pyrexia. The writer finds that the hot saline plunge, say, at a temperature of from 100° to 110°, is undoubtedly stimulating and always enjoyed by the patient.

The nurse has to be doubly vigilant at this period in order that her charge may be controlled. The convalescent period is undoubtedly the time when the imagination of the patient reaches its greatest height. He thinks only of great repasts, banquets, and sumptuous viands, and everyone knows the consequence of an error in diet during this period. While I do not believe in being more liberal in the dietary until the temperature has been normal several days, we must guard the dietary still very carefully. Professor Gilman Thompson believes in liberal feeding, especially in the condition known as "starvation temperature." I have carried out his suggestions and seen this condition rapidly relieved by a fairly vigorous diet. As a rule, I begin very quietly and calmly in the changes to be made in the diet list. The white of boiled eggs, scraped-beef sandwiches, oatmeal cooked all night and squeezed through a sieve of fine mesh, has given patients great satisfaction.—(W. J. Bellamy).

Oysters can be added and hard-boiled eggs and a bit of lettuce with cayenne pepper will often satisfy a very hungry patient. Cocoa and chocolate can be strengthened and the different broths used as the disease advances. Several proprietary foods are before the profession, but none of them seem to deserve special notice. Professor Shattuck, of Boston, and the Russian physicians believe in a very liberal diet, most of it throughout the disease.

In preparing this article the writer has consulted over a hundred English, German, French, and American authorities at the library of the Academy of Medicine, covering the latest literature of the last two years. He is deeply indebted for many of the ideas in this paper to the teachings of that great and good man the late Professor Alfred L. Loomis; to close association with that keen observer and expert teacher Professor Gilman Thompson; to his father, W. J. H. Bellamy, of North Carolina, also a pupil of the late Dr. Loomis, a man with enormous experience, covering thirty-five years of practice in a typhoid zone where malaria and typhoid mixed infection so often exist simultaneously; to Professor

Osler, of Johns Hopkins; to Professor Wilson, of Philadelphia; and to two younger members of the profession, Dr. Keays in a *Résumé* of the Treatment of Typhoid at the New York Hospital, and to his confrère, Dr. J. P. Thornley, in a similar work during his term of service as assistant attending physician at the Presbyterian Hospital in New York.

NEWPORT, R. I.

IMPERATIVE CONCEPTIONS.*

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By imperative conceptions I understand ideas, mental impressions, or emotions, nearly always painful or disagreeable, morbid in their intensity and in the persistence with which they recur in spite of the wish, will, and unimpaired judgment of the patient. The term "imperative ideas" is synonymous. With few exceptions, cases may be divided into two categories: phobias, or fears, and the doubting or questioning psychosis. In many instances both fears and doubts are present. These symptoms are peculiar, often puzzling, and apt to be confounded with hysteria, hypochondria, neurasthenia, and insanity. Hence this paper. Brief mention of a few examples will explain the trouble better than an extended description.

CASE I.—A lady of thirty-seven, intelligent, educated, travelled, and well balanced came to me for relief from a susceptibility to thunder-storms which was more than distressing. The trouble had begun in childhood and had grown with years until it constituted the *bête noir* of her existence and even a menace to her life. Not only did thunder give rise to a feeling of terror so overpowering as to make her an abject slave, but caused intense nausea, prolonged and violent emesis, and a degree of prostration comparable only to profound shock. As she had been suffering for some years from grave cardiac disease, the danger of such crises may be imagined.

Observe that I have said "*a feeling of terror.*" There was no real fear justified by suspicion or conviction. She fully comprehended the groundlessness of her panic and could reason upon the subject as clearly as any master of medicine or psychology. That she could be injured by a bolt after seeing the flash or hearing the crash, she knew to be impossible, and cheerfully characterized this pseudo-fear as absurd, but none the less did the approach of a storm

make her nervous and sick. With the distant roll of thunder self-control disappeared, and with every peal terror seemed driven into her very soul.

CASE II.—A lady, aged forty-seven, consulted me for facial spasm and for a nervous inability to go anywhere alone. The latter difficulty had begun two or three years before with a feeling of apprehension when at a distance from home, especially if no one was about. When I saw her she could just compel herself to walk to the nearest corner, about twenty-five yards from the entrance to her home, but there her wavering spirit deserted utterly and she could not force a foot beyond the curbstone. No more could she cross the street to call upon her intimate friend opposite. Many a time she resolved to be governed by such nonsense no longer, and resolutely started from her own door determined to cross over, but at the outer edge of the sidewalk the nameless dread came down and halted her as effectually as would a stone wall. Even indoors the condition persisted. Before crossing a large room she would stretch out a hand to some member of the family for the moral support of his company.

The next two cases are examples of imperative conceptions of the phobic type, although this variety is often incorrectly spoken of as morbid impulses.

CASE III.—A middle-aged man, the father of two young boys to whom he was devoted, consulted me because he said he had momentary impulses to kill them. As a matter of fact, he had nothing of the kind. What he had was the constantly recurring thought that he might do so. Conceptions of how easily he could do the deed, of the manner in which he might do it, and mental pictures of himself in the act and of their mangled bodies so persistently obtruded themselves that he was driven to distraction. He could not bear to look at a knife; the axe with which he had been accustomed to chop wood he carried off and threw into a river, and the sight of a clothes-line gave him the horrors. In reality, he had no homicidal impulse at all, but feared that in some insane moment he might have.

CASE IV.—An hysterical and neurasthenic woman of thirty-eight assured me that she frequently had a scarcely controllable impulse to kill herself and her child. The idea recurred many times a day. She could not be persuaded to go near the lake; on some days she would not go into the kitchen, because of the carving knives there, and on one occasion locked herself into a bathroom so that she might not harm the child. As in the previous case, there never was an impulse to harm herself or the child, but the constantly recurring, insistent, imperative conception of such an act, with the fear that she might do it.

Both of these patients were perfectly conscious that they had neither wish nor cause to commit the crime in question. Both shrank with horror from the thought of the deed. Neither had an abnormal desire or conviction on the subject. But neither could suppress the conception that haunted consciousness day after day.

*Read before the Illinois State Medical Society, May 22, 1901.

CASE V.—A hard-working mechanic brought his wife with the complaint that she was "no good" and must be crazy. The wife pleaded guilty to both impeachments. The trouble was that, instead of doing her housework, she sat down and thought about it. By means not always gentle the husband got her to prepare his breakfast, after which he left for work. On his return at noon he would find things as he had left them, the wife having spent the morning in a soliloquy of questioning doubt. "Shall I wash the dishes first or sweep the room? If I should wash the dishes first and break one, then I might have to go to the store to get another, and they might not have one, which would cause endless inconvenience. But if I should sweep first and do the dishes later, then I might not break a dish. Why must I do one thing before another? Why can't one do two things at once? Why do I have to ask all these questions? Why am I not like other women? I wonder if I cooked breakfast properly. It seems to me that I used sugar instead of salt. How could I have done that?" And so on *ad infinitum*. Fully aware of the futility of these abortive ratiocinations, depreciating her behavior, and deploring the consequences, this unfortunate woman was still unable to suppress the flow of conceptions perfectly useless, but so imperative as to occupy her entire attention.

CASE VI.—Just after this paper was begun, a young lady of twenty-two was referred to me by her physician because of nervousness, insomnia, mental depression, and general ill-health. The cause of all the trouble was a mystery until the young lady herself explained it—which she had not done to the family physician.

When a child, she once discovered that a little friend had confiscated some of her playthings and carried them off to her own home. Having been brought up with a New England conscience, the discovery gave this supersensitive child quite a moral shock. She began to wonder how any one could do such a thing, then to speculate on the possibility of herself doing the same, and finally to fear that she might. The result was that, for a time, she became timid about going into other houses. This trouble practically passed away, but at long intervals the conceptions would come back to torment her for a brief period. Several months before I saw the patient, they had returned with great vigor and elaboration. Now she has a constant dread that she may in some way take what does not belong to her, and turns over and over in her mind the possibility and probability of such a contingency. Furthermore, having been at a friend's house, or in a car, or in a store, or anywhere outside her own home, she is pursued by the presentiment that she may have got into her possession what belongs to another. Over and over she searches purse, chatelaine bag, pocket, and folds of her clothing to reassure herself that no foreign article is there. That she is scrupulously honest, that she could not by any means be induced to steal, she knows full well. That in some accidental way the valuables of others should become attached to her person, she freely avows to be in the highest degree improbable, and readily admits that if such a peculiar thing should happen, it could be easily adjusted. In fact, it was the very unreasonableness of her trouble which caused her to conceal it from every one but her father and mother. But, just the

same, she can no more rid herself of the notions than she can stop breathing. Hour after hour and day after day she reviews the entire question *de novo*, inspects it from every side, elaborates every consequence, and evokes every detail of this, to her, tragic drama. It is the perfect recognition of her abnormal state, with the complete impotence against the ideas, and the unceasing wear of doubt and fear that have worn her out as completely as could the most poignant grief or carking care. That she is depressed, distressed, and gloomy, has no appetite, sleeps poorly, and has no pleasure in life is perfectly natural under the circumstances.

CASE VII.—A middle-aged German woman, wife of a farmer, was brought to me because of mental trouble which had begun about a year before, in this wise: She and her husband had spent the evening at the home of her sister, a few miles distant, where there had been a social gathering of some kind. On the way home it occurred to her that she might have exchanged shawls with her sister, as the two garments were very similar. Such a doubt in itself presents nothing abnormal, but in the case of the patient it at once became pathological from its persistence, the weight attached to it, and the degree of mental perturbation occasioned by it. For several days, until she could visit the sister and have her shawl identified, she was constantly ill at ease and so distraught as to be useless about the house. Setting at rest the doubt about the shawls did not cure her. The questioning "broodiness" was immediately transferred to other objects and subjects. First it related to her customary housewifely dealings at the store. After returning from a marketing trip she was pursued by the idea that she had forgotten something or had bought the wrong article or too much or too little of it; that she had received too much money in change, or had passed a counterfeit piece, or had failed entirely to pay for some purchase; that she had injured goods in the handling or even stolen some article. Deeply troubled by these imperative conceptions, she counted money and purchases again and again, revolved in her mind all occurrences, and reviewed all transactions without ever settling the matter to her satisfaction. When I saw her she had many more troublous doubts. She was haunted by the impression that she had said something amiss, had emitted an oath, slandered someone, or conveyed a wrong impression. Of late her imperative ideas had included more than mistakes and mere moral peccadillos, conceptions of having carelessly caused the death of someone, and even of having committed murder, harried her without cessation. What wonder that she was sad, cried a great deal, was preoccupied, muttered to herself, paid but slight attention to everyday affairs, and was thought to be insane?

CASE VIII is an example of a class neither typically phobic nor dubious, but equally imperative with the others. The patient was a young man of twenty-two, and when brought to the clinic was found to have his pockets full of small scraps of paper. It was with a very shamed face, indeed, that he was induced to pull them out one after another, sometimes by the handful. He had picked them all up on the street and in public places, because if he passed a bit of paper or even picked it up, examined it, and then threw it away, he was tormented with

the idea that it might have been something of value. He had frequently tried to break the habit, but the conception was so imperious as to drive him back, sometimes many blocks, to hunt for and possess himself of the stray scrap. On a few occasions he had been unable to find it, and the distress of mind was then acute and lasted for several days. As intimated above, the young man was fully conscious of the irrationality of his conduct, but the impulse was too much for him; he yielded to it in spite of the ridicule to which it subjected him, and to which he was keenly alive.

The foregoing cases are reasonably typical of a disorder which in detail shows an infinite variety, and in extent a gradation into the normal or merely eccentric at one extreme and at the other into cases that are scarcely distinguishable from the graver psychoses. Ordinarily, however, insanity of any form is easily excluded, because there is present nothing approaching a delusion or any weakening of intellect. The phobic patient may be quite unable to enter a theatre or cross the street alone, but it is not because he has any false beliefs connected with the place. A victim of the psychosis of doubt may do many queer things and be quite incapacitated for any occupation, but he is not so because of erroneous convictions or loss of mental capacity. His memory is intact, his grasp of principles and of details alike perfect, his acuity of mind unimpaired.

Nor is it fair to rank imperative conceptions as manifestations of neurasthenia or hysteria. At least, if this is done, the bounds of these two diseases must be considerably extended—extended, indeed, to such an extent as to overlap each other by a very considerable margin. The same individual may have neurasthenia or hysteria and imperative conceptions. While in certain persons the strain and worry of imperative conceptions may bring about a neurasthenic state or induce hysterical outbreaks, relatively few of these patients have hysteria, and many of them have no neurasthenia. Some of the phobias bear a striking resemblance to hypochondria—at least, to paroxysmal hypochondria, if there could be such a thing—but in hypochondria the patient is continually convinced of the existence of some malady. He may be apparently convinced to the contrary by the arguments of his physician, but this conviction is never deep and always evanescent. On the other hand, the phobic patient, even in the throes of a paroxysm, has no real conviction of danger or disease.

The relation of imperative conceptions to other neuroses and psychoses is not one of interdependence, but of community of cause, and this cause is generally the neurotic constitution present by virtue of neuropathic heredity. It is remarkable in how many cases such heredity is present, and even in its absence evidence of congenital neural obliquity is,

as a rule, easily obtained. Illustrations are superfluous, but I might instance a few characteristic examples.

CASE IX.—A man of forty-four. His father was nervous and an inebriate, his mother died of apoplexy, one brother is nervous, has tremor and is an excessive user of cigarettes, and the oldest brother is migrainous. The patient's oldest son, seventeen years old, is nervous, peevish, and irritable, and his daughter, only eleven years old, has already begun to have migraine.

CASE X.—A woman of twenty-nine. One sister has migraine, another had severe "nervous prostration" for six or seven years, and a brother died of general paresis.

CASE XI.—A maiden lady of thirty-five. Her mother is nervous and very eccentric, two brothers are very nervous, and she herself has been nervous and emotional since childhood.

CASE XII.—A young woman of thirty-one. Her father is very nervous and at the age of forty "broke down" with "nervous prostration." A paternal uncle and paternal aunt were temporarily insane, and another paternal aunt has been mildly insane for the last twenty years. The patient's grandmother died of paralysis, and there was insanity in other members of her family. There is tuberculosis in her father's family. She has six brothers and sisters—all are nervous, one is a somnambulist, and one is a great sleep-talker.

The Prognosis is affected especially by three factors: (a) The character of the imperative conception; (b) the degree or intensity of the trouble, and (c) the nature or disposition of the patient. Confirmed subjects of the doubting and questioning or reasoning psychosis, the *Grübelnsucht* of the Germans, seldom recover, while the phobias may ordinarily be cured or greatly relieved. Bad cases of long standing, of any variety, are exceedingly difficult to handle and require all the niceties of neurological technics. Like other bad habits and tics, the earlier imperative conceptions are properly treated, the better the outlook. Pronounced neurotic heredity and neuropathic disposition are most unfavorable conditions. Assuming that a certain degree of unstable equilibrium or nervous susceptibility is necessary for the development of the malady, it will at once be seen that danger of relapse is never very remote, often imminent.

CASE XIII.—Quite recently I have seen a physician from a Southern city who has had recurrences of his trouble for fifteen years. In 1886, being then twenty-five years old, he ran about half a mile at top speed to catch a runaway team. It was a most unusual exertion for him, and, having caught the horses, he naturally found himself out of breath, exhausted, slightly dizzy, and with violent palpitation. The thought suddenly struck him that he might then and there drop dead of heart disease. The conception was so powerful (in proportion to his suscep-

tibility) as to give him quite a shock, and it annoyed him for several months. Since that time it has recurred every two to five years, brought on by any casual incident which suggests the original idea, and during its persistence he is entirely dominated by it in spite of a vigorous and active frame, a clear intellect, a perfect understanding of his own case, and poignant shame at his inability to throw off his nervous incubus. He said: "It makes me feel like a d——d fool."

Concerning possible dangers, it is to be said that patients who fear that they may jump from high places, commit suicide, or injure their friends never do so. Suicide is not unknown by any means, but those who kill themselves are not the ones who fear they may.

CASE XIV.—A married woman, thirty-two years old, a born neuropath, was sent to me a few weeks ago because she was haunted by the fear that she would kill her husband. With the phobia were incessant doubts and questions. In conversation she granted every reasonable proposition and clearly understood that every reason existed why she should not, could not, and would not injure him, and yet the idea that she would, in some mad moment, commit the crime was so overpowering that she hung herself soon after I saw her.

Note that she did not do that which she feared. If one of us had to choose between murder of a loved one and suicide, the latter alternative would be chosen. That was her position as she felt it. In like manner, the victim of imperative conceptions may commit suicide, just as sometimes does the victim of facial neuralgia or of circumstances, to free himself from an unbearable burden, but the act has no direct or necessary connection with the particular affliction of the individual.

Under the head of prognosis, too, belongs mention of the possibility of a combination with the graver psychoses or termination in them.

CASE XV.—A man, about forty-five years old, consulted me for a fear that he would throw himself from a window, also fear of knives. Under isolation in hospital, on proper treatment, he rapidly recovered and looked out of my office window, on the ninth floor, without a trace of trepidation. As he was about to leave he asked me if I could not get him a permit to dig in Lincoln Park. With great reluctance he then explained the presence of buried treasure there, and a little more questioning revealed the systematized delusions of paranoia, delusions which he had had long before his simple phobia, and quite unconnected with it.

The eventuation of imperative conceptions in insanity is very unusual, but I have seen one case in which the obtrusive ideas, at first recognized as impossible and absurd, gradually became converted into delusions.

The Treatment of imperative conceptions, in the

broadest sense, must embrace every means of breaking up a habit vicious and confirmed. As in the case of other bad habits, the same method is not applicable to every case, and an intimate knowledge of malady and individual is an enormous advantage, indeed, generally a pre-requisite of success. In the great majority of cases a course of systematic education or re-education based upon such knowledge constitutes the best treatment. An imperative conception is really a mental tic—a mental habit spasm—and, as Brissaud has found that the best therapeutics for tic of muscles is careful, graduated, oft-repeated, and long-continued training of the individual in the suppression of abnormal movements, so the victim of an imperative conception must be carefully taught to suppress his obtrusive idea and its results. The first step in this education had better be an explanation to the patient of the nature and harmlessness of his affliction, for he is apt to be in dread of insanity, paralysis, death, or crime. Naturally, this explanation must be suited to the mental capacity, beliefs, and feelings of the person, but it must be plausible and encouraging; secure his confidence and awaken his courage. The next step must be to teach him to be controlled by reason and judgment, instead of by his feelings, emotions, and impressions. These neurotics are much like children and, like children, must be governed in different ways. Some can be reasoned with and by words made to see the folly of their ways; a positive statement is enough to arouse inhibition. Others can be led, still others must be driven. Pure suggestion sometimes suffices. A process of progressive demonstration is most frequently useful. Having to deal with an affection essentially mental, treatment must be aimed at mental processes. Bitter tonics, "reconstructives," and so-called nervines are ridiculous remedies, except in a purely incidental way, and the same may be said of all assumed sources of "reflex irritation," unless it is considered wise to attack such suppositious peccant part for its purely suggestive effect. Treatment by sudden compulsion is not successful, and generally does harm. For instance:

CASE XVI.—An old acquaintance of mine, who since childhood has greatly feared thunder-storms, was walking with a friend, a large and powerful man, when a storm rapidly came up. The friend purposely delayed until the storm broke, then clasped the phobic in his arms, saying: "Now, you fool, I'm going to cure you." A struggle ensued, the victim finally breaking away by leaving his coat in his friend's hands. He did not stop running until he had reached the cellar of the nearest hotel. Relating the circumstances, he assured me that had he had a weapon at the time of the struggle he certainly would have killed his friend—such was his frantic impulse to free himself and flee from the thunder and lightning. Since the episode he has not only

feared storms more than before, but at such times people also.

Four short illustrations of treatment will suffice.

CASE XVII.—A vigorous, muscular, but impressive business man of twenty-eight years had become possessed of an agoraphobia to such an extent that he could not come down-town without someone at his side. He was first told to have his companion precede him by a few feet. This distance was rapidly increased to half a block or more, and then the companion was put behind. When he could precede the companion by a block, he was instructed to come down alone, and soon found himself cured. This was six years ago, and he has remained well.

Case II was treated in practically the same way, except that the patient was taken from home and isolated in a hospital with a sensible nurse. When she could go about with the nurse a block behind her on the opposite side of the street, she was sent around the block while the nurse waited on the corner, then around two blocks, and then she went out alone. There has been no return in four years.

CASE XVIII.—An intelligent, active business man of thirty-five years, suffering from agoraphobia based upon an imperative idea of heart disease and sudden death. He was convinced that he had no heart disease, knew that he was in first-class physical condition, and in speaking of his symptoms said: "I often feel as if someone ought to give me a good swift kick." The nature of his trouble and its genesis was carefully explained to him; he was told that he could cure himself by gradually crossing larger and larger open places alone, by not allowing himself to be dominated by the morbid ideas, and by following his judgment and mine rather than his imperative ideas and impulses. He followed directions and was soon well.

CASE XIX.—A woman of thirty-four years was constantly pestered by the idea that someone might break into her home while she was alone. She had no specific fear of murder, or violence, or robbery, but simply the constantly recurring idea of forcible entrance, and over this idea she brooded and worried, questioned and doubted, until she was a domestic wreck and anything but a helpmeet to her husband. Every morning she rose with good resolutions to conquer what she recognized to be a weakness, but every evening found her as bad as before. As isolation and training were not feasible and both intellect and will too weak to allow of management as in the preceding case, she was treated by means of hypnotism. Being a good subject, no difficulty was experienced, and she was cured by about eight treatments. Not having seen her since, I can say nothing as to the permanency of her recovery.

34 WASHINGTON STREET.

A Medical Grand Commander of Knights Templars.—On Wednesday, August 28th, the Grand Commandery of the Knights Templars of the State of Minnesota, of which Dr. J. W. Chamberlin, of St. Paul, is the grand commander, gave a reception at the Galt House, Louisville, Ky.

A STUDY OF THE TEMPERATURE, PULSE, AND RESPIRATION IN THE DIAGNOSIS AND PROGNOSIS OF CERTAIN DISEASES OF THE BRAIN.

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(Continued from page 395.)

Respiration.—That one can rarely count his own respiration accurately I have repeatedly demonstrated, both in my own person and in the persons of others. The normal respiratory act is unconscious and involuntary. We can at will make the act conscious and, to a certain extent, voluntary. We have it in our power to increase or lessen the number of respirations to the minute. As soon as one attempts to count his own respirations he becomes intensely conscious of them, and as a rule unintentionally increases or lessens the number to the minute. Not only does he modify the frequency, but it is difficult to prevent modifying their character. Some respirations will be fuller than others, and occasionally, if he does not avoid becoming too intensely absorbed in what he is doing, there will be a sighing respiration. The number of my respirations to the minute when I am quiet, I have been informed, is about 18. I have repeatedly tried to count my respirations, and I have often got from 20 to 23 to the minute at the same sitting. I have on a number of occasions counted the respirations of nervous patients while they were unaware of what I was doing, and then immediately afterward counted them after I had informed them I wanted to see how rapidly they were breathing. The result has almost invariably been 3 or 4 more respirations in the last count to the minute than in the first. In a few cases the result has been reversed.

The lesson to be learned from these observations is, not to let the patient know when we are counting the respirations. My rule is to lay my finger on the patient's pulse and count the respirations while the subject thinks I am counting the pulse.

In observing the respiration, its frequency and character should be studied and noted. Its character is either regular or irregular. If the respiration is regular, this fact should be noted after the figures indicating the frequency, with the addition, as the case may be, of "shallow," "deep," or "normal." On the other hand, if it is irregular, the character of the irregularity should be noted. An irregular respiration may be intermittent, remittent, sighing, "up-and-down," or Cheyne-Stokes in character. All these variations from the normal have considerable significance in the study of certain brain dis-

cases. A respiration that is more frequent while the patient is asleep than it is while he is awake points very strongly to organic disease of the brain, in the region of the respiratory centres. In a remarkable case which I studied about eighteen months ago, the first positive symptom observed on which I could base a diagnosis of organic brain disease was the fact that while the patient was asleep the respirations were nearly twice as frequent as they were when she was awake. This case had been thought to be hysteria before I saw it, and certainly it did present a formidable array of symptoms of this disease. The patient was under my care ten or twelve weeks immediately preceding her death. On several occasions during the last weeks of life the respirations numbered 120 to 142 to the minute during sleep, and 60 or 70 while the patient was aroused from a stupor. The autopsy showed, on microscopical examination, made by Dr. William M. Mitchell, a periarteritis of the smaller vessels of the pons. A very slow or a very rapid respiration in organic disease of the brain is of grave omen. It must be borne in mind that opium in non-lethal quantities may give rise to nearly all the irregularities of respiration, except possibly the Cheyne-Stokes, observed in organic brain disease. It also, in small therapeutic doses, slows the respiration.

For convenience, I will repeat the principal forms of irregular respiration that I am accustomed to watch for in organic disease of the brain: Stertorous; *intermittent*; *remittent*; *sighing*; "*ascending and descending*";³ and *Cheyne-Stokes*.

Stertorous.—Stertorous respiration occurs in brain lesions in which the muscles of the palate and pharynx are completely paralyzed and the palate and uvula are pushed backward and forward with each inspiration and expiration. It is always attended by coma, the reflex of the pharynx is lost, and the patient is unable to swallow. If found early in brain lesions, it denotes usually a profuse intracranial hæmorrhage. As a rule it precedes death in most cases of death by the brain. This noisy breathing is most marked while the patient is lying on his back, and may be greatly lessened by turning him on his side.

Intermittent respiration, as its name implies, is a respiration in which a pause occurs at least equal to the time required for one entire respiration. The intermission may occur one or more times a minute. It is usually 10 or 15 seconds in length. Not infrequently I have met with cases in which it was 20 or 25 seconds in length, and in the remarkable case to which reference has been made, in which the respirations sometimes were 140 to the minute while the patient was asleep or unconscious, the intermissions some days before death were two minutes in dura-

tion. Intermittency in the respiration occurs in some cases of renal and cardiac disease, from the influence of opium and probably from the effects of various other poisons on the nervous system. It is one of the early disorders of respiration in all diseases of the brain in which the respiratory centres are affected. It lends gravity to the prognosis and always precedes Cheyne-Stokes respiration, but it is not always followed by the latter. The more frequent the intermission and the greater their lengths the graver the prognosis.

Remittent respiration, in which the pause between respirations is longer than the normal, but does not equal the time required for one respiration, occurs from various organic and functional disturbances of the nervous system. When it results from organic disease of the brain, such as meningitis, apoplexy, abscess, the last stages of tumor, etc., it is not infrequently the first recognizable symptoms of interference with the respiratory centres. It has no special significance other than this. I have not been able to detect it in many cases in which intermittent and Cheyne-Stokes breathing have developed soon after.

Sighing respiration, also, occurs in various functional and organic disturbances of the central nervous system. When it is found in organic disease of the brain, it certainly adds gravity to the prognosis. It seems to indicate that the ordinary involuntary respirations are not sufficient for Nature's purposes, and extra efforts are needed to supply more oxygen to the blood. If it occurs, it is an early symptom and, like remittent respiration, denotes some disturbance in the respiratory centres.⁴

"*Up-and-down*," or "*ascending and descending*," *respiration*, next to the Cheyne-Stokes type of breathing, gives the greatest gravity to the prognosis in organic brain disease. I do not remember having seen this form of respiration described.⁵ There is no remission, or intermission, or undue pause between the respiratory acts. The patient takes a full breath and each succeeding respiration becomes less and less until the chest or abdomen scarcely seems to move, but almost immediately, without any lengthening of the natural pause, there follows a respiration a little fuller than the faintest which was the last of the descending. Each subsequent respiration increases in size until a full respiration is reached, when again, without an ab-

⁴During the preparation of this paper an adult female, a tuberculous subject for many years, began to have an occasional remittent respiration, the next day sighing and intermittent respiration was present, temperature subnormal.

⁵On reference, it is found that I described this form of respiration in a Report of Three Cases of Abscess of the Brain, *Transactions of the New York Academy of Medicine*, Third Series, Vol. VI, 1883, p. 90. I did not at that time give any name to it. I stated that one or more cases with respiration differing from the Cheyne-Stokes, similarly to that of my case, had been reported by Mills and Ott in 1881. My description in 1882 is as follows: "Just before the patient's death, when respiration approached the Cheyne-Stokes character, there was no period or interval of several seconds' duration during which the respiration intermitted, but the movements were continued regularly, increasing or lessening as the efforts at respiration reached the maximum or minimum."

³I have also termed this "up-and-down" respiration

normal pause, the respiration begins to descend. Thus the ascending and descending respiration may continue for hours before Cheyne-Stokes respiration develops. In some cases I have observed the "up-and-down" respiration to appear and disappear two or three times before the Cheyne-Stokes type has developed. In a few cases the latter has not followed and the patient has recovered.

Cheyne-Stokes respiration differs only in form from the "ascending and descending" type in the former being attended by a prolonged pause at the end of the descending respiration, and by a slighter pause at the end of the ascending respiration, but still the pause in the latter instance is greater than is observed between each two normal respirations. It must be extremely rare for recovery to take place in organic brain disease after the Cheyne-Stokes type has developed, as I have witnessed only one instance, and in this death was only temporarily postponed. In this case the patient was suffering from acute softening of the brain caused by thrombotic occlusion of a large artery. For two or three weeks the patient lived with intermittent and occasional sighing and remittent respiration, but finally the breathing assumed the ascending and descending type, followed by the Cheyne-Stokes, and death speedily took place.

Hughlings Jackson has mentioned abdominal breathing as occurring in connection with cerebral hæmorrhage. He says it is a grave symptom under such circumstances. In 1882 I reported a form of abdominal breathing noticed in the course of the history of a case of brain abscess. It may be imitated by one in health by first voluntarily expanding the abdomen, then allowing the chest to be inflated while the lower chest and abdomen are kept expanded, the expiratory movements taking place first in the abdomen and ending with the chest. This form of respiration is of grave omen, and is most commonly found in cases of great prostration, as in typhoid fever, shock, or any brain disease attended by a similar condition of the vital forces.⁶

Meningitis has rarely a temperature above 102° or 103° in its earlier stage. In tuberculous meningitis a temperature of 101° to 102° is the rule early in the disease, unless it is ushered in by one or more violent convulsions, when it may be 103° . In the final stage of the disease a temperature of 104° to 105° or even 106° denotes approaching dissolution. In some cases of tuberculous meningitis, with a large effusion into the lateral ventricles and running a prolonged course, a sudden rise of temperature to 105° or 106° may occur at irregular intervals several times during the course of the disease. I reported such a case, entitled Tuberculous Cerebrospinal Meningitis, in 1883.⁷

In purulent meningitis the temperature is variable. It may quickly reach 104° or 105° and continue thus elevated until just before death, when it may register 106° or even 107° . In all such cases the disease runs a rapid course. In other cases the temperature may be normal or subnormal at times, the patient dying from exhaustion with a rectal temperature of 1° or 2° below normal. I have seen cases of tuberculosis of the cerebral membranes in adults suffering from tuberculosis of the lungs and melancholia with a normal or subnormal temperature until the day before death. In some of these the temperature immediately preceding death was not above 100° . In the vast majority of cases of meningitis, no matter what the cause of the inflammation may be, the temperature reaches 104° , 105° or even 106° before death, and the gradual rise of temperature in the last stage of the disease indicates that the end is near. On the other hand, a sudden rise of temperature to 105° or 106° may have no such significance. Great irregularity of temperature during the course of meningitis points to sepsis or to large effusion into the lateral ventricles.

The temperature is practically the same in each axilla in meningitis, except in a few cases beginning unilaterally, as sometimes happens in syphilitic meningitis and in rare instances of tuberculous meningitis apparently starting from a tuberculous nodule situated on one side of the brain. I have seen one case of the latter character attended by hemiplegia. The temperature, taken a few hours after the first Jacksonian convulsion, was nearly 2° higher in the axilla on the paralyzed side. Before death the temperature was nearly the same in each axilla.

The pulse is variable in meningitis. Its average in the beginning of the disease is about 100; later it may become exceedingly slow, dropping to 70 or even to 40 a minute, and is then often very irregular, both in volume and in frequency. Intermissions are of frequent occurrence, the spacing between some beats may be observed to be increased, and all the beats are not of the same volume. As the end approaches and extreme exhaustion is apparent, the pulse becomes frequent whether the temperature rises or not. In all cases in which the temperature is very high toward the end the pulse is from 150 to 170 or 180, and finally may become uncountable. In cases in which there are sudden rises of temperature during the course of the disease the pulse becomes very frequent at these times.

The respiration, especially in regard to frequency, is less variable in meningitis than the temperature or pulse. The character of the respiration early in the disease is frequently of considerable diagnostic importance, especially in the tuberculous form, in which the base of the brain is usually affected. The

⁶Transactions of the College of Physicians of Philadelphia, 1883.

⁷Ibid., p. 308.

significant character early is the intermittent type with occasional sighs. There are irregular pauses in the respiration, several seconds in duration, during which the patient ceases to breathe. In a few cases in the adult supposed to be suffering from tuberculous meningitis, the intermittent respiration has been the first positive evidence on which I could base a diagnosis. The frequency of the respiration is rarely greatly disturbed in the early portion of the developed stage of the disease. In one case of subacute tuberculous meningitis there was also a periarteritis affecting the nutrient arteries of the pons and involving the respiratory centres. In this case the respiration was more rapid while the patient was asleep than while she was awake. In basilar meningitis involving mainly the posterior fossa and in cases in which the lateral ventricles are greatly distended, the respiration may be quite slow at times, and rarely exceed the normal, until the symptoms point to the beginning of the end from exhaustion. Slow respiration, with cyanosis, in basilar meningitis indicates that the respiratory centres are greatly affected. It is in such cases that sudden death may occur from arrested respiration. In all cases of meningitis in which death occurs from exhaustion, the respiration, like the pulse, becomes very rapid before the end. The gradual increase of the frequency of the respiration and pulse enables one approximately to determine about when death will occur. A sudden increase in the frequency of the respiration and pulse has no such significance. It is rare for the patient to make much of a rally after Cheyne-Stokes respiration sets in. Ascending and descending respiration without abnormal pauses, as seen in the Cheyne-Stokes type, may occur at any time after the disease is fully developed, and nearly always precedes the development of the latter.

(To be continued.)

THE

THERAPEUTICS OF WHOOPING-COUGH.

By THOMAS J. MAYS, M. D.,

PHILADELPHIA, PA.

Although whooping-cough, one of childhood's most common maladies, is accompanied by marked catarrhal disturbance of the bronchial tubes, it is unquestionably a spasmodic affection of the pneumogastric nerves, due to the affinity of a special virus for the latter structures, and in this respect bears a certain analogy to asthma and to other spasmodic disorders of the respiratory organs. Of its contagious nature there can be no doubt. A knowledge of its pathology is, therefore, quite satisfactory, but, when we come to treat it, the practitioner must confess that there is no disease before which he stands so

helpless as he does before this. At least this has been the writer's experience, who has administered every known remedy, running through a list of such drugs as the bromides, camphor, chloral, chloroform, bromoform, quinine, antipyrine, phenacetine, carbolic acid, etc., without the slightest permanent relief. In more recent years, however, and in conformity with my belief that disorders of the pneumogastric nerves is not only responsible for all the various forms of spasmodic cough, but also plays an important part in the evolution of many diseases of the lungs,¹ I applied counter-irritants over these nerves in the region of the neck in this disease with the most signal benefit. In fact this method is the only one that has ever given the least promise of amelioration to the writer. The practical way of applying this remedy is as follows: Trace the pulsating carotid artery from behind the angle of the lower jaw to the clavicle on both sides of the neck. This will be a landmark for finding the pneumogastric nerves which lie in close proximity and slightly behind the carotids. Gentle massage and kneading of this region of the neck, every hour or two, yield beneficial effects in many cases of this disease. The application of a strip of mustard plaster, about two inches wide, from the angle of the lower jaw to the clavicles on each side of the neck, two or three times a day, until the full effects of the mustard are evident, is almost sure to cause amelioration of the spasmodic cough. Equal parts of gum camphor, chloral hydrate, and menthol, applied over this region, are also very useful. Painting the same area with tincture of iodine, twice a day, until irritation of the skin is produced, is a beneficial procedure. Finally, in very stubborn cases the hypodermic injection of silver nitrate over the vagi must be resorted to in accordance with the following plan: Lift the skin over the vagus between the thumb and the forefinger of the left hand, introduce the hypodermic needle just under the elevated skin, and inject five minims of a two-and-a-half-per-cent. solution of cocaine hydrochloride. Detach the syringe from the needle and allow the latter to remain in the puncture. Wash out the syringe with water, draw a two-and-a-half-per-cent. solution of silver nitrate into the syringe, attach the latter to the needle, and throw in from three to six minims of the silver solution.

Under the influence of this line of medication the child becomes more comfortable, the paroxysms become less frequent, the severity of the cough diminishes, and altogether the affection assumes a different character, often in the space of a day or two.

¹See *Consumption, Pneumonia, and their Allies*. By Thomas J. Mays, M. D., p. 530. E. B. Treat & Co., New York, 1901.

AN UNUSUAL CASE OF GASTRIC ULCER.*

By FRANK H. MURDOCH, M. D.,

PITTSBURGH, PA.

On October 21, 1899, Mr. J. R., hotel keeper, thirty-three years of age, consulted me in regard to his stomach, and gave the following history: During the latter part of 1897 he began to be troubled with distress after meals, with bloating and belching. On Thanksgiving Day, 1898, he became suddenly ill, and was at once obliged to assume the recumbent position. During the first three days and nights of this illness he experienced, every two or three hours, severe pain in the gastric region, which was temporarily relieved by vomiting a large quantity of hot, sour fluid. He also suffered greatly from intense thirst, and became so exhausted that he was scarcely able to turn himself in bed. At the end of three days the pain and vomiting ceased, so that he was able to retain liquid food; after which time he began to improve rapidly. He was in bed altogether two weeks, and during that period lost fifty pounds in weight; but from the time he was able to leave his room, his recovery was as rapid as the onset of his illness had been sudden, for in a month his health was completely restored and he had regained the fifty pounds he had lost. For three months he remained perfectly well, but on February 15, 1899, he had a second attack similar to the first; rapid prostration, great thirst, severe pain relieved by vomiting, at frequent intervals, of great quantities of sour liquid. He was in bed two weeks and again lost fifty pounds in weight. He recovered from this attack as promptly as from the first, regained his former weight, and continued to feel perfectly well until August 1, 1899, when he began to have distress after meals, and often vomited, at 2 or 3 o'clock in the morning, food eaten during the previous day. On September 1st he had a third attack similar to the first and second before described; but from this he did not recover so promptly; for, after he was able to be up and about, vomiting continued at frequent intervals until the 12th of September, when he vomited a large quantity of blood. He was fed by the bowel for two weeks after this hæmorrhage; when he began taking liquid food by the mouth, which he continued to do until I saw him on October 21, 1899. At this time he looked pale and thin, was forty-six pounds under his normal weight, and very weak, being able to walk only a short distance at a time. He also felt very uncomfortable after eating and was very much troubled with bloating and belching. His appetite was good, his bowels regular, and he slept well.

A physical examination revealed nothing wrong, excepting that his stomach and bowels contained a large quantity of gas. Examination of the stomach contents after Ewald's test breakfast showed an absence of free hydrochloric acid, but rennet and pepsin were present. Lactic acid was absent. In the fasting condition his stomach contained no food particles, but some mucus and a good deal of bile; and for this reason I used lavage every morning for a week. On November 1st, the patient left for home, and I did not see him again for five months;

when, on April 9, 1900, he again presented himself. During these five months he had washed out his stomach occasionally in the morning before breakfast, and always found it empty. He enjoyed splendid health until two weeks ago, when he began to suffer from severe pain in the gastric region during the night, always between midnight and 3 a. m., which, an hour or two after it began, was relieved by vomiting, first a large quantity of sour fluid, and afterward food which he had taken the previous day. During these two weeks his appetite failed, he lost eighteen pounds in weight, and his stomach contained, every morning fasting, a considerable quantity of green slimy liquid. An hour after he had eaten Ewald's test breakfast, I obtained by expression, 250 cubic centimetres of thin green fluid, which contained free hydrochloric acid in excess, Toepfer's test showing an acidity of 60. Total acidity, 84.

April 10th.—At 3 o'clock this morning he vomited about a quart of liquid, but without much pain. Before he had eaten breakfast, I introduced a stomach-tube and obtained by expression 150 cubic centimetres of green liquid containing food particles and free hydrochloric acid in nearly normal amount.

Every morning from April 10th to April 13th, I was able to obtain, by expression, liquid varying in quantity from 60 to 200 cubic centimetres, which always contained food particles and free hydrochloric acid in more than normal amount, Toepfer's test usually giving an acidity of 40. After he had expressed the contents of the stomach, I washed it with a 1-to-1,000-solution of nitrate of silver, which stopped the vomiting that had occurred regularly every night for two weeks. On the afternoon of the 13th he went home.

April 19th.—He had been home a week. He vomited on the mornings of the 13th and 14th; but not since. This morning I obtained, by expression, 150 cubic centimetres of fluid mixed with food. There was still an excess of free hydrochloric acid.

April 24th.—This morning, before he had eaten breakfast, I obtained 125 cubic centimetres of liquid containing particles of beef and barley grains taken in soup yesterday at noon; free hydrochloric acid present. After this I washed out his stomach every morning for four weeks. At the end of this time I found it empty three mornings in succession, when the lavage was stopped, there being no further indication for its use. On June 15th, he took a very long drive and on the 16th had a second hæmorrhage from the stomach, the first having occurred in September, 1899, making an interval between the two hæmorrhages of nearly ten months. After vomiting the blood he continued to vomit large quantities of sour fluid, which exhausted him greatly, and in order to prevent vomiting, whenever he felt nauseated he introduced a stomach tube, and was able, every three or four hours, to express about a quart of liquid. Of this he sent me a specimen, which proved, upon examination, to be gastric juice mixed with food particles. Toepfer's test showed an acidity of 44, with a total acidity of 64. This constant secretion of gastric juice continued, as in the three first attacks, for three days and nights, when it ceased and he began to improve. He was fed by the bowel for two weeks and was confined to bed for four weeks. After leaving his room he soon

*Read at the meeting of the Allegheny County Medical Society, March, 1901.

regained his health. I saw him in September, three months after the last hæmorrhage, and he expressed himself as feeling perfectly well. I passed a stomach tube in the morning before he had eaten anything, and found his stomach empty. An examination of the stomach contents, after Ewald's test breakfast, showed that the gastric secretions were practically normal. I heard from this patient last month, and he has had no attack of either hæmorrhage or vomiting since June, and feels perfectly well. He washes his stomach occasionally in the morning before breakfast and always finds it empty.

This patient had altogether four attacks of severe pain, great thirst, rapid emaciation, with vomiting of large quantities of hot sour liquid. I did not have an opportunity of examining a sample of the stomach contents during the first three attacks, but a specimen sent me during the fourth showed the fluid obtained to be gastric juice, and, as this attack was in every way similar to the others, it is fair to suppose that the hot sour liquid previously vomited was gastric juice also.

This periodic continuous flow of gastric juice was first described by Reichman, and is known as Reichman's disease, or gastrosuccorrhœa continua periodica, to distinguish it from the chronic form of the disease. Reichman's disease, however, is regarded as a neurosis, and although the patient had four attacks of gastrosuccorrhœa, yet the presence, at times, of food in the stomach contents, when taken in the fasting condition, as well as the occurrence of hæmorrhage, sufficed to clear up the diagnosis and to show that these attacks were due, not to any nervous influence, but to the irritation produced by the ulcer.

The isochymia or stagnation of food, which also occurred at one time in this case, must have been due to a spasmodic contraction of the pylorus, resulting either from irritation caused by the presence of an open ulcer, or from the constant flow of hyperacid juice.

515 PENN AVENUE.

Therapeutical Notes.

For Generalized Pruritus.—Dr. Jay F. Schamberg (*Therapeutic Gazette*, June) has studied the effects of carbolic acid internally in several cases of generalized itching which had lasted over a period of months. Improvement took place in all cases, and cure in some. The following is the prescription used:

R Carbolic acid. 24 to 72 minims;
Glycerin. 1 to 2 drachms;
Sherry, enough to make. . . 3 ounces.

M. One drachm in water after meals.

The Medical Treatment of Amenorrhœa.—Lutaud (*Gazette médicale de Paris*; *Gazette de gynéc-*

ologie, July 5th) has used the following with success:

R Bichloride of mercury, }
Sodium arsenate, } of each $\frac{1}{4}$ of a grain;
Strychnine sulphate, }
Potassium carbonate, } of each. . . . 30 grains;
Sulphate of iron, }

M. Divide into sixty pills. One to be taken at the beginning of each meal.

In other cases when the stomach is too fatigued to tolerate mercury, he replaces it by manganese:

R Iron arsenate. $1\frac{1}{2}$ grain;
Extract of nux vomica. 15 grains;
Manganese sulphate. 75 "

M. Make sixty pills. One to be taken before each of the two principal meals.

When an amenorrhœic woman is constipated, which is not infrequently the case, he associates aloes with one of the preceding formulæ:

R Carbonate of iron, }
Gum ammoniac, } of each. 75 grains;
Socotrine aloes, }
Syrup of wormwood, q. s. to make 50 pills.

M.

One to be taken before each of the two principal meals.

When the amenorrhœa coincides with obesity, purgatives must be associated with emmenagogues. The two following formulæ have been found useful in such women as suffer from the menstrual molimen with scanty flow:

R Socotrine aloes. 15 grains;
Rue, }
Savin, } of each. $7\frac{1}{2}$ "
Saffron, }

M. For ten wafers. One before each meal.

Or

R Distilled water. 1,800 minims;
Syrup of saffron. 450 "
Essential oil of rue, } of each. 10 drops.
Essential oil of savin, }

M.

A soup-spoonful thrice daily during the period corresponding to the menstrual molimen.

The preparations of wormwood he considers worthy of trial, and gives, by preference, the infusion, 75 grains of the leaves to a pint, or an injection, 300 grains to 16 ounces.

Finally, in amenorrhœic women, he considers it desirable frequently to practice uterine catheterism.

The Treatment of Constipation.—Sir James Sawyer (*Quarterly Medical Journal*, May) in a paper read before the Leicester (England) Medical Society said that *respiratory exercises* before breakfast and dinner were of use, and advised the following: 1. To excite pressure on the liver, place the heels together, raise the arms at right angles to the body and rotate backwards and forwards two or three times. 2. Separate the feet, raise the arms and sway from side to side until the hand touches the leg below the knee. 3. Since the chief points of accumulation are the cæcum and sigmoid, press these parts

with the psoas and iliacus by standing beside a table and putting first one foot and then the other on it.

Foods.—Green vegetables should be taken, fruit, especially apples (cellulose excites peristalsis), and marmalade for breakfast.

Drugs.—Each has his favorite. Sir James, personally, preferred aloes and considered that belladonna and nux vomica were of little use.

- ℞ Socotrine aloes..... 1, 2, or 3 grains;
 Ferrous sulphate..... $\frac{1}{4}$ of a grain;
 Extract of hyoscyamus.... 1 grain.

M. ft. pil. One to be taken at bedtime.

The quantity requires readjustment, generally reduction. In obstinate constipation think of cancer of the rectum. Sometimes when a patient is impatient one must give a drug first and turn to adjuvants later. This should be done also in cases of atonic condition with dilated and loaded bowels. Salts and senna, caraway seeds, raisins, and figs are frequently very useful. The following are useful pills:

- ℞ Powdered ginger..... 1 grain;
 Barbadoes aloes, } of each..... $1\frac{1}{2}$ "
 Hard soap, }

M. ft. pil. One to be taken at bedtime.

- ℞ Powdered myrrh,
 Aloin,
 Extract of nux vomica, } of each, $\frac{1}{2}$ a grain;
 Extract of licorice,
 Hard soap, }

M. ft. pil.

For Bright's Disease with Œdema and Abundant Albuminuria.—The *Gazette hebdomadaire de médecine et de chirurgie* for August 1st cites the following from the *Journal de médecine de Paris*:

1. An exclusive regimen of boiled milk. Keep the limbs enveloped in cotton batting, covered with waxed tissue.

2. For four consecutive days, give five of the following pills:

- ℞ Powdered squill, }
 Powdered scammony, } of each, $\frac{3}{4}$ of a grain.
 Powdered digitalis, }
 Podophyllin..... $\frac{1}{2}$ " "

M. For one pill.

3. Administer daily four tablespoonfuls, in milk, of the following mixture:

- ℞ Strontium lactate..... 600 grains;
 Water..... 4,500 minims.

M.

The Extirpation of Tumors of the Orbit.—Dr. Gerasime Stathatos (*Grèce médicale*, January) arrives at the following conclusions: 1. The best operative procedure for the removal of tumors of the orbit, and especially tumors of the optic nerve, is that of Croenlein. 2. The surgeon should always operate with the intention of preserving the eyeball; if he is overcome by operative difficulties it will then be justifiable to practise enucleation. 3. In all cases in which the incomplete operation is possible, it is preferable to enucleation; the eyeball preserving some movement permits the more easy and satisfactory adjustment of one artificial eye if atrophy ensues.

Hamlet's Ague Pills.—A formula for this popular remedy is cited by the *Journal of Tropical Medicine* for August 1st from the *Indian Medical Record* for June 19th, as follows:

- ℞ Quinine sulphate..... 2 drachms;
 Powdered myrrh..... 1 drachm;
 Powdered capsicum..... 1 "

M. Make into sixty pills.

For Pityriasis of the Face and Eyebrows.—The *Gazzetta degli ospedali e delle cliniche* for May 30th says that Monin highly praises the following lotion:

- ℞ Distilled rose water..... 500 parts;
 Tincture of eucalyptus..... 50 "
 Glycerin..... 40 "
 Tincture of benzoin..... 30 "
 Tincture of opoponax..... 20 "
 Benzoate of lithium..... 15 "

M.

The Treatment of Whitlows.—The *Gazzetta degli ospedali e delle cliniche* for May 21st says that after the felon has been incised a wisp of aseptic gauze saturated in the following solution is introduced into the wound into contact with the bone, and over it is applied a compress of a solution of alum acetate:

- ℞ Metallic iodine..... 150 grains;
 Tincture of iodine, } of each... 75 "
 Tincture of rhatawy, }
 Potassium iodide..... 30 "
 Glycerin..... 450 "

M. For external use only.

Dr. Schuster, says the *Gazzetta*, who recommends this formula, asserts that under the influence of such treatment he has obtained almost instantaneous cessation of the suppuration, and cicatrization of the wound in a very few days, even in those cases that had resisted the use of iodoform gauze.

To Purify the Sick Room.—Deguy, according to the *Gazzetta degli ospedali e delle cliniche* for May 30th, recommends the evaporation in a sick room of a coffeespoonful of the following mixture in a pint of steaming water:

- ℞ Eucalyptol..... 150 minims;
 Oil of thyme, }
 Oil of cedar, } of each... 75 "
 Oil of lavender, }
 Alcohol..... 1,500 "

M.

For Hæmorrhoids.—Sir James Sawyer (*Birmingham Medical Review*, May, 1900; *Dublin Journal of Medical Science*, July, 1901) gives the following formula for an ointment for piles: Take the whole plant of the celandine (*Ranunculus ficaria*), gathered when it is blooming in the spring, cut it into small segments and keep it immersed in melted hog's lard, at a temperature of about 100° F., in the proportion of one part by weight of the plant to three parts of lard, for twenty-four hours. Then squeeze, strain, and allow it to cool and solidify. This use of the plant has long been recognized, as one of its old English names is *pilewort*.

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THE UNTOWARD EFFECTS OF ANÆSTHETICS.

It has taken a long time for the profession to realize that to set up complete anæsthesia and maintain it for a considerable length of time is a serious matter. Not that we shrink from it now any more than formerly, but we do it with the full consciousness that it is not free from danger; consequently we are more intent on guarding against severe and even troublesome after-effects, and the result is that anæsthetization as now conducted is less perilous and less unpleasant than was once the case. We believe that in all our large hospitals the management of anæsthetics is as pleasant and safe for the patient as our present knowledge admits of its being, and we believe also that outside of hospital walls the same carefulness is exercised in the great majority of instances; nevertheless, we are quite convinced that there are still too many practitioners who are not sufficiently impressed with the necessity of sparing no pains to promote the patient's safety and comfort. We therefore think it well to call attention to some excellent remarks made at a recent meeting of the Chelsea Clinical Society, London, by Dr. J. Blumfeld, a hospital anæsthetist (*Clinical Journal*, August 7th).

In the first place, as to vomiting, Dr. Blumfeld remarks that the transitory vomiting that so commonly follows on emergence from the anæsthetic condition is more apt to be induced by the use of ether than by that of chloroform, but the severe and protracted vomiting occasionally met with is more apt to be due to chloroform than to ether. The vomiting that follows anæsthetization is essentially of central origin, since it occurs also when the anæsthetic is administered by the rectum; nevertheless,

its occurrence is favored by an accumulation of material in the stomach, such as mucus which has been swallowed and, in cases of intestinal obstruction, matter consisting mainly of water, hæmatin, ferments, and altered blood-pigments regurgitated from the intestine. To remove this material, the stomach should be washed out before the anæsthetic is administered. Mingling with collections of mucus, milk has a tendency to form a stringy mass which is vomited with difficulty; hence Dr. Blumfeld thinks that milk is not suitable as the first thing to be taken into the stomach after an operation. The "preliminary starvation" to prevent vomiting is sometimes carried too far, especially in the case of infants. A child at the breast should be nursed not more than three hours before an operation; the author has seen serious collapse after circumcision which he believes was due solely to the fact that the child had not been fed for seven hours. It is well to put a baby to the breast at the end of an hour after it has regained consciousness. Vomiting from anæsthetics is much aggravated by moving the patient, especially if he is jolted and his head is allowed to dangle about; hence, so far as practicable, a patient should occupy during an operation the bed on which he is to lie subsequently.

When a person in a state of collapse is to be operated on, no special preliminary step is necessary if ether is to be used, for that anæsthetic is of itself sufficiently stimulating, but the administration of chloroform should be preceded by a subcutaneous injection of strychnine, and when the patient is under the influence of the chloroform, a pint or more of water at a temperature of 105° F. may be mixed with two ounces of brandy and slowly injected into the rectum. Stupor lasting for weeks has occasionally followed anæsthesia, especially when the operation was upon the bladder or the rectum. Insanity, usually of the maniacal type, has occurred in rare instances as a result of either the anæsthetic or the operation, and it is very dangerous to anæsthetize a person subject to recurring attacks of insanity.

Dr. Blumfeld does not deal with the matter of asphyxia from anæsthetics, but passes to a consideration of their occasional visceral effects. Chloroform, he says, is more apt to cause albuminuria than ether is; nevertheless, persons with renal disease already existing are better subjects for chloroform than for ether. Probably the liver is sometimes

affected by the anæsthetic, for jaundice not infrequently follows an operation and "biliousness" is common. Chloroform may cause fatty or granular degeneration of the cells of various structures; ether causes such changes less frequently. As for "ether pneumonia," the author does not seem to believe in its existence; when ether affects the lungs, it gives rise to a coarse bronchitis, most commonly in abdominal and breast cases, in which the pain of the wound and the bandaging make it difficult for the patient to cough up mucus. In such cases patients should not be kept flat on the back for a long time, but be propped up and be allowed to turn on to the side even within a few hours after the operation. Many of the cases of so-called "ether pneumonia" are doubtless instances of mild pulmonary embolism, a small portion of the clot formed in a ligated vein becoming detached and being carried through the heart and into the pulmonary circulation. The fear that a patient may "catch" pneumonia from the apparatus used in anæsthetization seems to the author groundless, for the vapor of ether is itself germicidal, and a well-cleansed face-piece is less likely to harbor germs than the patient's own mouth or the air of the room in which he lies is. In very rare instances acute cedema of the lungs has been found in persons who had died shortly after taking ether. Occasionally both ether and chloroform give rise to protracted hiccough or yawning. Once in a while epistaxis occurs during the administration of ether, but soon ceases on the withdrawal of the anæsthetic.

MEDICAL MEN AND PUBLIC AFFAIRS.

We have often expressed regret for the rarity with which the men of our profession take any prominent part in public affairs—affairs which, so far as they concern the interests of medical men or the efficiency of the public military services, cannot safely be left to untutored legislative bodies. In saying "untutored" we do not mean to imply that legislators are commonly deficient in general information, but that when it comes to technical matters they are necessarily in need of the special information which only persons of technical training can furnish. We do not think that legislative bodies take a special delight in degrading or underrating medical administration, though appearances sometimes point to the contrary, as in the recent reorganization act by which Congress did actually degrade the medical

department of the army. In its issue for August 10th the *Medical Record* said: "In the judge advocate general's department—the lawyer's branch of the military service—for example, the new law authorized the appointment of lawyers from civil life to the grade of a major, a grade which the same bill prevented the doctor newly appointed from civil life from receiving until after more than a quarter of a century of hard service." Commenting on the *Record's* article, the *Army and Navy Journal* for August 24th said: "To make a comparison between the treatment given to lawyers in the judge advocate general's department and that given to doctors as an evidence of designing discrimination is, we think, to do an injustice both to Congress and to the medical department. Lawyers are noted for their persistence in securing legislation in their own interests; physicians are equally celebrated for indifference in such matters. The doctor is not a lobbyist; the lawyer is." Our military contemporary goes on to remark that lawyers abound among the members of Congress, while doctors are few, and it thinks that, if there had been in Congress as many doctors as lawyers, the medical profession would have met with as intelligent treatment as the legal. "Our army doctors," it adds, "have not been an assertive body. When the means placed at their disposal for a certain task have been inadequate, even glaringly so, they have gone quietly ahead to do the best they could in the circumstances, instead of becoming noisy *Oliver Twists* and clamoring for more. It is perhaps this ability and willingness to do much with little that has caused their status in the reorganization bill to be affected to their detriment."

The *Army and Navy Journal's* appreciation of the work of the medical corps of the army is most gratifying, and we should be glad to see a goodly number of medical men in Congress. We do not expect such a state of things, however, at least in this generation, and we do not believe it is necessary for physicians to be members of a legislature in order to guide legislation. Ordinarily the essential features of Congressional action are settled upon in committee meetings, and medical men need not be members in order to exert a decided influence in shaping the results of committee-room deliberations, as was notably exemplified on more than one occasion by the late Dr. John B. Hamilton. It is not enough that anybody attempting to follow his example

should be well-informed, honest, and earnest, as we believe all the high officers of our governmental medical corps to be; he must, in addition, be possessed of the special tact that makes the diplomat. There must be such men in the medical corps of the army, in that of the navy, and in that of the Marine-Hospital Service. Officers of each of those corps are constantly stationed in Washington, and we believe it would serve an excellent purpose if those assigned to duty in the national capital were chosen with particular reference, other things being equal, to their diplomatic ability. Such a policy, it goes without saying, would in no wise be incompatible with the efforts of medical men in civil life to guide Congressional action, and we do not believe that it would be at all detrimental to the efficiency of any one of the three corps mentioned. It is manifest that the medical profession ought to have much more influence than it has in shaping public affairs, and it rests only with itself to attain such influence. Let us no longer be "celebrated for indifference in such matters."

MALTA FEVER.

This disease, endemic on the island of Malta, has until recently been supposed to be restricted within very narrow limits, but Captain and Assistant Surgeon Joseph J. Curry, U. S. V., has observed a number of cases in the Philippine Islands, and he agrees with various medical officers of the British army in the conviction that it is a widespread affection in tropical regions. From what he suggests in an article published in the new *Journal of Medical Research*, i, 1, it may be that it occurs in our southern States. Since his return from the Philippines Dr. Curry has observed eight cases in the United States Army and Navy Hospital in Hot Springs, Arkansas. Five of them were in men who had returned from the Philippines, one was that of a hospital steward who had become infected in Cuba, one was in a sailor from a man-of-war that had been cruising along the coasts of South America and Central America, and one was in a sailor from a vessel stationed in West Indian waters.

Possibly the vexed question of "typhomalarial" fever may be solved if Dr. Curry's suggestion is carried out. In our southern States, he remarks, there are instances of fever that are neither typically typhoid nor typically malarial, and he thinks it pos-

sible that many of them may be examples of Malta fever. He recommends that the sedimentation test with the *Micrococcus melitensis* be added to the list of routine blood examinations, and he thinks that it will be especially valuable and interesting to apply it in cases of persistent recurring rheumatism. In all the cases observed by him in Hot Springs the previous diagnosis had been that of rheumatism, and, indeed, in view of the prominence of the articular symptoms, this is not to be wondered at. The serum reaction in this disease has been found to occur earlier in this disease and to be more decided than the Widal reaction in typhoid fever.

These studies of Dr. Curry's convey once again the lesson that tropical diseases should be investigated more systematically than has heretofore been the case in this country and that tropical medicine should be taught in our schools. Most of the work, naturally, will in all probability fall upon the medical corps of the army, the navy, and the Marine-Hospital Service, but the results of their labors will be of great utility in civil life, particularly in the mercantile marine.

THE NEW JOURNAL OF MEDICAL RESEARCH.

The first number of the new series of the *Journal of the Boston Society of Medical Sciences*, with a change of title to that of the *Journal of Medical Research*, has just been issued. It is a handsome octavo of 298 pages of text copiously and beautifully illustrated. All the articles consist of papers that were presented at the first annual meeting of the American Association of Pathologists and Bacteriologists, held in Boston on April 5th and 6th. The new journal comes fully up to the expectation that we have entertained concerning it, and that is saying a good deal.

THE PARK AVENUE TUNNEL.

There seems to be a prospect at last that the railway people will be compelled by the city board of health to abate those features of the traffic through the tunnel which render it "dangerous to life and detrimental to health." The board, we believe, has the power to stop the business of the roads if the conditions of their operation are not ameliorated, and, in spite of the immense loss and inconvenience that would result from such a course, we do not doubt that it would be generally borne with patience as being preferable to the present method of using the tunnel.

TRAINED NURSES FOR PASSENGER VESSELS.

The *Journal of Tropical Medicine* for August 1st raises a very interesting matter in suggesting that the larger passenger vessels ought to carry a trained nurse as part of their establishment. The medical officer cannot reasonably be expected to be nurse and doctor, too; the stewardesses are not competent for the greater emergencies, and even if they were, they have all the work that could reasonably be expected of them. Moreover, a nurse's services, to be of any use, must be exclusive. It is easy to conceive of many conditions rendering the services of a nurse practically imperative in these days of modern travel. Extremely high temperature, pneumonia, dysentery, patients with chronic intestinal ailments, women travelling while *enceinte*, and threatened with miscarriage, etc., are instances in point. As the *Journal* says, it is probable that the passenger companies will raise objections at first on the score of extra expense; but there is no doubt that the knowledge of the presence of such a person on board would greatly increase the popularity of the line. But if the public sees the force of this necessity and urgently and persistently demands it, the companies will soon realize the importance of meeting the demand. To argue that passengers have got along very well hitherto without a nurse on board is, of course, an argument that will not hold water in face of the vast improvements in other respects that have been brought about for the safety and comfort of the multitudes who now travel by sea.

THE EXPULSION OF A VESICAL CALCULUS BY THE RECTUM.

Although quite uncommon, the escape of a calculus from the bladder into the rectum by ulceration seems not to be exceedingly rare, for at a recent meeting of the Northern Central Medical Society (*Gazette hebdomadaire de médecine et de chirurgie*, July 11th) it was brought out in a discussion that Chaplain had collected twenty-seven cases of the expulsion of such calculi by the anus.

VIRCHOW'S EIGHTIETH BIRTHDAY.

We are glad to learn that a dinner will probably take place in New York on October 12th in celebration of Professor Rudolf Virchow's eightieth birthday. The date is really the 13th, but that falls on a Sunday. We are sure that many American admirers of the great pathologist will be present at the dinner, including not a few of his former pupils and of those who have had the privilege of knowing him personally.

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general, during the week ending August 31, 1901:

Smallpox—United States.				
California.....	San Francisco.....	Aug. 11-18....	1 case.	
Illinois.....	Freeport.....	Aug. 17-24....	1 case.	
Maine.....	Aroostock County.....	Aug. 2.....	Present.	
Massachusetts.....	Boston.....	Aug. 17-24....	5 cases.	2 deaths.
New Jersey.....	Newark.....	Aug. 17-24....	5 cases.	2 deaths.
Pennsylvania.....	Philadelphia.....	Aug. 17-24....	7 cases.	1 death.
".....	Pittsburgh.....	Aug. 19-24....		1 death.
Wisconsin.....	Green Bay.....	Aug. 18-25....	3 cases.	
Smallpox—Foreign.				
Brazil.....	Rio de Janeiro.....	July 14-28....		64 deaths.
Canada.....	Woodstock, District.....	Aug. 2.....	80 cases.	
Colombia.....	Panama.....	Aug. 12-18....	7 cases.	
Ecuador.....	Guayaquil.....	June 12-22....		3 deaths.
Gt. Britain.....	London.....	Aug. 2-10....	11 cases.	1 death.
India.....	Bombay.....	July 23-30....		2 deaths.
".....	Calcutta.....	July 20-27....		4 deaths.
".....	Madras.....	July 20-26....		3 deaths.
Italy.....	Messina.....	Aug. 3-10....	5 cases.	2 deaths.
".....	Naples.....	Aug. 4-11....	123 cases.	26 deaths.
Japan.....	Osaka and Hiege.....	July 22-27....	1 case.	
Netherlands.....	Rotterdam.....	July 27-Aug. 10	3 cases.	
Spain.....	Malaga.....	July 1-31....		2 deaths.
".....	Valencia.....	July 27-Aug. 3		11 deaths.
Straits Settlements.....	Singapore.....	July 13-20....		1 death.
Uruguay.....	Montevideo.....	July 6-20....		43 deaths.
Yellow Fever.				
Brazil.....	Rio de Janeiro.....	July 14-20....	7 cases.	
Cuba.....	Havana.....	Aug. 10-17....	1 case.	
".....	".....	".....	from Fincis	Riquena.
Mexico.....	Tampico.....	July 26-Aug. 2	2 cases.	1 death.
".....	Vera Cruz.....	Aug. 10-17....	6 cases.	2 deaths.
Cholera.				
India.....	Bombay.....	July 23-30....		5 deaths.
".....	Calcutta.....	July 20-27....		22 deaths.
".....	Madras.....	July 20-26....		1 death.
Japan.....	Yokohama.....	July 31.....	1 case.	
Java.....	Batavia.....	July 13-20....	10 cases.	6 deaths.
Plague—Insular.				
Philippines.....	Manila.....	July 6-13....	12 cases.	10 deaths.
Brazil.....	Rio de Janeiro.....	July 20-28....		3 deaths.
Plague—Foreign.				
India.....	Bombay.....	July 23-30....		113 deaths.
".....	Calcutta.....	July 20-27....		16 deaths.
".....	Karachi.....	July 21-28....	5 cases.	7 deaths.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending August 31, 1901:

DISEASES.	Week end'g Aug. 24		Week end'g Aug. 31	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	61	16	114	25
Scarlet fever.....	90	11	66	6
Cerebro-spinal meningitis..	0	0	0	3
Measles.....	72	5	47	9
Diphtheria and croup.....	102	24	108	6
Small-pox.....	18	8	19	4
Tuberculosis.....	222	138	194	130

Society Meetings for the Coming Week:

MONDAY, September 9th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private); New York Ophthalmological Society (private); German Medical Society of the City of New York; Gynecological Society of Boston; Burlington, Vermont, Medical and Surgical Club; Norwalk, Connecticut, Medical Society (private).

TUESDAY, September 10th.—New York Academy of Medicine (Section in Genito-urinary Surgery); New York Medical Union (private); Buffalo Academy of Medicine (Section in Medicine); Rome, N. Y., Medical

Society; Medical Society of the County of Rensselaer, N. Y.; Newark (private) and Trenton, N. J., Medical Associations; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioner's Club, Richmond, Kentucky; Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, September 11th.—New York Pathological Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Philadelphia County Medical Society.

THURSDAY, September 12th.—Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Massachusetts, Medical Club (private); Pathological Society of Philadelphia.

FRIDAY, September 13th.—Yorkville Medical Association, New York (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending August 29, 1901:

BAILHACHE, PRESTON H., Surgeon. Detailed as a delegate to represent the service at the meeting of the American Public Health Association, to be held in Buffalo, September 16 to 20, 1901.

GOODMAN, F. S., Hospital Steward. Granted leave of absence for thirty days from September 1st.

HALL, L. P., Hospital Steward. Relieved from duty at Boston and directed to proceed to Vineyard Haven, Massachusetts, and report to the medical officer in command for duty and assignment to quarters.

SMITH, A. C., Passed Assistant Surgeon. Granted leave of absence for one day, under Paragraph 181, *Regulations of the United States Marine-Hospital Service*.

TODT, W. C., Acting Assistant Surgeon. Granted leave of absence for fourteen days from August 18th.

WARHANIK, C. A., Hospital Steward. Granted leave of absence for thirty days from September 4th. Resignation to take effect October 4th.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending August 31, 1901:

ATKINSON, R. T., Assistant Surgeon. Detached from the Washington Hospital and ordered to the *Wabash* immediately.

BALCH, A. W., Assistant Surgeon. Detached from the *Wabash* and ordered to the *Monongahela* immediately.

BERTOLETTE, D. N., Medical Inspector. Detached from the *New York* and ordered to the *Brooklyn* as fleet surgeon.

BRISTER, J. M., Assistant Surgeon. Assigned to the Marine Brigade, Asiatic Station.

GARDNER, J. E., Surgeon. Detached from the *Brooklyn* and ordered to the *New York*.

KENNEDY, R. M., Passed Assistant Surgeon. Detached from the *Bennington* and ordered home.

MORGAN, D. H., Passed Assistant Surgeon. Detached from the *Monongahela* and ordered to the Naval Hospital, Newport, immediately, for treatment.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending August 31, 1901:

CHAMBERLAIN, W. P., First Lieutenant and Assistant Surgeon, is granted leave of absence for eight days.

DALE, FREDERICK A., First Lieutenant and Assistant Surgeon, will proceed to the Presidio of San Francisco and report to the commanding officer, Third Battalion, Fourteenth Infantry, for temporary duty with and to

accompany the companies of that battalion to Fort Porter and Fort Niagara, N. Y.

EDIE, GUY L., Major and Surgeon. The leave granted him on surgeon's certificate of disability is extended one month.

OWEN, WILLIAM O., Major and Surgeon, is granted leave of absence for two months, to take effect upon his being relieved from duty at Fort Thomas, Kentucky.

Le Caducée: A New French Journal of Military Medicine and Surgery issued its first number on July 6th. It is to be published on the first and third Saturday of each month. Its aim is to make common property the individual labors of military medical officers of all countries.

Killing Cats to End a Diphtheria Epidemic.—At Knox, Ind., there is an epidemic of diphtheria. Seventy-six cats were killed in one day, and the board of health has issued an ultimatum that every cat in the town must be killed on the theory that cats carry the diphtheria germs from house to house in their fur.

Presentation to Dr. Patrick Manson, C. M. G., F. R. S., LL.D.—The President of the British Medical Association presented Dr. Manson, at Cheltenham, with the Stewart prize, which consisted of an illuminated scroll and a cheque for £50 (\$250). This prize is given for the encouragement of the study of epidemic diseases.

Changes of Address.—Dr. Stratford S. Corbett, to No. 333 Willis Avenue, Borough of the Bronx, New York; Dr. C. H. Dockstader, to No. 483 Manhattan Avenue, New York; Dr. George A. Elliott, to No. 2084 Washington Avenue, Borough of the Bronx, New York; Dr. Reynold Webb Wilcox, to No. 679 Madison Avenue, New York.

A Colorado Official Offers to Test Dr. Koch's Theories.—In view of the interest taken in the question of whether animal tuberculosis can be communicated to human beings, T. L. Monson, State Dairy Commissioner of Colorado, has offered himself as a subject for a thorough test of the matter, provided a suitable annuity for his family shall be assured in case of fatal results.

A Parisian Physician Offers Himself as a Sacrifice to Science.—Dr. Garnault, a physician of Paris, France, has offered himself as a living refutation of the latest Koch theory. He is willing to be inoculated with bovine tuberculin, though he feels certain of contracting the disease. Dr. Brouardel is opposed to Dr. Garnault's experiment, saying it will prove nothing.

To School the Public Against the Contagion Idea.—Arrangements are being made by Dr. Matthew J. Rodermund, the Appleton, Wis., physician who recently attracted public attention by airing his peculiar views on contagion, to found a school at Milwaukee, the object of which will be to educate the public to the idea that small-pox contagion does not exist, that quarantine is wrong and that vaccination is a crime.

Medical Students versus the State Board of Regents, in re Examinations.—Much indignation has been aroused among the students of the medical colleges of New York city and State, by a ruling of the State Board of Regents, which, if it is allowed to stand, will bar from the September examinations about one thousand eligible students. The regents have full power under the law to refuse to admit the students for examination, but the applicants say the action is directly contrary to the spirit of the law and the intention of the Legislature which passed the act last session empowering the regents to admit these students to the examination.

Vacancies in the Army Medical Department.—The examination of applicants for appointment as Assistant Surgeon in the Army has been resumed in Washington and San Francisco. The Army Medical Boards convened in those cities will remain in session so long as there are candidates to be examined. Seventy-six vacancies in the Medical Department still remain to be filled, and since it is desired by the military authorities that the department be filled up to its full legal limit as early as practicable, all eligible applicants will be afforded opportunity for examination, and those found qualified will be commissioned at an early date. Full information as to eligibility, nature and scope of examination, etc., may be obtained upon application to the Surgeon General, U. S. Army, Washington, D. C.

The Mississippi Valley Medical Association will hold its twenty-seventh annual meeting at Put-in-Bay on September 12th, 13th, and 14th. A preliminary programme has been issued, in which is shown a list of seventy-two addresses to be given by physicians from all over the country.

The First Egyptian Congress of Medicine.—The first Egyptian Congress of Medicine, under the distinguished patronage of His Excellency the Khedive, will be held at Cairo in December, 1902. The papers to be read and discussed at this important meeting will be principally in reference to the diseases peculiar to Egypt, especially cholera, bubonic plague, liver diseases, dysentery, and ophthalmia. Tuberculosis and the effects of climate will also be discussed. Among the medical men who are promoting the congress are Abbate Pacha, Comanos Pacha, physician to the Khedive; Ibrahim Pacha Hassan, dean of the Cairo Medical School; Mol Eloui Bey, the ophthalmologist, and the chief Egyptian physicians, native and foreign. Dr. Voronoff is secretary general of the committee in charge of arrangements.

A number of well-known medical men will contribute reports and send communications, a brief summary of which is here appended:

Hepatic Abscess, by Dr. Cartoulis, Dr. Voronoff, Dr. Colloridi, Comanos Pacha, and Dr. Legrand; Alcoholism and its Advance in Egypt, by Dr. de Becker; Ankylostomum Duodenale, by Dr. Sandwith, Dr. Loos, and Dr. Ruffer; Bilharzia Hæmatobia, by Dr. Milton, Dr. Morrison, Dr. Goebel, Dr. Colloridi, and Dr. Trekaki; Cardiopathia in Egypt, by Dr. de Semo; Dysentery, by Dr. Cartoulis and Dr. Hess Bey; Epidemics in Egypt, their Prophylaxis and the Means for Combating them, by Dr.

Bitter, Dr. Engel Bey, and Dr. Crendiropoulo; Bilious Fever, by Dr. Valassopoulo; Malarial Fevers, by Dr. Dreyer and Dr. Fornario; Filariasis in Egypt, by Dr. Madden; Haschisch Insanity, by Dr. Warneck; Conjunctival Granulations in Egypt, by Dr. Eloui Bey, Dr. Sameh Bey, and Dr. Lakah; Prevalence and Treatment of Hydrocele in Egypt, by Dr. Colloridi; Medicine Amongst the Arabs, by Dr. Eid; Myxœdema in Egypt, by Dr. Brossard; Ophthalmia in Egypt, by Dr. Demetriades, Dr. Voilas, and Dr. Sameh Bey; Plague, by Dr. Gotschlich; Tuberculosis in Egypt, by Dr. Ibrahim Pacha, Dr. Hassan, Dr. Eid, and Dr. Sandwith.

There is no doubt that the scientific and practical importance of this, the first medical congress of Egypt, will arrest the attention of medical men in all quarters of the globe. The attendance and co-operation of all those interested in tropical and sub-tropical medicine is cordially invited by the promoters of this enterprise.

The Röntgen Society of the United States.—

The second regular meeting will be held in Buffalo, on Tuesday and Wednesday, September 10th and 11th, under the presidency of Dr. Heber Roberts, of St. Louis. In addition to the president's address, the programme contains the following titles: The Diagnostic Value of the Röntgen Rays, with Special Reference to their Application in Medico-legal Cases, by Dr. Mihran K. Kassabian, of Philadelphia; An Examining Frame and "One Minute" Localizer, by Dr. S. H. Monell, of New York; How the Induction Static Machine Can be Excited without a Separate Charger, by Dr. John T. Pitkin, of Buffalo; The X-ray in Country Practice, by Dr. Joseph C. Clark, of Olean, N. Y.; What the X-rays Show in Actinomycosis, by Dr. G. E. Fosberg, of Cedar Rapids, Iowa; X-ray Work in Great Britain, by Dr. G. P. Girdwood, of Montreal; The Discovery of the Bacilli in Cancer, by Dr. Julius Silver-smith, of Chicago; Researches in the Direction of Obtaining Shadowgraphs of the Muscles and Ligaments of the Body, by Dr. H. Westbury, of Harrison, N. J.; The Therapeutic Value of the X-ray, by Dr. Constantin V. S. Boettger, of Ottawa, Canada; Some Medico-legal X-rays, by Dr. F. Wesley Sells, of Murray, Iowa; Investigation of X-ray Problems, by Dr. Virgilio Machado, of Lisbon, Portugal; Skiagraphy of the Concretions in Urine, Especially Cystine, by Dr. R. Jedlicka, of Prague, Bohemia; Why some Mistakes are Made in Radiography, by Dr. J. N. Scott, of Kansas City, Mo.; Description of a Simple and Efficient Form of Electrolytic Interrupter, by Dr. Elmer G. Starr, of Buffalo; The Treatment of Cutaneous Cancer by the X-rays, by Dr. G. E. Pfahler, of Philadelphia; The Use of the X-ray as a Therapeutic Agent, by Dr. H. P. Pratt, of Chicago; Some Light Rays in Tuberculosis, by Dr. J. Mount-Bleyer; X-rays an Absolute Necessity in Dental Surgery, by Dr. Frank Austin Roy; The X-ray Tube, by Dr. Emil H. Grubbe, of Chicago; The Development in the Crookes Tubes in 1901, by Dr. H. Westbury, of Harrison, N. J.; X-ray Machinery, by Dr. W. C. Fuchs, of Chicago; The Relative Efficiency of the X-ray Generators, by Dr. W. A. Price, of Cleveland; Position in Skiagraphy, by Dr. M. E. Parberry, of St. Louis; and Turk's

Gyromele and the X-rays in the Diagnosis of Diseases of the Stomach, by Dr. J. Rudis-Jicinsky, of Cedar Rapids, Iowa.

Typhoid.—No less than fifty-four cases of typhoid fever were reported last week in the Pennsylvania Hospital, Philadelphia, more than twice the number usually there at this season of the year.

The Baltimore County Medical Association, at its meeting at the Springfield Hospital on August 15th, passed resolutions regarding the treatment of the insane and commented favorably upon the excellent condition in which the institution was found.

Small-pox Among the Indians in Wisconsin.—The superintendent of the Indian schools, together with Dr. Quigg, of Tomah, was in Black River Falls, Wis., recently investigating the small-pox which is prevalent among the Winnebago Indians. They found the situation much more serious than they expected. Within a distance of three miles there were thirty cases. More than fifty cases have been reported from Brockway and Lanchester. It is impossible to force the Indians to observe quarantine regulations with the force the town has at its command.

St. Louis's Typhoid Rate.—Chicago experts assert that the impurities in the St. Louis water supply come from Kansas City, some 350 miles distant, according to the course of the Missouri. Tests, it is said, are to be made and vital statistics examined, to show the connections between the typhoid death rate of St. Louis and those of Kansas City and Missouri River towns on one hand and of Peoria and Illinois River on the other.

Dr. Teichmann has forwarded to City Counselor Schumacher a letter, calling attention to the increase of typhoid fever in St. Louis in the past three weeks, and suggesting that a meeting be held immediately to arrange for the commencement of work under the appropriation of \$25,000, which will become available in a few days. Dr. Teichmann states in his letter that the number of cases of typhoid fever reported to the board of health has shown a rapid increase of late. The week before last twenty-three cases were reported, and last week forty-six cases. The cause of the increase in typhoid, according to the city chemist, is the fall in the volume of Missouri River water and the consequent lack of dilution for the Illinois River impurities.

Death of Dr. G. W. Wells.—Dr. George William Wells, since 1892 Medical Director of the Manhattan Life Insurance Company, died at his home at Richmond Hill, L. I., on September 2d. Dr. Wells, a pupil and kinsman of the late Dr. Louis A. Sayre, was the editor of the *Medical Examiner and Practitioner*. He was born in Tyrone, Steuben county, N. Y., June 5, 1841, and graduated from Princeton in 1865. He then commenced the study of medicine in the office of Dr. Sayre, and graduated from the Bellevue Medical College in 1868. He attended the post-graduate lectures in the Long Island

College Hospital, where he was later made assistant professor of diseases of the nose and throat under Professor French. He then became physician to the outdoor poor department of the Bellevue Hospital Medical College for diseases of the chest. He was also surgeon of the old Seamen's Retreat Hospital on Staten Island, and practised for ten years as a physician in this city, and for three years in Brooklyn, when he entered actively upon the career with which he has since been identified—as medical examiner at the home office of the Mutual Life Insurance Company. Dr. Wells was a member of the American Medical Association and several other medical societies and was for ten years secretary of the Medico-Legal Society, and he had also been secretary of the Society of Medical Jurisprudence of State Medicine.

Births, Marriages, and Deaths.

Born.

PHELAN.—In San Francisco, on Saturday, August 10th, to Dr. Henry de R. Phelan, United States Army, and Mrs. Phelan, a son.

Married.

AMYX—FYFE.—In Chicago, on Tuesday, August 20th, Dr. Robert F. Amyx, of St. Louis, and Miss Mattie B. Fyfe.

CULLEN—BECKWITH.—In Williamstown, Massachusetts, on Thursday, August 22d, Dr. Thomas Stephen Cullen, of Baltimore, and Miss Emma J. Beckwith.

DIMITRY—JACOB.—In New Orleans, on Wednesday, August 28th, Dr. Theodore J. Dimitry and Miss Fernande Jacob.

FISCHER—MEYER.—In New York, on Wednesday, August 28th, Dr. Carl Fischer and Miss Fanny Meyer.

GIBBON—YOUNG.—In San Francisco, on Monday, September 2d, Dr. John Heysham Gibbon, of Philadelphia, and Miss Marjorie Young.

JONES—WILMARTH.—In Marinette, Wisconsin, on Thursday, August 22d, Dr. Stafford P. Jones and Miss Mary Wilmarth.

KEENE—PARSONS.—In Washington, on Wednesday, August 28th, Dr. Walter Prince Keene and Miss Katherine Bushnell Parsons.

LITTLE—BRONSON.—In Geneva, N. Y., on Thursday, August 29th, Dr. Frank Little, of Brooklyn, and Miss Jennie Louise Bronson.

MISH—SHIREK.—In San Francisco, on Sunday, August 25th, Dr. S. Charles Mish and Miss Wanda Shirek.

MORSE—SCHON.—In St. Louis, on Thursday, August 22d, Dr. F. L. Morse and Miss E. S. Schon.

WARD—BROWN.—In Mount Vernon, New Hampshire, on Thursday, August 22d, Dr. Frederick S. Ward, of Springfield, Massachusetts, and Miss Gertrude Stevens, daughter of Dr. John P. Brown, of Taunton, Massachusetts.

Died.

BRENT.—In Cincinnati, on Wednesday, August 21st, Dr. Columbus P. Brent, in the sixty-eighth year of his age.

JONES.—In Quincy, Massachusetts, on Sunday, August 25th, Dr. George J. Jones, in the eighty-fourth year of his age.

KIELTY.—In Fitchburg, Massachusetts, on Wednesday, August 28th, Dr. John D. Kielty, in the forty-fourth year of his age.

KINCANNON.—In Walker, Missouri, on Wednesday, August 21st, Dr. Andrew H. Kincannon, in the eighty-first year of his age.

MONTGOMERY.—In Manhattan, Kansas, on Friday, August 23d, Dr. Edward R. Montgomery.

WELLS.—In Richmond Hill, N. Y., on Monday, September 2d, Dr. George William Wells, in the fifty-eighth year of his age.

Pith of Current Literature.

Medical News, August 31, 1901.

Blood Examinations as an Aid to Surgical Diagnosis. By Dr. Joseph C. Bloodgood.—Observations have demonstrated that there is a leucocytosis of from fifteen to twenty-four thousand following hæmorrhage. The relation between the amount of blood lost and the leucocyte count is not known. In marked anæmia, especially when the hæmoglobin percentage is low, general anæsthesia, especially when prolonged, is dangerous. Thirty per cent. of hæmoglobin is a danger signal. The leucocyte count as an aid to post-operative diagnosis in abdominal surgery is most certain in the early recognition of obstruction. There is always a rise, usually of over twenty thousand, associated with any obstruction of the intestines. In the few cases observed, the rise has been prominent before the clinical symptoms themselves were sufficiently clear to make a positive diagnosis. The importance of the leucocyte count in the early recognition of acute abdominal lesions is dwelt upon by the author, but, while the cases reported are interesting and suggestive, it would seem that further observations are required before positive conclusions can be reached. In regard to the interpretation of the leucocyte count in appendicular inflammation the author believes that a rapid rise in the leucocytes, especially above eighteen thousand, should be a sufficient indication for exploration, even in those cases in which the local symptoms are very slight. In the few exceptions in which the local symptoms are sufficiently distinct to indicate an operation, a low leucocytosis should not influence us to delay operation.

The Racial Factor in Hysteria. By Dr. Julius Ullman.—In an interesting paper the author points out that hysteria is seen among all people and in all countries, and the fact that it affects certain races, such as the Jewish and the Latin races, may be attributed to causes of environment rather than to inherent qualities of a race. Heredity plays a rôle only in that the child may learn to imitate certain traits of its parent, the environment and habits remaining the same. We must not forget, however, that hysteria may be an epiphenomenon in certain organic diseases. Better therapeutic results will often be obtained among the susceptible races by drugs, suggestion, and mechanical means of treatment, directed against a latent hysterical condition, in addition to treatment for organic disease if it is present.

The Drug Habit; its Cause and Restriction. By Dr. Joseph M. Aikin.

Two Fatal Cases in Infants—Pemphigus and Erysipelas. By Dr. Frank S. Meara.

Medical Record, August 31, 1901.

Metastatic Chorioiditis Occurring in the Course of Pneumonia, Due to Grippe, Based on a Study of Six Cases with Two Autopsies. By Dr. Charles Stedman Bull.—The disease, as presented in the six cases which form the basis of this

paper, is characterized by pain in the eye and head, intense vascular congestion, with the usual symptoms of chorioiditis or iridochorioiditis, and rapid and total loss of sight. It may be ushered in by severe headache and vomiting, rise of temperature, and general febrile symptoms. The intra-ocular tension is at first increased, but subsequently sinks much below normal, even when no perforation of the eyeball occurs. The course of the disease is from three to six weeks, and the prognosis is always bad, the case ending in total blindness with a shrunken eyeball. Enucleation of these eyes is not advisable in the acute stage of suppuration, especially if the capsule of Tenon or the orbital tissue is involved.

Protozoal Life in the Blood of Man and Animals, and Some of its Evolutionary Phases in the Bodies of Suctorial Insects. By Dr. M. P. Overholzer.—The author gives an interesting contribution to the ætiology of malaria. He remarks that, in this section of the country, in the so-called intestinal colic of babes under six months of age or older, where these little ones have intermittently prolonged spells of crying day after day, and night after night for weeks at a time, quinine will give more permanent relief in the majority of cases than all the modifications of food that can be made, or any other single remedy or set of remedies named in our pharmacopœia. He believes that a microscopical examination of the blood will convince the most skeptical of the true ætiological factor in many of these cases.

Suggestions in Infant Feeding. By Dr. Charles Gilmore Kerley.—The author gives some formulæ, describes the technics of sterilization and Pasteurization, and warns against the error of beginning at birth with too strong a milk mixture, and against inattention to the case. He also points out that, very often, no distinction is made as regards food-strength for different months in the year.

The Clinical Aspects of Acute Intestinal Obstruction. By Dr. Howard Lilienthal.—Death rarely, if ever, occurs as a result of the mere retention of the fæces. The mortality of this affection is due to: (1) The shock incident to the strangulation of a vital organ; (2) sepsis from within the distended and congested gut even without the onset of peritonitis; (3) the embarrassment of the functions of the lungs and heart by the distention itself, with consequent exhaustion of the vital forces in an already weakened individual. The stomach should be washed out before operating. In the most desperate cases no general anæsthetic should be employed. A tentative incision should first be made in the right iliac region; but, if exploration proves negative, a long median incision should be made immediately. If a strangulation exists the patient must not leave the table until relieved.

Remarks on the Scientist, the Practitioner, and the Antitoxine Treatment of Diphtheria. By Dr. Adolph Rupp.—The author asserts that as the diphtheria antitoxine antagonizes only the diphtheria toxine, and as the phenomena of diphtheria (in a clinical sense) are induced by bac-

teria and their toxines other than the Klebs-Löffler bacillus, antitoxine is practically a remedy of very limited utility.

American Medicine, August 31, 1901.

Two Cases of Injury to the Diaphragm by Puncture Successfully Treated by Suturing. Transdiaphragmatic Suture of the Liver and Kidney. By Dr. Carl Schlatter.

Disease and Sin. By Dr. George M. Gould.—The author considers those sins and diseases, the entire evil products of which would be abrogated if men did not break those laws of which all know, and which all acknowledge to be good. One hundred per cent. of the effects of unchastity, syphilis, gonorrhœa, alcoholism, suicide, homicide, and war, are evil. The author proposes to combat venereal disease by the regulation of prostitution, and to prevent the evils of alcoholism by the punishment of drunkenness, and by improving the conditions of life. He believes in the interdiction of the marriage of the unfit. Statistics are given. (*To be concluded.*)

The Operative Treatment of Saddle-Nose, with Two Illustrative Cases. By Dr. Emanuel J. Senn.

Pulmonary Tuberculosis as an Insurance Problem. By Dr. Charles Lyman Greene.—The author asserts that the present requirements of a majority of our insurance companies and the usual methods of insurance examiners, are not sufficient to exclude persons suffering from incipient or arrested tuberculosis. A knowledge of the normal chest is all important. Unilateral hyperresonance is as important as unilateral dulness, and the absence of the normal breath sounds is no less significant than the presence of abnormal sounds. The examiner must rely more on auscultation than on percussion. No one sign is pathognomonic. The tuberculin reaction and the demonstration of bacilli in the sputum are impracticable measures, save in the case of substandard lives. Greater stress should be laid upon the question of direct infection, and specific questions in relation to environment should be inserted in every medical book.

The Value of Antitoxine in Diphtheria. By Dr. Walter R. Griess.—Antitoxine should be given so soon as the diagnosis is made with certainty. Children require larger doses than adults. In mild cases, two thousand units should be the initial dose, to be repeated if no improvement takes place within twelve hours. All laryngeal cases, or cases in which prostration is severe, should have, as an initial dose, four thousand units. Intubation in children should be practised before the child becomes exhausted.

The Treatment of Neurasthenia. By Dr. W. Blair Stewart.

Report of a Case of Purpura Hæmorrhagica. By Dr. A. Hymanson.

The Medical History of Dr. Samuel Johnson. By Dr. W. C. Cahall.

Philadelphia Medical Journal, August 31, 1901.

Sweat Baths and Baths which Increase Bodily Temperature. By Dr. R. Friedlaender.—Temperature-increasing baths are indicated: (1) In combating infections and toxic conditions. In acute and subacute diseases due to exposure, catarrh of the upper respiratory passages, fresh rheumatic affections of the muscles and joints, and also in other infections the onset of which is not characterized by high fever, and in which individual conditions render an increase of the fever permissible and desirable for the course of the pathological process; furthermore, in syphilis and in general gonorrhœal infection. (2) When an intense increase of metabolism is indicated from other causes, such as self-intoxication, and in conditions affecting metabolism, such as gout.

Sweat-baths are indicated: (1) When a cure by means of free diaphoresis is contemplated; in exudations and transudations, in nephritis with œdema, in hydræmia. In chronic, and especially rheumatic affections of the muscles, joints, and nerves, in the residual conditions of acute articular rheumatism, in chronic muscular rheumatism and arthritis deformans, in neuritides, and in tuberculous arthritic affections.

Traumatic Hysteria; Cranial Operation; an Interesting Pathological Condition; Recovery. By Dr. Frank R. Fry.—The author's case demonstrates that, if, in any case, there is doubt about the traumatic origin of hysterical or other psychical symptoms, or about the possibility of surgical relief, the patient should have the benefit of the doubt. To determine these matters the case should be thoroughly canvassed from a neurological standpoint.

The Use of Drugs in Pulmonary Tuberculosis. By Dr. W. R. Huggard.—The author's line of treatment is determined in the first place by the digestive system, by the general health, and by the state of nutrition. If the digestion is bad, the only drugs indicated are such as will restore it to a normal condition. If digestion is good, the general condition satisfactory, and the patient improving, the author refrains from using drugs unless some definite indication is present. Among the most important indications for drugs are persistent afternoon pyrexia in spite of absolute rest out of doors; a tendency to recurrent febrile attacks or to slight inflammatory attacks. This tendency is usually combined with impaired nutrition and with a low state of general health. In these conditions, arsenic, strychnine, quinine, and salol, are among the most useful tonics. Active softening, excessive cough, over-abundant expectoration, and, more rarely, scanty or extremely purulent or nummular expectoration, call for such drugs as formaldehyde vapor, creosote and its derivatives (except the inert carbonate of guaiacol), terpine hydrate, oil of cinnamon, myrtol, the balsams, and the lime salts.

The Inhalation of Formic Aldehyde as an Aid in the Open-air Treatment of Pulmonary Tuberculosis. By Dr. Crowry Muthu.—The results of this medicament in the author's hands have been encouraging.

Slow Pulse, with Special Reference to Stokes-Adams Disease. By Dr. Robert T. Edes.—The author gives an interesting statistical table of sixty-seven cases of slow pulse in connection with his former papers on the subject.

Journal of the American Medical Association,
August 31, 1901.

Ancient and Modern Conception of Syphilis. Chairman's Address Delivered Before the Section on Cutaneous Medicine and Surgery, at the Fifty-second Annual Meeting of the American Medical Association. By Dr. William L. Baum.

Intra-uterine Amputations, Probably Caused by Fibrin Abnormally Present in the Liquor Amnii. By Dr. J. Maher.—The author suggests that adhesions between the amnion and the fetus are more apt to cause distortions, producing so-called monstrosities, than clean-cut amputations. Considering the position of the fetus *in utero* it appears quite improbable that the arms or legs ever come into such constant and intimate contact with the amnion as to become adherent, but that, being the parts which are free and in almost continuous motion, they pick up the fibrin from the liquor amnii, when it is abnormally present.

Ectopic Pregnancy, with Report of a Case of Ovarian Pregnancy. By Dr. William H. Wathen.—The author does not believe it possible for an ectopic pregnancy to develop primarily in the peritoneal cavity, for the ovum cannot be lodged in any one place sufficiently long to form chorionic attachments, and the secretion would very soon destroy its vitality; the one or more cases of reported abdominal pregnancy, after removal of the uterus, were primarily tubal or ovarian, these organs not having been removed with the uterus.

Gynæcology, its Contribution to General Surgery. By Dr. Henry O. Marcy.—The author summarizes the contribution of gynæcology as practically the entire domain of pelvic, abdominal, and intestinal surgery.

A Case of Leprosy—A Case of Multiple Nævus Pigmentosus. By Dr. Burnside Foster.

Report of a Case of Epidermolysis Bullosa Hereditaria. By Dr. L. E. Schmidt.

Protracted Influenzal Pneumonia in Infancy. By Dr. Frank X. Walls.—An excellent text-book article. These cases must be treated individually on general principles. The sick room should be well ventilated, free from noise and at the temperature of 80° or 85° F. Diet should conform to the digestive capabilities of the infant. A daily tepid bath should be given, and several times a day the mouth and nostrils should receive a gentle alkaline and antiseptic wash. Physiological doses of belladonna and nux vomica act very well. In the event of impending heart failure, in addition to strychnine, we may employ camphor, nitroglycerin, ammonia or its salts, whiskey, and the careful administration of digitalis. Hot mustard baths for the peripheral circulation and inhalations of hot moist air for symptoms of suffocation, should be remembered. A cotton jacket around the chest is grateful to the patient, and a calomel plaster placed over the consolidated lung favorably influences the pathological condition.

Membranous Colitis. By Dr. Charles Douglas.—The author's cases illustrate the necessity there is for the physician always to examine the stools personally in gastro-enteric disturbances.

Ureteral Calculus Accurately Located by the X-Rays and Removed by an Extraperitoneal Operation. By Dr. W. W. Keen.

Remarks on Spinal Surgery, with Illustrative Cases. By Dr. Andrew J. McCosh. (*Not concluded.*)

The Gynæcologist as Consultant. By Dr. Hunter Robb.

The Rationale and Technic of Pneumatic Aural Massage. By Dr. B. Alexander Randall.—The author mentions "finger-tip massage" as being without any possibility of mischief, the means always at hand, without cost, besides which it can be used anywhere at just the time when the need for it is felt. The hollow palm placed over the auricle can in like manner exercise vigorous pneumatic massage.

Pernicious Anæmia. Report of the Progress of Cases Presented to the Association of American Physicians in Nineteen Hundred, and Report of a Case with Diffuse Spinal Cord Lesions and Post-mortem Findings. By Dr. Frank Billings.

Notes on Anæsthetics. By Dr. D. H. Gallo-way.

Case of Tubal Pregnancy. By Dr. H. W. Hendrickson.

Boston Medical and Surgical Journal, August 29, 1901.

The Treatment of Stricture of the Œsophagus. By Dr. Theodore Dunham.—The author has met with encouraging success in the dilatation of œsophageal stricture, and in this article he describes some procedures which he has devised for the treatment of cicatricial stricture.

A Discussion of the Indications for Operation in Gastric Ulcer. By Dr. Arthur T. Cabot.—The author believes that acute hæmorrhages should rarely be treated by operation; the results of intervention have not been good, while the results of medical treatment have been satisfactory. When, however, a hæmorrhage frequently repeats itself, even if severe in amount, it will demand operative treatment so soon as its recurrent character is plain. Small, frequent hæmorrhages, threatening anæmia, give a clear indication for operation. Perforation of the stomach, either acute with general peritonitis, or chronic with surrounding adhesions and perigastritis, demand instant operation. When an ulcer runs a chronic course with a strong tendency to recurrence, and gradually diminishes the patient's capacity for work and for the enjoyment of life, an operation is indicated, especially when the patient is so situated as to be dependent on his daily work for support and unable to closely regulate his diet.

Cancer of the Intestine. By Dr. Frederick B. Lund.—According to the author, operation is indicated absolutely in all cases in which a tumor is suspected of being a cancer of the intestine, after a careful eliminative diagnosis. If a benign tumor or obstruction is found, so much the better. Operation

is indicated where the symptoms point to a probability of stenosis of the bowel, whether a tumor is palpable or not. Exploratory operation is indicated whenever vague intestinal symptoms associated with loss of weight in persons past middle life lead to the suspicion of intestinal cancer. Exception should be made of cases of general metastases of the peritonæum, cancer of the liver, etc., in which event no radical operation can be proposed, but all operative measures must be directed to palliation. The constant improvement which is being made in the technics of enterectomy promises an improvement in results.

New Procedures in the Treatment of Hip Disease; Operative Dislocation and Drainage of the Acetabulum in Acetabular Disease. By Dr. E. H. Bradford.

An Apparent Case of Diphtherial Infection from Well Persons Carrying Diphtheria Bacilli. By Dr. Franklyn W. White.

British Medical Journal, August 24, 1901.

Proceedings of the Section of Navy, Army, and Ambulance at the Annual Meeting of the British Medical Association. Introductory Remarks on the Work of the Section. By the President, Deputy-Surgeon-General W. G. Don, M. D.

The Treatment of Wounded in Naval Actions. By Fleet-Surgeon Gilbert Kirker, R. N., M. D., M. Ch., M. R. C. S.—The author treats this subject under the following heads: 1. The surgeon's station, or the place where the wounded are treated. 2. The time of treatment. 3. The conveyance of the wounded.

The Disposal of the Wounded in Naval Actions. By Surgeon F. H. A. Clayton, M.D., R.N.

Floating Hospitals. By Inspector-General Belgrave Ninnis, M. D., R. N. (Retired).—The author makes a strong argument in favor of the advantage of a well-equipped hospital-ship accompanying every fleet in action, in preference to caring for the wounded on each ship.

Healthfulness of Modern Warships. By Staff Surgeon W. E. Home, R. N., M. D., B. Sc. Edin.—The author proves, by official statistics, that the modern steel battleships are much more healthful than the wooden ships which preceded them.

Some Remarks by Way of Contrast on War Surgery, Old and New. By Sir William MacCormac, Bart., K. C. B., K. C. V. O., M. A., M. Ch., LL. D., D. Sc.

The Theory of Air-borne Typhoid in Armies. By H. E. Leigh Canney, M. D.—As a result of his investigation of different epidemics of typhoid fever at various army posts in Indian and Egypt, the author has arrived at the following conclusions: (1) That air, by means of flies and dust, is an extremely weak medium of conveyance of typhoid fever in armies, both on active service and at stations.

(2) That if the army is free from typhoid it will in all probability remain so until it receives the bacillus by a water avenue.

(3) That if typhoid fever is prevalent, existing

arrangements on service leave the water avenues infinitely more accessible to the bacillus than the extremely difficult air avenues.

(4) That if typhoid fever is allowed to become very prevalent, then it is still probable that the water avenues are the most important, though the air-borne avenues increase in importance.

Medical Cadet Corps. By Surgeon-Captain J. Cantlie, M. B., F. R. C. S.—The author advocates the establishment of a medical cadet corps in every medical school, for instruction and training in military ambulance work.

The First Aid and Home Nursing Classes of the London School Board. By Robert J. Collie, M. D.

The Röntgen Rays in Military Surgery. By John Hall-Edwards, L. R. C. P. Edin., F. R. P. S.—The author reports that, in 193 cases of injury in various portions of the body, by bullets, portions of bullets, and fragments of shell, occurring in the South African War, in 65 the foreign body was localized by means of skiagraphic pictures.

Types of Entrance and Exit Wounds as Seen in South Africa. By Cuthbert S. Wallace, F. R. C. S. Eng.

Lancet, August 24, 1901.

The Treatment of Tuberculosis in Sanatoria. By Sir James Crichton-Browne, M. D. Edin., LL. D. St. And., F. R. S. Lond. and Edin.—The author considers that we have in sanatoria at the present time the best means for the arrest and cure of tuberculous disease. The reports of the sanatoria at Görbersdorf, Nordrach, and Mundesly, are referred to as evidence of the excellent results which may be obtained in such institutions. People of large means should be left to the care of private physicians with residences at great altitudes, etc., but, for people of moderate means and for the poor, sanatoria should be generally established throughout the world.

How Can the Tuberculin Test be Utilized for the Stamping Out of Bovine Tuberculosis. By Sheridan Delépine, M. B. Edin., B. Sc.—As a result of his experiments upon animals, the author has reached the following conclusions: (1) That tuberculin is an almost infallible test of the presence of tuberculosis in animals under seven years of age, when this fluid is used with proper care. (2) It is possible, by the use of tuberculin and thorough disinfection of cattle sheds, to stamp out tuberculosis from a herd in the course of one year. (3) Cases of infection which may accidentally occur after this preliminary removal of tuberculous cattle, can be easily and economically detected by the periodical use of tuberculin. (4) Tuberculous animals between two and three years of age can be disposed of on the meat market without serious loss. (5) As the slaughter of cows in calf or milch cows involves serious loss to the farmer, State help is necessary. (6) To remove the chief sources of infection, immediate slaughter should be resorted to in all cases of advanced tuberculosis or where the udder is diseased. (7) Milch cows and cows in calf, not in advanced stage of disease, should be isolated and

slaughtered only after they have been suitably prepared. Milk from tuberculous cows should be boiled. (8) Valuable breeding animals, free from advanced tuberculosis or disease of the generative organs, may be isolated and *kept for a time* for breeding, provided the calves are isolated and fed on sterilized milk. (9) Measures short of removal of all tuberculous animals, disinfection of cattle sheds and periodical testing of animals and prevention of importation of tuberculous animals will not yield satisfactory results.

The Treatment of Melancholia. By Lewis C. Bruce, M. D., F. R. C. P. Edin., and H. de Maine Alexander, M. D. Edin.—The authors of this paper consider melancholia to be a disease of disordered metabolism, and believe that treatment should be directed toward increasing the excretion of waste products of this metabolism through the channels of the urinary and integumentary systems.

Based upon this theory, their method of treatment consists in placing patients in bed and giving them an exclusive fluid diet, consisting of three pints of milk, three pints of *weak* tea, and as much water as is desired. No solid food should be given until the patient asks for it and complains of hunger. By this plan it is asserted that the arterial tension falls, and the urine is increased in amount, and the excretion of urea augmented, in some instances to 800 grains *per diem*.

As a result, the mental state, characterized by great depression, restlessness, vivid hallucinations, and sleeplessness, improves until finally a normal state is reached. Relapses have occurred from obstinate constipation, and menstrual and gastric irritation, but they have been easily controlled. The histories of four cases are given.

Three Cases of Pruritus Associated with Lymphadenoma. By Wyndham Cottle, M. D. Oxon., and Lee Dickinson, M. D. Cantab.

Congenital Hepatic Cirrhosis with Obliteration of the Bile-Ducts. By G. Parker, M. A., M. D. Cantab.—The author reports the case of a child which was normal at birth and for three weeks after, when he began to vomit, became jaundiced and the stools white. This condition persisted in spite of all treatment, the jaundice becoming deeper, for six months, when the child died suddenly.

The autopsy revealed complete obliteration of a portion of the common bile-duct.

Inunction v. Intra-Muscular Injection in the Treatment of Syphilis. By C. F. Marshall, M.D., B. Sc. Vict., F. R. C. S. Eng.—The author reports sixty-nine cases of secondary syphilis, thirty-seven of which were treated by intramuscular injections of a solution of sal alembroth, ten minims being used once a week, and thirty-two, by inunction of one half drachm of unguentum cinereum. There were sixteen relapses among the cases treated by injections, and only seven among those treated by inunctions.

In spite of the advantages claimed for injections, viz. secrecy, cleanliness, and uniformity of dose, the inunction-treatment seems to be the more reliable, and is always best where rapid mercurialization is required.

An Epidemic of Catarrhal Jaundice Probably Due to the Enteric Fever Bacillus. By J. W. Dalglish, M. D. Durh., M. R. C. S. Eng., L. R. C. P. Lond.—The author states that, during the summer and fall of 1900, there were several hundred cases of jaundice in the small town of Bloemfontein. At the same time typhoid fever and dysentery were raging to about the usual extent. The peculiar features of the epidemic were that the jaundice attacked all classes of people, the drunkard and the abstainer, those with good hygienic surroundings, and those with poor; it rose to its height and fell coincidentally with the epidemic of typhoid fever and dysentery, and, in many instances, one member of a family had typhoid fever, and another jaundice. Also, the jaundice occurred most frequently in the class which furnished the greatest number of cases of typhoid.

From these facts, and from the peculiar symptoms associated with the jaundice, viz. headache, languor, nausea, vomiting, etc., the author believes that it stood in some causal relation to the typhoid-fever bacillus.

Meat Albumin Dietary in the Treatment of Tuberculosis. By F. W. Forbes Ross, M. D. Edin., D. P. H., R. C. P. S. Lond.—The author is strongly in favor of a large amount of meat albumin for tuberculous patients.

The Condition of the Blood in Scarlet Fever. By F. Percival Mackie, M.R.C.S. Eng., L.R.C.P. Lond.—From an examination of twenty-five cases of scarlet fever, the author concludes that a moderate anæmia and a leucocytosis are present in all cases, that the leucocytes begin to increase, as a rule, about twenty-four hours after the appearance of the rash, and reach a maximum after the subsidence of the general symptoms. He also considers this leucocytosis a favorable sign, while a deficiency or sudden drop in a severe case is of bad import.

Lyon médical, August 11, 1901.

Extirpation of Glioma of the Cerebellum.—M. Jaboulay relates a case in which, in two sessions, he removed a glioma of the cerebellum with the result of a complete disappearance of all symptoms except the impaired vision, which was dependent upon a chronic nephritis. A meningeal fistula remained with a discharge of cerebrospinal fluid.

Cytological Examination of Pleural Effusions.—M. Barjon and M. Cade have examined the aspirated fluid from pleurisies of all kinds. They found an absence of polynuclear cells in tuberculous pleurisy, cancerous pleurisy, and hydrothorax. Malignant effusions are easily distinguishable by finding the special cells of the tumor in the fluid, while in tuberculous pleurisy lymphocytes predominate. Effusions in hydrothorax always present a large number of endothelial cells. Polynuclear cells were present in purulent, and pneumonic pleurisies and in effusions due to infarcts. In the first class there were only a few polynuclear cells, while, in the second, these elements overshadowed all other organic

elements. In the pleurisies due to infarcts, they constituted about a third of the cells present.

Sterilization of Rubber Catheters. By M. Phelps. (*Continued article.*)

Presse médicale, August 14, 1901.

Neuroglia in General Paralysis.—M. L. Marchand writes that the tissues affected by proliferation in general paralysis are those which are normally richest in neuroglia. In the beginning of the disease there seems to be a hyperplasia of the neuroglia. The neuroglia examined in the evolution of the disease, leads the author to conclude that it is due to some toxic element carried by the fluids of the body, as the parts near the cerebro-spinal fluid are always most affected. In the beginning there is always a proliferation of the neuroglia with a round-cell infiltration of the neighboring blood-vessels. Thus the rôle of the vascular system in the inauguration of the disease seems clear.

Gazette hebdomadaire de médecine et de chirurgie, August 15, 1901.

Influence of Castration upon the Skeleton.—M. E. Briau shows that the influence of removal of the ovaries and testicles is to increase the weight of the long bones and to augment their length. This is especially noticeable in the posterior limbs. The experiments were carried out in dogs with check animals of the same original weight for comparison. The facts correspond with clinical evidence obtained from eunuchs.

August 18, 1901.

Cytodiagnosis. By M. C. Nicolle.

Kidney and Liver in Gastro-intestinal Diseases of Children.—M. P. Merklen says that the main symptoms of renal disturbance in the gastro-intestinal disturbances of infants are dyspnoea and oedema, the albuminuria being a secondary symptom. The benign forms unaccompanied by high fever are easily distinguished from the grave forms, which are accompanied by fever and the usual signs of an infectious disease. In the former, the urine is normal in quantity, of a specific gravity below 1010, of a clear yellow, and of little odor; in the severer forms of intestinal disorder the quantity is diminished, is of a brown color and of increased acidity rapidly becoming alkaline. Uric acid and urates are found in the copious sediment. The specific gravity ranges from 1015 to 1020.

Berliner klinische Wochenschrift, July 29, 1901.

Heredity in Pathology.—Dr. Friedrich Martius takes up the problems of the inheritance of pathological conditions. (*Continued article.*)

Carbon Disulphide Poisoning.—Dr. E. Mendel reports two cases of poisoning by the inhalation of carbon disulphide. In both cases, atrophy in the supply area of the median, ulnar, and radial nerves, was found with partial reaction of degeneration and paresis in the areas supplied by the tibial and peroneal nerves. In one of the patients there was an isolated electric change in the extensor brevis digitorum.

Chronic Pentosuria. By Dr. Fritz Meyer.

The Frequency of Herpes Zoster.—Dr. E. Hœnnicke says that herpes zoster forms one per cent. of all skin diseases. There appears to be no difference in the sexes as to susceptibility. It occurs most often from the fifteenth to the thirtieth years, and is rare in old age. The greater the nerve supply to a part, the more frequently does herpes attack that part. The region of the trigeminus is most often attacked. Either side of the body may be the seat of the disease, although a bilateral seizure is unusual. Physicians and nurses are likely to get the disease during an epidemic, which occurs most often during the spring or fall.

Locomotor Ataxia in Women.—Dr. P. Fehre says that the same ætiological factors cause the disease in women as in men, among which, syphilis is the most prominent. Puerperal processes augment the disease but little. The increase of lues and the increased activity of women in industrial life have augmented the number of cases in the sex.

August 5, 1901.

Puerperal Psychoses.—Dr. E. Meyer reports fifty-one cases of psychoses arising during the puerperium. Of these, eleven were of melancholia, four of periodic melancholia, three of circular psychoses, five cases of paranoia, nine of acute insanity, fourteen of catatonia, four of epilepsy, and one of hysteria. The author says that this shows that the puerperium does not give rise to any particular form of insanity, but that any form that is met in other conditions of health or disease may show itself. The prognosis does not differ from that of the same psychosis when it present itself under other circumstances.

Enuresis in Children.—Dr. Martin Thiemich believes that enuresis is often the expression of hysteria. Placed in surroundings which are strange—that is, isolated, with proper suggestive measures, the children frequently recover with no other treatment. In the clinic this is often seen, although it is difficult to carry out at home. Removal of adenoid growths is an example of suggestion which is often efficacious in stopping the disorder. A not infrequent accompaniment of enuresis is the hysterical frequency of micturition. Enuresis is defined by the author as a monosymptomatic hysteria.

Priority of Vaginal Cæsarean Section. By Professor Dührssen.—A claim that he is the originator of this operation rather than Acconci.

Heredity in Pathology. By Dr. Friedrich Martus.

Human and Bovine Tuberculosis.—Professor Rudolf Virchow, in an address, says that a sharp distinction must be made between the real anatomical tubercle and any material which happens to contain a tubercle bacillus. The latter is not, according to his conception, necessarily tuberculosis. In the investigations about to be made in Berlin, and in which he is to have a part, Virchow will make strenuous efforts to have the anatomical tubercle demonstrated before he will allow the material to be condemned as tuberculous.

Münchener medicinische Wochenschrift, August 6, 1901.

A Crystalline Product of Immunization. By Dr. H. Büchner and Dr. L. Geret.

Vascular Injuries to the Root of the Mesentery.—Dr. Wilms has made some experiments upon the blood-supply of the mesentery and has found that ligature of the superior mesenteric vein is a serious matter in men and animals. In operations upon the head of the pancreas the branch above and behind the pancreas, where it meets the inferior mesenteric and splenic veins, must not be tied. Ligature of the superior mesenteric vein at the level of the lower bend of the duodenum, below the pancreas, does not lead to intestinal gangrene.

The Duplicity of Malignant Protopathic Tumors. By Dr. R. L. Grünfeld.

Treatment of Sarcoma with the Röntgen-Rays. By Dr. Carl Beck.

Treatment of Wounds. By Dr. F. Hænel.

The Stomach Tube in Ulcer of the Stomach.—Dr. W. Flade says that in the majority of cases of gastric ulcer increased acidity is demonstrable. This is an important factor in distinguishing between phthisis of the mucosa and carcinoma, and ulcer. If there is a possible atony, cholelithiasis or gastroptosis, the hyperacidity is not a conclusive diagnostic element. An occasional finding of blood favors the diagnosis of ulcer if cancer can be excluded. (*To be continued.*)

Treatment of Aphasia after Cerebral Disturbances.—Dr. Vidal advises the gradual education of aphasics by teaching them, first the labials, then the linguals, and, later, the letters produced by the tongue and larynx. The explosive vowels are taught in connection with the consonants.

Two Cases of Carbolic Acid Gangrene. By Dr. Fischer.

Centralblatt für innere Medizin, August 17, 1901.

Quinine and its Esters.—Dr. M. Overlach says that saloquinine, the ester of quinine, has these advantages over the ordinary preparation of the drug: (1) It is absolutely tasteless; (2) its use is followed by no ringing in the ears or disturbance of hearing, by headache, vertigo, or other symptom on the side of the nervous system; (3) no irritation of the gastro-intestinal or genito-urinary tract has been noticed, even after the employment of large doses. It is given in doses of thirty grains, once or oftener daily, to adults. A neutral salt of the ester is equally useful in obtunding pain. It is given in increasing doses from fifteen grains up to sixty grains, omitting the drug for a day when the maximum dose is reached. The author has found it useful in all kinds of rheumatic affections, neuralgia, neuritis, the lancinating pains of tabes, and gonorrhœal rheumatism.

Riforma medica, July 14 and 16, 1901.

Researches on the Active Substance of Typhoid Cultures. By Dr. A. Paladino-Blandini.—In a former paper the author showed that it was

possible to isolate two substances from typhoid cultures—a nucleo-albumin and a nuclein. Three centigrammes of the nuclein, when injected into a guinea-pig weighing 1,600 grammes, killed the animal almost instantaneously if introduced directly into the blood, and at the autopsy the right ventricle was found filled with a blood-clot, which extended into the vessels. The author therefore assumed that the typhoid bacillus produced a toxic nuclein which destroyed a large number of leucocytes and liberated a large quantity of fibrin ferment. In order to test the truth of this, he injected non-fatal doses of the nuclein into the blood and into the peritonæum. He found that the nuclein which he isolated had an injurious effect upon the leucocytes, so that the injection of minute doses into the blood was followed by a diminution in the number of leucocytes per cubic centimetre of blood in the guinea-pig. The destruction of the leucocytes which thus takes place liberates a large quantity of fibrin ferment and thus causes the formation of clots. Another interesting fact which the author noted, was the increase in the virulence of the *Bacterium coli* in guinea-pigs that had received injections of the typhoid nuclein. The next question which he considered was whether this nuclein was specific in its action. For this purpose he made use of endopleural and intravenous injections of the isolated nuclein. The clinical picture obtained in these slow experimental intoxications was found to correspond closely to that of typhoid fever in man. The lesions in the spleen and other organs were also analogous to those found in typhoid fever, but such lesions may also be produced by the toxins of the *Bacterium coli* and the comma bacillus as well as of the streptococcus. There are, however, some lesions which follow the injection of the typhoid nuclein and the toxin of the *Bacterium coli*, which are characteristic and not obtainable with the other toxins, namely, the swelling and necrosis of the Peyer's patches. This makes the effects of intoxication with the typhoid nuclein and the real typhoid fever perfectly identical. Only one symptom of experimental typhoid infection is lacking in the chronic intoxication with nuclein, and that is the diarrhœa and bloody stools. Experiments conducted by the author, however, convinced him that the nuclein was not the sole toxic agent which the typhoid bacillus manufactured.

June 17, 1901.

On the Poison of Tape Worms. By Dr. G. Messineo and Dr. D. Calamida.—The authors give an account of a series of experiments which show that the pathogenic action of taeniæ is due to a poison which is the same in all the species and which passes into the circulation. Whether this poison is a product of the metabolism of the worms, or whether it is secreted by these animals, the authors have not been able to establish.

June 18, 1901.

On the Treatment of Splenic Hypertrophy in Malaria with Sclavo's Iodized Serum. By Dr. Antonio Mori.—Seventeen cases thus treated are reported, and the author's conclusions are as fol-

lows: Sclavo's iodized serum may be injected in doses of ten cubic centimetres without local or general disturbances, and the injections may be repeated daily for a long time. The effect of iodized serum upon the enlarged malarial spleen is undoubtedly beneficial, and its action is the more pronounced in the more recent cases.

Vratch, July 14 (July 26, New Style), 1901.

On the Susceptibility of Domestic Pigeons to the Tuberculosis of Birds and Mammals. By Dr. V. V. Mourzayeff.—The author shows that domestic pigeons offer a strong resistance to the tuberculosis of hens, a less marked resistance to the tuberculosis of pheasants, and that they are immune against the tuberculosis of parrots and against cultures of the tubercle bacillus from birds. Inoculation experiments show that if the specific source of the infection is disregarded, pigeons are not very susceptible to the tuberculosis of birds (only in twenty-five per cent. of the cases), and are certainly less susceptible to these inoculations than guinea-pigs. The comparative susceptibility of pigeons to birds' tuberculosis may be expressed by the figure 25 (per cent.), and that of man to the same form of tuberculosis by the figure 24.4 (per cent.), thus there is but little difference between the two in this respect. The virulence of Koch's bacillus is a very inconstant quantity, and there is no way at present of judging the possibility of increasing this virulence.

Vassilyeff's Method of Quantitative Estimation of Albumin in the Urine and Its Defects. By A. F. Drgevetzky.—Although many methods for the quantitative estimation of albumin have been described, not one meets the requirements of the practising physician. Vassilyeff, in 1896, described a method which, according to the originator, requires but five minutes for its execution, and gives a possible error of not more than 0.06 per cent. The author undertook to study the efficiency and accuracy of this method. The precipitant which Vassilyeff proposed was salicylsulphonic acid, originally introduced as a precipitant of albumin by Roch. The indicator of the reaction was the so-called "Echt-gelb," a yellow dye which is the sodium salt of amidonitrotoluidinsulphonic acid. In weak solutions (aqueous) this dye is lemon or straw colored, and on addition of salicylsulphonic acid it becomes brick-red in color. On this change of color the titration of the albumin-containing urine is based. Twenty-five grammes of the commercial salicylsulphonic acid are dissolved in 200 cubic centimetres of distilled water, filtered and used for the titration. Every cubic centimetre of this solution precipitates 0.01006 grammes of albumin. To from ten to twenty-five cubic centimetres of the filtered urine from three to six drops of the indicator "Echt-gelb" are added (one per cent. aqueous solution). If the urine is of a light color the titration may then be begun, but if the urine is rich in pigments, it should be diluted three or four times, and a few more drops of the indicator should be added. If the urine is strongly alkaline it must be acidulated with dilute acetic acid, but if it is slightly alkaline the reaction takes place perfectly well. Enough of the salicylsulphonic acid solution is now added drop by drop from a burette until the drops no longer alter the brick-red color which has appeared.

The number of cubic centimetres of the reagent used in titration multiplied by 0.01006 equals the amount of albumin in the quantity of urine examined, and, from this, the amount of albumin per litre is easily calculated. The author found that the end of the reaction could not be observed, as the urine became cloudy from the precipitation of albumin. He therefore modified the process in such a way that a weaker indicator 1:1000 was used, and that the drops of reagent were allowed to fall upon a porcelain cover on which there were a few drops of urine. The method was then compared as to its accuracy with the gravimetric method and it was found that Vassilyeff's test was not satisfactory, inasmuch as it gave faulty results; so that one was possible to obtain one per cent. of albumin when there was four per cent. in the specimen. The fault, according to the author lies in the indicator, not in the reagent.

On the Diagnosis of Renal Diseases. By Dr. N. A. Michailoff.—In 1897, Achard and Castaigne described a method of diagnosing the permeability of the kidneys by subcutaneous injections of an aqueous solution of methylene blue (one cubic centimetre of 1:20 solution). In 1899, Achard and Delamare suggested the use of phloridzin ($C_{21}H_{24}O_{10}$) for the same purpose. The author describes two cases in which he used phloridzin from the beginning of the disease. In comparing the two substances, methylene blue and phloridzin as diagnostic helps in nephritis, the author says that methylene blue requires a longer time before the end of the reaction is reached; sometimes six days. Phloridzin, however, gives a short reaction. In Casper's clinic, a one-half-per-cent. solution of phloridzin was injected subcutaneously in a healthy hospital orderly, and sugar appeared in the urine after twenty minutes and continued to be present for three hours only. In nephritic subjects, the excretion of sugar is also of very short duration with phloridzin. In future, both methods will occupy a prominent place in the diagnosis of renal affections.

A Case of Diffuse Dermatitis as the Result of Inunctions of Mercury. (Drug Scarlatina of Behrend.) By Dr. E. A. Arkine.—A peasant, aged thirty-three years, after a series of mercurial inunctions, developed a general scarlatiniform eruption, with fever, anorexia, and malaise, lasting about a week. When the fever declined there was violent itching of the skin and, later, desquamation in small plaques. The age of the patient; the absence of any cases of scarlet fever in the district and in the hospital; the occurrence of the rash after five, and its full development after seven, inunctions; the absence of the characteristic tongue and angina, as well as the subsequent course of the eruption, which became polymorphous toward the end of the disease, pointed to the medicinal origin of the rash. The fever was quite high, but there was no nephritis and no stomatitis. Fournier has reported one case, and Taylor two cases of death from mercurial erythema. The author calls attention to the fact that the erythematous eruption in these cases should be regarded, as in measles and scarlatina, as an outward sign of a general disease, which may give rise to serious symptoms analogous to those caused by the presence of bacteria.

Book Notices.

Topographischer Atlas der Medizinisch-chirurgischen Diagnostik. Von Dr. E. PONFICK, o. ö. Professor und Direktor des pathologischen Instituts zu Breslau. Erste Lieferung. Jena: Gustav Fischer, 1901.

The eminent pathologist of Breslau has undertaken a monumental work in the publication of this atlas, of which the present number is the first installment. He has taken typical cases of disease, made frozen sections of the cadavers, and reproduced them in natural colors in life-size or in a size approximating this. The main purpose of the plates is to show the relations of organs in disease. The reproductions are wonderfully accurate in color as in topography, and the accompanying text, in German, French, and English, elucidates the plates admirably. The diseases illustrated in this installment are left pneumothorax, endocarditis with mitral insufficiency, colloid carcinoma of the peritonæum, cirrhosis of the liver with ascites and jaundice, carcinoma of the pylorus and retroperitoneal glands, and otitic abscess of the right temporal lobe. From the artistic, clinical, and pathological points of view, the atlas is exquisite and should be of great value to all who are interested in diagnosis, pathology, and clinical medicine.

A Text-book of the Practice of Medicine. By Dr. HERMANN EICHHORST, Professor of Special Pathology and Therapeutics and Director of the Medical Clinic in the University of Zurich. Authorized Translation from the German. Edited by AUGUSTUS A. ESHNER, M. D., Professor of Clinical Medicine in the Philadelphia Polyclinic, etc. Volume I. With 84 Illustrations. Volume II. With 85 Illustrations. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 7 to 628; II to 590. [Price of the set, \$6.]

The English-speaking members of the medical profession who do not or cannot read German owe a debt of gratitude to Dr. Eshner for this excellent translation of the well-known work of Eichhorst on internal medicine. This work is so generally used by German students and practitioners of medicine, on account of its intrinsic merit, its concise statement of facts, and its remarkable clearness, that it is no wonder that English-speaking readers have not been long deprived of the opportunity to read it in their own language. There cannot be too many text-books on the subject of internal medicine. The more there are, the better for students of medicine, because acquaintance with many must tend to enlarge their views on disease and its manifestations.

This work is published in two volumes instead of in one, the form in which it appeared in the original. This is in some respects an advantage, as it is fatiguing to hold a bulky volume for a considerable length of time. Eichhorst, at the earnest solicitation of his pupils and others, designed this condensation of his larger work on *Special Pathology and Therapeutics* with special reference to the needs of the student for reliable, concise, and accurate information on the principal and most important manifestations by which diseases can be recognized. It is questionable whether it was wise to include

among the subjects treated those of diseases of the skin, spermatorrhœa, impotence, and sterility in the male.

There is no doubt that Eichhorst has produced a work which will become now as popular in America as it is in Germany. A perusal of any one of the chapters will show the reason for the popularity of the book. The chapter on heart diseases, noteworthy the section on valvular lesions of the heart, is so succinct and at the same time so clear, that there can be no excuse for any student's failing to grasp the subject of the pathological dynamics of the circulatory system. All the important and essential signs of disease are given in each description, and in such a way as to impress the picture of the disease on the student's memory, and none of the unusual and anomalous features of disease are omitted. The descriptions of anatomical alterations are adequate, yet thorough.

What will particularly make this book a help to the student is the explanation of disease phenomena in reference to anatomical alterations and physical laws. A more complete index would have enhanced the value of the book.

Kurzes Lehrbuch der Gynäkologie. Herausgegeben von Dr. OTTO KUSTNER, o. ö. Professor, Direktor der Universitätsfrauenklinik in Breslau, etc. Mit 260 Abbildungen im Texte. Jena: Gustav Fischer, 1901. Pp. x-465.

This short treatise on gynecology presents, in its modern aspects, a scientific conception of the subject. Practical considerations are given prominence, and exact and precise methods of diagnosis and treatment are given. The main operations of minor as well as major gynecology are accurately described, and the illustrations accompanying this part of the text are far above the average. An excellent impression made by the book is of its broad conception of gynecology, noting especially the relations between pelvic diseases in women and other organic or functional disturbances.

Omissions of consequence are few. There is no mention of kraurosis vulvæ, and the nasal treatment of dysmenorrhœa is not spoken of. In other respects, it is in every way an admirable text-book. Anatomically, pathologically, clinically, diagnostically and therapeutically—considered from any of these standpoints, it is remarkably complete for a work of such small compass.

The collaboration of Bumm, Döderlein, Gebhard, and von Resthorn gives the work authoritative power.

Select Methods in Food Analysis. By HENRY LEFFMANN, A. M., M. D., Professor of Chemistry and Toxicology in the Woman's Medical College of Pennsylvania, etc., and WILLIAM BEAM, A. M., M. D., formerly Chief Chemist for the Baltimore and Ohio Railroad. With 53 Illustrations in the Text, 4 Full-page Plates, and many Tables. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. viii-9 to 383. [Price, \$2.50.]

This work, though intended for the needs of "practical analysts and advanced students in applied chemistry," contains much that might be of use to medical men. Many of the methods are

taken from such valuable sources as the bulletins of the United States Agricultural Department and of the Association of Official Agricultural Chemists and from the works of such eminent authorities as Allen and Richmond.

Chapter I deals with Physical data, and such determinations as specific gravity, polarimetry, and spectroscopy. The adaptation of these subjects is of interest both to the chemist and to the clinician. Under chemical data we find discussed in detail the determination of solids, both fixed and extractive; and nitrogen, total and albuminoid. The handling of apparatus and general chemical processes are both treated in detail, and many valuable points are given that could be adapted to general clinical methods. The method of Meade for standardizing sulphuric acid, published only a few months ago, is, it is gratifying to note, included in this chapter. The paragraph on indicators is, however, not so complete as might be expected in a work of this character.

The bulk of this volume being devoted to applied analysis, the authors have made it their particular task to select special methods for the determination of the various constituents. Now that specializing in diet is so much adopted in infant feeding as well as in the treatment of the adult, a careful perusal of such a book and acquaintance with its subject are most desirable, and this work, although somewhat technical, will be most instructive to those interested in the selection of diet and the composition of various foodstuffs.

Phonetic spelling has been adopted in this work. The references might have been given more in detail and the index might have been more extended; the press-work, however, is admirable, and the book is a very handy volume for reference.

Beiträge zur Frage über die Behandlung der entzündlichen Erkrankungen der Gebärmutter-Adnexe mit dem galvanischen und dem faradischen Strome. Von Dr. med. JOHANN KALABIN, Privat-Dozent für Gynäkologie an der Kaiserlichen Universität, etc. Mit 3 Abbildungen im Texte. Jena: Gustav Fischer, 1901. Pp. x-230.

This is an exhaustive monograph on the treatment of inflammatory conditions of the uterine appendages by means of the constant or induced electrical current. The author gives an historical account of this method of treatment, and follows this with lengthy tables of his own cases and those selected from literature.

His conclusions are interesting. He finds that the constant current, used in salpingitis or salpingo-oophoritis, often leads to a complete or an almost complete cure; but cases of pyosalpinx must be treated surgically. The menorrhagia accompanying salpingo-oophoritis ceases on the vaginal application of the galvanic current up to a strength of thirty milliamperes; when this condition is accompanied by myomata of the uterus or by fibroids lying in the broad ligament, the electric treatment is contraindicated. Simple oophoritis and gonorrhœal invasion of the tube are benefited by the galvanic current.

The deductions of the author, then, imply that catarrhal or gonorrhœal inflammation of the tubes and ovaries may be benefited by the repeated use of

the galvanic current, and in the case on an oophoritis, of the faradaic current. Although he cites a large number of cases in proof of his assertions, further investigation will have to be made before the dicta are universally accepted. The book is worth perusal by the specialist.

Surgical Experiences in South Africa, 1899-1900. Being Mainly a Clinical Study of the Nature and Effects of Injuries Produced by Bullets of Small Calibre. By GEORGE HENRY MAKINS, F.R.C.S., Surgeon to St. Thomas's Hospital, London, etc. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. xvi-493. [Price, \$4.]

From the introductory remarks we glean that no scurvy has prevailed in South Africa during the Boer war, owing to the advantages arising from cold storage, which in turn diminished the offal and refuse. All the typhoid fever and bowel disorders are attributed to the lack of restraint of the privates in drinking condemned non-potable water. The absence of sunstroke is attributed to non-indulgence in alcoholic drinks. Varicose veins of the lower extremities and diseases of the intestines constituted surprising large percentages of the causes of disability.

As to the modern mantled missile, its relative innocuity is again confirmed, as are also the rarity of its lodgment and the aseptic condition of the wounds inflicted. Explosive effects are credited in the first instance to the missile used in the Martini-Henry rifle, while ricochet bullets are capable of doing the same. Expanding bullets, on the author's authority, are traced to the Boers, and he expresses the opinion that the sanction of the Martini-Henry rifle by the Hague Conference is less humane than the employment of expansive bullets.

In general the treatment of wounds is a tribute to the principle of *laissez faire* in surgery, coupled with the protection from further contamination by the use of the "first-aid" dry dressing. There is a detailed narrative of injury to various organs. While death from external hæmorrhage was rare, yet a large number of arteriovenous aneurysms were subsequently encountered. A very extensive chapter is devoted to gunshot fractures, the treatment of which was only operative in case of extensive comminution, and in those cases the exit wound, says the author, should be the path for the incision, since the entrance wound, being aseptic, has generally healed *per primam*. The Röntgen rays seem to have been of more service in determining the type of fractures than in showing the situation of the lodged bullet. As to joint injuries, we are told that "not a single instance of primary or secondary excision of a joint, either partial or complete, is recorded," and, as suppuration was rare, treatment implied simply immobilization and, with the signs of healing, prompt motions.

Wounds of the skull and spine made the poorest showing; for the former, operative intervention is always in place, but for the latter it is futile. Wounds of the lung constituted the most hopeful class of cases of the whole series of trunk or visceral injuries; injuries of the heart and great vessels were uniformly fatal. Bullet wounds of the abdominal cavity did not respond favorably to operation, and the current practice of prompt intervention in civil

practice evidently does not apply here. A very pertinent argument is that a single case of this kind might be treated according to civil methods, but when numerous cases occur it is impossible to meet the situation. Wounds of the small intestine were uniformly fatal, but extraperitoneal injury of the colon and bladder are less likely to heal spontaneously than intraperitoneal injury of these organs. Injuries of the solid viscera heal spontaneously.

There are numerous passages which repeatedly testify what great advantage accrued to the injured from the advice and action of civil consulting surgeons whose extensive experience in civil practice made itself felt when fine discernment was called for. The observations are in strict accord with those of other writers on the same field of action.

A Text-book of Mechanotherapy (Massage and Medical Gymnastics) Especially Prepared for the Use of Medical Students and Trained Nurses. By AXEL V. GRAFSTROM, B. Sc., M. D., late House Physician, City Hospital, New York, etc. With Eleven Pen-and-ink Sketches by the Author. Philadelphia: W. B. Saunders, 1900. Pp. 5 to 139.

La Mécanothérapie. Application du mouvement à la cure des maladies. Par le Docteur L. R. REGNIER, Chef du Laboratoire d'électrothérapie et de radiographie à l'Hôpital de la Charité. Avec 6 figures dans le texte. Paris: J. B. Baillière et fils, 1901.

Traitement de la coxalgie par la mécanothérapie sans immobilisation au lit. Par le Docteur PAUL ARCHAMBAUD, Directeur de l'Ecole française d'orthopédie et massage, etc. Paris: Librairie de la Revue médicale, 1901. Pp. 32.

If mechanotherapy were a science both in theory and in practice, as maintained by Dr. Grafstrom, we should hardly have the confusion in the use of the term exemplified in the three brochures before us. It is used by him as synonymous with massage and medical gymnastics, by Dr. Regnier, in the sense of active and passive movements performed by the aid of machinery, and by Dr. Archambaud in that of treatment by portative apparatus and massage.

Dr. Grafstrom's booklet gives a clear, but very condensed, statement of the various procedures comprised in the manipulations of the Swedes. He adds that "movements given by machines can never, in accuracy and exactness, be compared with those given by trained and skilful hands." Dr. Regnier, on the contrary, assures us that, by the Zander method of exercises given by machinery the chances of error are reduced to a minimum, and that, as the machine is not subject to fatigue, the localization and amount of the exercise are by so much the more exact. He adds that the manipulations of massage are, as a rule, only valuable when associated with gymnastic movements. His brochure is a brief exposition of mechanotherapy from this point of view.

Dr. Archambaud advocates the treatment of coxitis by portative apparatus and manipulations, without confinements to bed, and appears to consider the method as original with himself, whereas it has been used—minus the manipulations, except in cases of deformity—in the United States for over forty years.

A Clinical Treatise on Fractures. By WILLIAM BARTON HOPKINS, M. D., Surgeon to the Pennsylvania Hospital, etc. Philadelphia: J. B. Lippincott Company, 1900. Pp. 3 to 268.

In this interesting work we find a clinical exposition of the more common fractures as met with by the author in his service at the Pennsylvania Hospital (one of our largest fields for the clinical observation of fractures). Most of the material here represented has been previously used by the author in his lectures to his students; it, however, has been elaborated and revised so as to be adaptable to book form. We are happy in noting the omission of all obsolete traditions, only such matter being retained as has been found useful and instructive. The writer, in his preface, expresses his appreciation of the services of Dr. Starbuck and Dr. Stewart for the skiagraphs reproduced and to Dr. Cattell for the many photographic illustrations.

As is naturally to be expected, the opening chapter is devoted to the necessary introductory remarks on fractures in general, to be followed later by those on special fractures of the upper and lower extremities. It is refreshing to note here especially the absence of the time-honored cuts so frequently found in many of our older text-books, and to find in their stead skiagrams, drawings, and photographs of both scientific and practical value. Chapters iv and v are descriptive of fractures of the pelvis and also of those of the sternum and ribs, and here again the author's clever handling of the subject and the absence in the text of descriptions of all unwieldy and cumbersome apparatus are to be commended. The methods adopted in the treatment seem the best and simplest. Chapters vi and vii treat of fractures of the skull and face, and include the operative treatment. The work concludes with a chapter on compound fractures. This last-mentioned subject we think deserving of more space.

The work as a whole may be commended to both student and practitioner as being safe in its teachings and most useful and instructive.

The Treatment of Fractures. By CHARLES LOCKE SCUDDER, M. D., Surgeon to the Massachusetts General Hospital, Out-patient Department, etc. Assisted by FREDERIC J. COTTON, M. D. Second Edition, Revised. With 611 Illustrations. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 9 to 457. [Price, \$4.50.]

The fact that a second edition of Dr. Scudder's book appears within a year of the publication of the first is sufficient evidence of its merited popularity, and therefore it requires but few words from us. We can only add to our review of the first edition that the present volume is enhanced in value and made even more attractive by the addition of many new x-ray illustrations, with remarks and suggestions in the text for their correct interpretation. Besides, we find numerous new illustrations in the chapter descriptive of the use of plaster of Paris. The index has also been improved and made more useful.

New Inventions.

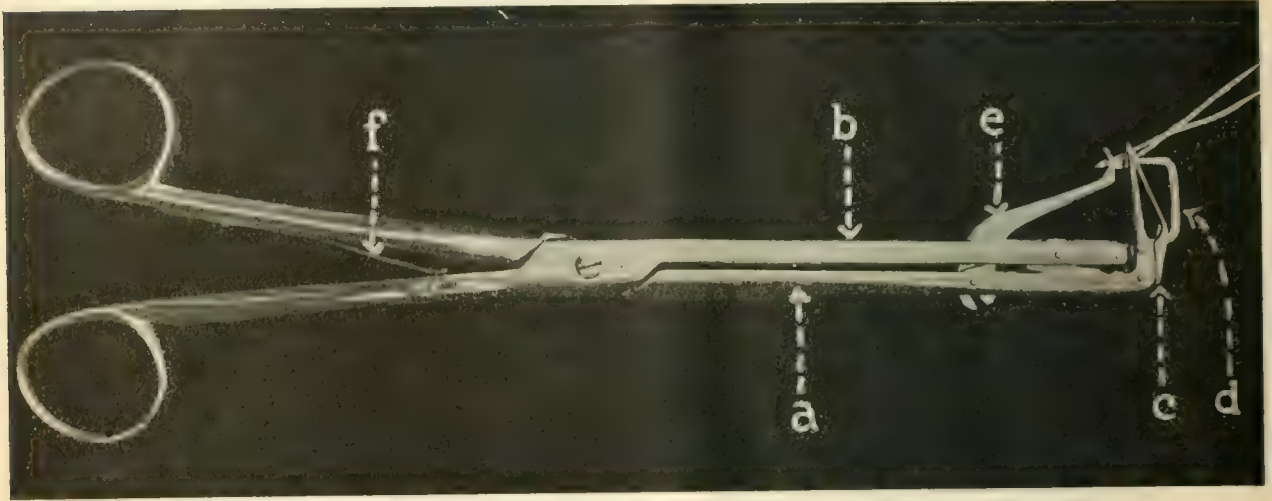
TWO NEW INSTRUMENTS.*

BY COMPTON RIELY, M. D.,

BALTIMORE,

ASSISTANT SURGEON TO THE HOSPITAL FOR THE RELIEF OF
CRIPPLED AND DEFORMED CHILDREN; CHIEF OF CLINIC
TO THE PROFESSOR OF ORTHOPÆDIC SURGERY
AND ASSISTANT DEMONSTRATOR OF ANATOMY
AND OSTEOLOGY IN THE UNIVERSITY OF MARYLAND.

which there are long, narrow slots in which parts of the pieces *c*, *d*, and *e* play. The lower inch of the shank, *a*, is bent at an angle of about 80°, and near its free end there is an oblong hole through which the needle passes when the handles are compressed. This piece also acts as one blade of two forceps, the other blades of these forceps being *c* and *e*. An angular piece, *c*, is hinged at its angle in the slot in the angle of *a* by means of a rivet. Its upper end is flat and works in the slot of *b*'s shank, and also has a slot in which a rivet through the shank of *b* works and by means of which the required movements of *c* take place. The lower end

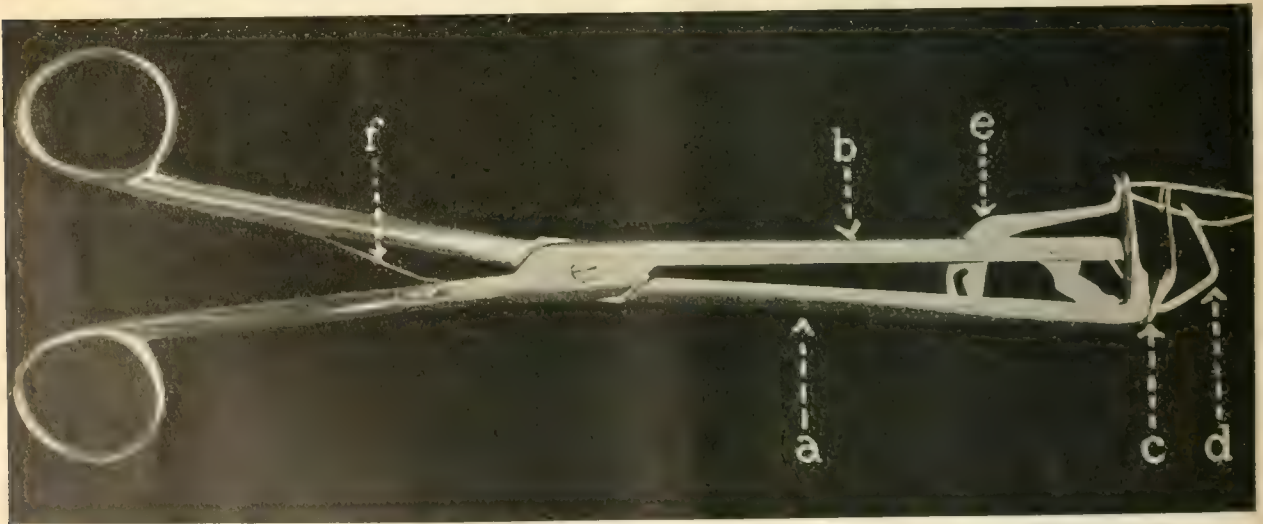


Staphylorrhaphy suture-passer (three-quarters actual size).

I.—A STAPHYLORRHAPHY SUTURE-PASSER.

This instrument is devised especially for suturing cleft palates, but may also be used for vesicovaginal fistula. It is composed of six pieces so constructed as to take the place of a needle, needle-holder, and

of *c* has a slot for the passage of the needle. It is spring-like in character, in order to adapt itself to the palates of varying thicknesses, and in conjunction with the lower end of *a* acts as a mouse-tooth forceps for holding the flap while the needle passes through.



The same, handles pressed apart.

mouse-tooth forceps. The two long pieces, *a* and *b*, consist of handles, lock like those of scissors, with long shanks of unequal length, in the lower ends of

A U-shaped needle, *d*, is employed, one arm of which is hinged at about its centre in the slot of the lower end of *a* a little beyond its angle; its free end works in the slot at the lower end of *b* and has a slot in which a rivet through the lower end of *b* works and by means of which the other arm, which has the

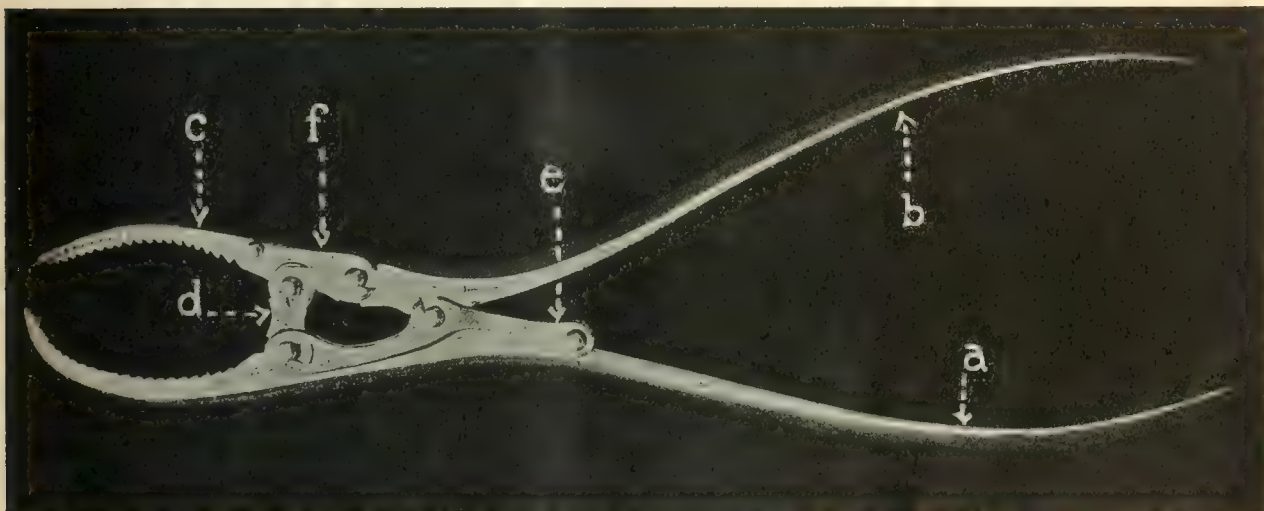
*Presented before the American Orthopaedic Association at Niagara Falls, June 13, 1901.

eye near its pointed extremity, carries the suture through the palate.

The piece *e*, shaped something like a human lower extremity, is hinged just above the knee-shaped portion by means of a rivet in the slot of the shank of *b*. Its upper end passes through the slot in the shank of *a*. In this upper end is a curved slot in which a rivet through the shank of *a* works, by means of which the foot-shaped portion is made to pass between the needle and suture and press it down on the end of *a*, with which it acts as a forceps for holding the suture while the needle passes back through the palate. This last movement takes place when the handles are separated. A spring, *f*, aids in separating the handles. The handles are slightly curved so that the hand of the operator may not obstruct the view of the field of operation.

Position of the Table, Patient, and Operator.—The patient, having been prepared in the usual way, is anæsthetized and placed on the table, the foot end of which has been slightly elevated. The head hangs over the low end, the neck being supported by

the operator, the handles directed downward and the point of the needle directed to his right. The suture, which should be of silk, about fifteen inches long, is passed through the eye of the needle from the near side, only drawing it through two or three inches, so that the longest end is next to the operator. The instrument is now inserted into the mouth with the point of the needle directed first toward the left side of the angle of the cleft. The forceps portion of *a* and *c* take the place of mouse-tooth forceps in holding the flap; they are placed with the blade *c* to the nasal and *a* to the buccal side, in such a way that the oblong hole at the lower end of *a* comes over the desired suture point. The handles are now compressed until the shanks touch, this action carrying the threaded needle through the flap. When this is accomplished, the handles are separated. By this action, the short end of the suture is caught on the buccal side by the forceps portion of *a* and *e* and the threaded needle passes back to the nasal side. The instrument is then withdrawn from the mouth until the needle comes within two or three inches of



A Giant bone-forceps (three-quarters actual size). (See page 476)

a pillow. This position is advantageous, not only in preventing the blood from interfering with respiration, but also in placing the roof of the mouth down, making the cleft more accessible for operation. The operator stands with his right side to that of the patient.

Operation.—The mouth is held open by means of a gag, preferably Whitehead's on account of its tongue-depressing attachment, but in case this instrument is not at hand the tongue can be held forward by means of a piece of silk passed through its tip and held well against the floor of the mouth by means of a long narrow-bladed retractor. The edges of the cleft are denuded thoroughly (special care being used in the angle), and this is best accomplished by catching the uvular end of one side of the cleft with a mouse-tooth forceps, making it tense, inserting a small-bladed scalpel a little beyond the angle, and, with a sawing motion, cutting toward the uvular end. This same procedure is to be used for the other side.

When one is threading the needle, the instrument is held in one hand with its convexity away from

the end of the long portion of the suture, and the handles are now compressed just enough to release from the grasp of *a* and *e*, the former short end of the suture, which is held out of the mouth. The instrument is again inserted into the mouth and the suture passed through the opposite flap in the way just described. When the instrument is withdrawn from the mouth the second time, the needle will be found unthreaded and what was the former long end of the suture, in the grasp of the forceps portions of *a* and *e*. This should be released and, with the other end, clamped with a forceps until all the sutures have been passed in the same way. Then the sutures should be tied, beginning at the angle.

The next step is that of relieving tension, which may be accomplished by any of the following methods: By chiseling off the hamular processes; by cutting the levator palati and the tensor palati where it passes over the hamular process; by Brophy's method as described in Park's *Surgery*; or by making an incision through the muscles of the soft palate near enough to the median line to avoid cutting the posterior palatine artery, which runs along the

inner side of the base of the alveolar process. This incision should not be carried through the posterior border of the palate. The latter method is the one with which I am most familiar, and it has proved very satisfactory.

Distribution of tension (a very important point) is attained by inserting the sutures close together, certainly not farther apart than three sixteenths of an inch. This renders them less apt to cut out or cause abscesses, and keeps the edges in perfect apposition, which is requisite for prompt and perfect union. Very probably the frequent failures to obtain union are largely due to this neglect, owing to the difficulty in passing them.

The advantages of this instrument are that it does not have to be threaded in the mouth; that the sutures are passed much quicker and easier; that the needle does not cut such large holes; that it avoids manipulation with mouse-tooth forceps, which bruise the tissues and thereby render them less apt to heal; and that by shortening the time of operation the amount of hæmorrhage and shock is lessened.

and curved, thereby disturbing the soft parts less.

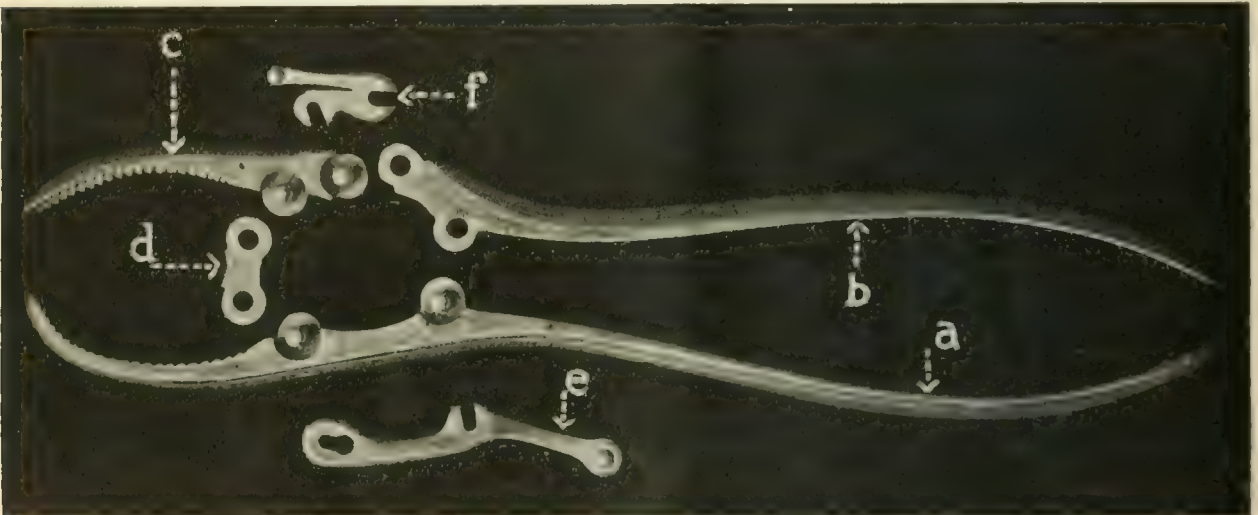
These instruments have been made for me by the Charles Willms Surgical Instrument Company, of Baltimore.

2000 NORTH CHARLES STREET.

Miscellany.

Tuberculosis and Its Treatment.—Dr. Baradat, consulting physician at Cannes (French Riviera), made the following remarks at the recent British Congress on Tuberculosis: In the case of tuberculosis, as in that of every infectious disease, two factors must be taken into consideration. The first of these is the infectious agent, the morphological and biological characters of which are so well known nowadays; the second is the soil which the agent has developed itself in, and whose characteristics are either acquired or hereditary.

All rational medication must, to be complete and



Giant bone forceps taken apart.

II.—A GIANT BONE-FORCEPS.

This instrument is intended to take the place of the lion-jaw forceps in joint resections, in amputations, and in plating compound and old ununited fractures. It is composed of six pieces with four joints for the purposes of obtaining compounds leverage and adjustment to bones of different sizes.

The handles, joints, and jaws are shown in *a*, *b*, *c*, and *d*; *e* and *f* are keys for holding the pieces together, by the removal of which the parts can be separated for cleansing and sterilization. Further description is not necessary, as its mechanism is simple and can be readily understood from the accompanying cuts.

The advantages alleged for this instrument over the lion-jaw forceps are that injury to the tissues is less apt to occur, as it cannot slip, owing to its tighter grasp and the fact that the distance between the points of the jaws is always less than the diameter of the bone in their grasp; that the serrations point toward the handles; and that in plating bones it is more easily applied because of its jaws being thin

really efficacious, apply to these two factors, and take into account all the elements which arise in a given case. For, as Leudet says, tuberculosis presents, in its varied manifestations, special idiosyncrasies, differing absolutely from one individual to another. Under these conditions only can we hope to be victorious over this dread disease. As a matter of fact, a review of the new methods of treatment employed in dealing with tuberculosis reveals to us the fact that, although these methods are, without doubt, of real value, they are only efficacious against certain given system, and possess no influence over the whole of the phenomena which are to be overcome; certainly, they have special indications, but they are insufficient, because their field of action is but a limited one.

Among these indications, the comparative effects of which we shall examine later on, some are destined to improve and to strengthen the soil, others, on the contrary, are specific agents; they give rise to diapedesis of the white globules, thus multiplying the means of defense with which the organism is provided in its struggle against the bacilli.

A thoroughly rational treatment should take both factors into account, that is to say, the medication employed should act in two ways, both as a dynamogenic agent and as a specific. One is generally inclined to look upon each new method of treating tuberculosis as one that will immediately effect a radical cure of this terrible disease, without taking into account either the infectious agent and its toxine or the soil on which these latter react. We must oppose this tendency, and attempt a true, careful, and impartial appreciation of the new medications.

Let us, for instance, take the case of an anæmic patient: the Koch bacillus has invaded his organism, but still remains latent; if we leave this patient to himself his anæmia will increase, his digestive activity will diminish, his strength will dwindle away, and assimilation will be reduced to a minimum; there will be, as has truthfully been said, a failure of the whole organism.

What must be done to meet such a case?

First, the organism must be strengthened, nutrition favored; it is here that a use is found for medications tending to produce these effects, such as arsenic in its more easily assimilable forms (cacodylates), tannin, iodine, cod-liver oil, salt lotions, alcohol frictions, sea-baths, and a hygienic treatment. By these means the bacilli will be kept under, their action neutralized, and as long as an equilibrium is maintained between the means of defense and the attack, the patient will live. But a fatal time will come when the bacilli will gain the upper hand, and this under the influence of varied causes, to which an organism already infected will have to pay a large tribute, such as physiological troubles, grief, repeated bronchitis, influenza, measles, scarlatina, and, especially in the case of young subjects, intense physical and intellectual strain—too much bicycling, too much fast living, an excess of emulation and rivalry in examinations and competitions. So that this treatment of the soil, if we may be allowed this expression, which seemed at first so efficacious, had but an ephemeral effect; enough had not been accomplished, the disease should have been attacked in its very essence, the bacilli and their toxines destroyed. It is the same with all medications in the case of tuberculosis, and I should willingly call them partial medications.

Let us consider those that address themselves to the soil, the constitution of the subject. First, we hold that a hygienic treatment should be the basis, the indispensable foundation-stone of every medication; without it, they all fail.

As Professor Letulle so picturesquely puts it, the patient must be "*centrifuged*," he must be taken away from large towns, from the centres where diseased persons are collected; he must be given the pure, fresh, invigorating air of the seaside or of the mountains; he must have in profusion sunlight, an agent as salutary to man as it is destructive to microbes. In our opinion, this hygienic treatment will best be realized by means of *free sanatoria*, Landouzy's home sanatoria, such as we find them scattered, in the shape of villas, along our sun-bathed Mediterranean shores. There all the required conditions, not only hygienic, but moral and inspiring as well, can be fulfilled. In private sanatoria for the rich, the culinary arrangements for such a large number of people are necessarily

unsatisfactory, the cooking is less carefully attended to, the dishes are less carefully prepared and less adapted to individual wants, to stomachs often fatigued and upset. As a matter of fact, the question of food is of vital importance in the treatment of a disease in which superalimentation plays such an important part. The private sanatorium should be reserved for the impulsive, for those who are incapable of energy and self-direction.

Besides, how many of these sanatoria are carelessly conducted! How many paying sanatoria are under the control of commercial managers, who allow alcohol in all its forms to be freely distributed! who close their eyes to promiscuities which are dangerous, often immoral, and always harmful to patients who must carefully husband their strength.

On the contrary, we willingly acknowledge the usefulness of the sanatorium destined for the poor. In their case, hygienic discipline will always be maintained, for there will be no reason for unbending before the perspective of rapid gains and big dividends; on the other hand, the poor will always find at a sanatorium better feeding than at home.

As for the medical treatment, much has been said of cacodylate of sodium. I shall not attempt a complete study of this substance. The most important thing for us is to be thoroughly acquainted with its real value. Its action and its efficiency must be measured by the light of the experience of numerous observers, and of our own. Its promoters were wrong, in my opinion, to call cacodylate of sodium a specific agent against tuberculosis. As against the numerous favorable observations, which I do not doubt in the least, of Messrs. A. Gauthier, Renaut, Rendu, Letulle, and others, I have to set off many others, equally unimpeachable, in which the results on tuberculosis have been *nil*.

In the course of my practice, I currently employ cacodylate of sodium; its effects have proved excellent in cases of anæmia, of ganglionic and lymphatic persons, of chlorosis; in such cases, I have observed a regular revival of the physiological functions, an increase of appetite, a resorption of ganglia. On the contrary, I have obtained less favorable results in cases of ulcerous and cavitory tuberculosis.

Burlureau, in a recent and thoroughly complete study on the cacodylate, has come to the same conclusion. "As for tuberculosis," he says, "I regret to have to say that, contrary to the opinion of Professor Gauthier, it is in this disease that the cacodylate has given me the least favorable results. Out of twenty-nine cases of pulmonary tuberculosis, I have only once obtained a really favorable effect, and that was but temporary."

The cacodylate will be specially useful for the predisposed, for those incipient cases which were so difficult to diagnosticate, and which we have now learned to recognize.¹

¹For instance, Landouzy, Grancher and Sanchez have revealed to us the delicate stethoscopic signs of the period of germination; Bard and Faisans have shown us the importance of the cardiac rhythm, of tachycardia; Roussel and Boix, that of the scapulothoracic amyotrophy; Bouchard, Beclere, Kelsch and Maragliano have taught us the radioscopic signs of incipient tuberculosis; Arloing, Mongour and Courmont have established on a sure basis the early diagnosis of tuberculosis by serodiagnosis by agglutination; Albert Robin and Binet give us the same certitude by the analysis of the respiratory chemism; Sirot and Fink, by the observations of the effects produced by injections of artificial serum; Gaube (of Gers), by the study of the demineralization of the tissues.

As for the vanadates, they have not fulfilled the expectations formed of them, but this is partly due to the difficulty experienced in obtaining thoroughly determined products.

The same must be said of certain artificial serums, which must be classed among the soil-strengtheners, and are wanting in bactericidal powers, or rather in the power of exciting diapedesis and phagocytosis.

We now come to the raw meat treatment. The experimental researches of Richet and Héricourt have proved that raw-meat juice acts, not as a strengthening agent, but as an antitoxine. This antitoxine would neutralize the effects of the tuberculosis toxine. This juice is the muscular plasma, obtained either by the press or by congelation followed by rapid thawing of the muscular tissue.

The following is the method I have adopted at Cannes in the case of patients whom I submit to this treatment; the daily quantity of mashed meat is 800 grammes (about 28 ounces); the patient takes as much as he can, the rest of the meat is pressed, in order that the juice may be extracted. The plasma must be taken immediately after having been prepared, otherwise one risks swallowing a putrefied and toxic substance.

Although this method has given me excellent results, I consider it difficult to put into every-day practice. It possesses many inconveniences; for one thing, it is not within everybody's reach; it is costly in preparation, and requires from 800 to 1,500 grammes of meat daily; it is supported with difficulty by many patients; it requires constant supervision, for this meat juice soon putrefies and becomes toxic. Injected under the skin of an animal, it causes death in a few minutes.

Experiments with this antituberculous plasma have been made in the laboratory of Messrs. Richet and Héricourt. These attempts at hypodermic injections of an immunizing and even curative liquid led me to read once more the already old but very complete works on the bactericidal, or antitoxic, properties of the blood of animals that are refractory, or seemingly refractory, to tuberculosis.

The medical literature of 1890 to 1895 shows us how this question has been strenuously discussed and deeply criticized.

However, from these works we glean the following fact: that the blood of certain animals confers on other animals immunity from tuberculosis, and may even cure this disease. "As far back as 1888," says Professor Bouchard, in writing to Mr. Bertin, one of the promoters of antituberculosis serotherapy, "I expressed the idea that vaccines were destined to play a part, not only in the prophylaxis, but also in the treatment of this disease."

For my own part I have no hesitation in attaching myself to the method of antituberculous serotherapy introduced, at about the same time, in 1889, by Richet and Héricourt, and by Bertin, and Picq, for I think that therein lies the solution, so long sought for, of the problem of the cure of tuberculosis. Naturally, with this medication just as with any other, we must not wait for the patient to be emaciated, to present digestive troubles and cachexia before treating him.

For, I insist on this point, tuberculosis is not consumption. A consumptive, or phthisical, person is

one in whose case the Koch bacillus, after having terminated its progressive career, has slowly brought on the suppurative destruction of the cells attacked, and in this mass of destroyed matter you will find all the processes provoked by the staphylococcus, the streptococcus, and the pneumococcus, working together with the Koch bacillus.

In this case you have phthisis, consumption, the hectic fever which brings on a fatal issue; imagine that, by some means, you could at this period destroy the bacilli of tuberculosis; your patient would still succumb to the streptococcus, the staphylococcus, and the pneumococcus.

As a matter of fact, says Landouzy, it is this idea of helping those who are in the incipient stage, at a time when the germs of secondary infection have not yet attacked them, that has led medical men to make use of "the immunizing agents that are antitoxic or bactericidal owing to their strengthening action on phagocytosis."

This science of serotherapy, which we owe entirely to the French school, has been perfected by Pasteur's most renowned disciples, by Dr. Duclaux, Dr. Roux, Dr. Grancher, Dr. Nocard, Dr. Metschnikoff, Dr. Yersin, Dr. Calmette, Dr. Leroux, Dr. Charrin, Dr. Marmorek, Dr. Boinet, and many others, among whom we must mention Bertin and Picq, who were, together with Richet and Héricourt, the promoters of modern serotherapy.

The use of natural serum has given me unexpected results in serious cases of tuberculosis, and I have always been surprised to find that this method of treatment was not better known; natural serum seems to me to fulfil all the required conditions, for it is both dynamic and bactericidal.

As we know, in the case of tuberculosis, the bacillus acts as a destructive force, but its action is strengthened by that of other destructive forces due to the soil. In one case it will be anæmia, in another heredity, in another influenza or intellectual or physical strain.

So, with these generalities, what are the characters required of a therapeutic agent against tuberculosis? We admit the stimulating and regenerative properties of the general tonics, cacodylates, phosphates, cod-liver oil, etc.; we will even allow the antitoxic property of meat juice, but has any one the right to say that each of these agents fulfils the two conditions necessary to the cure of tuberculosis? Certainly not, for they are either simply stimulating and strengthening or simply antitoxic. Bertin and Picq's serum (goat's serum) seems to me, on the other hand, to be at the same time tonic, antitoxic, and bactericidal; it is the one I make use of.

As a matter of fact, daily experience tends to prove that every serum is dynamogenic, and therefore a general strengthening agent. This is proved daily by the use of artificial serum in the case of serious hæmorrhage, of anæmia subsequent to chronic diseases, and of traumatic shock consecutive to operations. In taking into account, however, the comparative value of the two serums, natural and artificial, we find that a very small quantity of the former produces an intense therapeutic effect, while the same effect can only be obtained by employing a double or even triple dose of artificial serum. There is here a *quid divinum*, due evidently to the

intimate composition of natural serum. No one nowadays denies the dynamogenic action of serum—it is a recognized fact. All we have to do is to repeat this action as often as required in order to maintain to a remarkable degree the resistance and the vitality of the patient. While awaiting experiments destined to throw light on the still obscure question of the mode of action of serums, I give preference to the theory propounded by Metschnikoff, who looks upon them, not as antitoxic, but as stimulating agents of phagocytosis, in other words, as *stimulines*, provokers of organic resistance.

Therefore, as we admit that the microbial destruction and the arrest of infection are due to phagocytosis, the aim of our therapy must be to increase the activity of the phagocytes, in order that they may the more easily accomplish their mission. Moreover, the happy results that I have obtained this winter by means of natural serotherapy lead me to believe that this is the real and only effective method of realizing the cure of tuberculosis, especially in its early stages, now that the means of diagnosis which we possess permit us to discover the very earliest symptoms of incipient tuberculosis.

This treatment is absolutely innocuous and easily applied; one hypodermic injection of two cubic centimetres every other day. In some cases, however, in the case of nervous patients especially, I have observed after each injection an exaggeration of cellular activity, showing itself in the shape of fever, erythema, and dyspnoea; in such cases I administer the serum internally. But, in order to obtain the same tonic and stimulating effects, I have to increase the dose, and administer ten cubic centimetres instead of two, as in the case of hypodermic injections.

These results agree with those obtained by Grasset, who concludes by saying that the administration of serum internally is the method of choice, because it is free from danger and gives rise to no accidents. Nevertheless, even with Bertin's serum, I am of opinion that the cacodylate medication should be employed as a precious adjuvant in most cases, on the same level as tannin, iodine, and cod-liver oil.

Heredity and Circumcision.—The *Gazzetta degli ospedali e delle Cliniche* for May 7th remarks that it has excited wonder in view of the fact that circumcision has been practised for many decades of generations in certain races, that heredity has not appeared to have induced any modification in the prepuce. Dr. Talbot, relying on a large number of observations is inclined to admit the hereditary transmission of the effects of circumcision, and that in opposition to Weissmann, who, in his theory of heredity, does not admit that mutilations of any kind can be transmitted to the descendants, and in the special care of circumcision asserts that congenital absence of the prepuce is observed with equal frequency among peoples that practise circumcision and those among whom this rite is not practised. Talbot, for his part, thinks that heredity constitutes an important factor in the production of such anomalies. In support of his opinion, besides his own personal observation, he refers to the statistics of various Hebrew physicians in New York. The most numerous of these statistics are those of Dr. Cohen who, in twenty years, has performed ten

thousand circumcisions, finding the prepuce wanting in five hundred cases, and but very slightly developed in two thousand.

A Table of Cases of Intussusception Occurring at St. Bartholomew's Hospital and at the Victoria Hospital for Children, Chelsea, during the Years 1891-1900. Compiled by D'Arcy Power, F. R. C. S. Eng.

		Cured.		Died.		Total.		Grand total.	Total No. of surgical patients
		M.	F.	M.	F.	M.	F.		
1891.	St. B. H.	0	0	1	2	1	2	3	3,852
Victoria	Hospital	1	0	0	0	1	0	1	349
1892.	St. B. H.	1	1	2	0	3	1	4	3,750
Victoria	Hospital	0	0	1	1	1	1	2	441
1893.	St. B. H.	3	2	1	1	4	3	7	4,539
Victoria	Hospital	0	0	2	0	2	0	2	479
1894.	St. B. H.	0	0	1	1	1	1	2	4,453
Victoria	Hospital	0	0	1	0	1	0	1	505
1895.	St. B. H.	1	0	5	2	6	2	8	4,617
Victoria	Hospital	0	0	1	1	1	1	2	537
1896.	St. B. H.	1	0	2	0	3	0	3	4,475
Victoria	Hospital	0	1	1	0	1	1	2	475
1897.	St. B. H.	0	1	0	2	0	3	3	4,237
Victoria	Hospital	1	0	0	1	0	2	2	491
1898.	St. B. H.	2	0	3	1	5	1	6	4,236
Victoria	Hospital	1	0	0	0	1	0	1	387
1899.	St. B. H.	4	1	2	2	6	3	9	4,120
Victoria	Hospital	0	0	2	0	2	0	2	151
1900.	St. B. H.	2	0	3	0	5	0	5	3,754
Victoria	Hospital	0	0	0	0	0	0	0	289
		17	6	28	14	44	21	65	46,197

Total recoveries, 23. Total deaths, 42. Thirty cases presented points of especial interest as follows: In two, spontaneous recovery took place, one acute and one chronic case. In one, recovery occurred from a triple intussusception. One patient died of ileus after reduction. One had intestinal obstruction due to adhesions after the abdominal section. Two patients were too ill to operate upon. In one case there were such extensive adhesions that nothing could be done. Three cases recurred repeatedly after apparent reduction by irrigation. In three cases the intussusception was overlooked at the operation and was found *post mortem*. In one case there was no intussusception. Fifteen cases needed excision of the bowel; in seven cases an artificial anus was made; all proved fatal. In five cases Murphy's button was used; four patients died and one recovered. In two cases Maunsell's operation was performed; both died. In one case a circular enterorrhaphy was done; the patient died.

Somnambulistic Amnesia.—Dr. William B. Fletcher (*Medical and Surgical Monitor*, August) says that while amnesia is common in most forms of alcoholism, either acute or chronic, it is usually transient, but occasionally it becomes so prominent a symptom that it has been regarded by some writers as a special form of disease. The author presented a case in which there was no history of alcoholism, although the patient was a barkeeper for many years. He had been under the influence of alcohol but seven times in his life, and was not a tippler behind the bar. He was thirty-two years old and had a most amiable and intelligent wife, to whom he had been married six years. He said that he went through

the secondary eruption of syphilis two years before his marriage. He was of slight build, extremely tidy in appearance, and gave a history of his case in an easy conversational way. "After I had, as I thought, been cured of syphilis, I married and continued my occupation as bartender until fifteen months ago. One night I felt queer in my head and was going to close up to go home when a physician, whom I knew quite well, came in and I told him my symptoms. The doctor gave me some medicine which I took, from which time I remembered nothing for several days, although I locked up the place, went a long distance to my home, told my wife I did not feel well, was attended by my physician and finally came to myself, not knowing I had been home more than a night. I had several attacks of this kind the following six months. I went to Hot Springs twice, spending six weeks each time, and while there was in good condition; but when I started home the last time I lost all consciousness of what I did, but came home all right and was in Chicago many days before I knew I had left Hot Springs. These spells come over me without any premonition, and last from a few moments to several days.

Dr. Fletcher had this patient under constant observation for four weeks. He would arise in the morning, make an elaborate toilet, shaving himself with care, but all in a rather automatic way. If crossed in anything he would become irritable, but seemed most of the time perfectly conscious. "I am going home," he would say, and would at once pack his dressing case with considerable care, walk without the slightest regard to where he desired to go, stand on a street corner for a time, when his attendant would step up to him and ask him if he could be of any service, etc., to which the patient would reply that he wished to go to a hotel or wanted to hire a room. The attendant would carry the luggage and lead the patient back to the same room he had quitted perhaps but a few minutes before. He would then order his meal, pay his bill with a shirt button or anything he had in his pocket, never recognizing the attendant or surroundings or remembering his having gone out. In fact, the man seemed at all times in a somnambulistic state. While chronic and continuous somnambulism has not been recognized, the author believes it can exist, and that this is a typical case.

The patient had been under the care and treatment of some of the best specialists in America, and all of them had treated him upon the same line, anti-syphilitic. Dr. Fletcher did not care much for the diagnosis of the case, but his written prognosis was "bad." He advised the patient's wife to take him home at the end of the month's observation. She did so, and wrote the following week that he became comatose the day of his departure and died within six days. Unfortunately, no post-mortem examination was made, and the case has little interest, says the author, except as a medico-legal question. In such psychical condition, produced by alcohol, by syphilitic disease of some unknown cortical centres, by emboli or thrombus—what crimes may not be committed and the person be in reality beyond the bounds of responsibility. What a responsibility, too, rests upon courts and juries, and particularly upon medical experts.

The Mississippi Valley Medical Association.—

The chairman of the committee of arrangements, Dr. I. N. Love, sends the following announcement: The committee has arranged for a rate over the Lehigh Valley system and by the steamers of the Cleveland and Buffalo Transit Company of \$11.85 going out, and for return a third thereof (about \$3.95), under the absolutely necessary condition that trunk line certificates shall be viséd by an authorized agent in Put-in-Bay, on or not later than September 13th. Under this arrangement tickets will be sold at No. 1205 Broadway, corner of Twenty-ninth Street, New York, or at any local office of the Lehigh Valley system in New York; also at Cortlandt, Desbrosses, and West Twenty-third Street ferries on September 9th, 10th, and 11th. M. de Brabant, city passenger agent of the Lehigh Valley Railway, No. 1205 Broadway, will answer by call or letter all inquiries in regard to the trip.

When buying transportation for this meeting, purchasers must demand trunk line certificates, without which no return reduction can be obtained. Return tickets will be valid, beginning September 13th, for a continuous passage to New York, with the further privilege that, on payment of \$1.00 to the agent at the station in Buffalo, a stop-over for ten days will be granted to visit the Pan-American Exposition.

The most convenient train leaves New York from Cortlandt or Desbrosses Street ferries (West Twenty-third Street ferry being five minutes earlier) at 8 p. m. and arrives in Buffalo at 7.55 a. m. The boat leaves Buffalo at 9 a. m. and arrives in Put-in-Bay at 12.45 p. m. The train leaving New York at 10 a. m. arrives in Buffalo at 9.20 p. m. and the boat leaves at 9 a. m. the next day. The Black Diamond Express (extra fare, 50 cents) leaves New York at 12 m. and arrives in Buffalo at 9.55 p. m. The boat leaves at 9 a. m. the next day. The tickets for return are good at Put-in-Bay until September 18th. It is requested that all those who expect to attend the meeting of the association should lose no time in writing to reserve hotel accommodations.

The Influence of Oxyurides in the Production of Appendicular Inflammation.—

At the Academy of Medicine of Paris, M. Moty (*Giornale internazionale delle scienze mediche*, May 15th) recently made a communication on the frequent presence of *Oxyurides vermiculares* observed by him in appendices which he had removed. To recognize the presence of these nematodes it is requisite to open the appendix immediately after operation and not to wash it. In this way living parasites are found, which die instantly and become immediately unrecognizable. In three out of five of the author's last cases operated on, the oxyurides seemed to be the sole causes of the appendicular inflammation, the ætiology of which was obscure. From these facts it follows that in all cases of appendicular inflammation which may be considered possibly due to worms, purgative vermicides should be prescribed.

The Benefits of Popular Science.—The *Woman's Medical Journal* for June says that a youngster in school was asked: "What is the difference between an optimist and a pessimist?" He replied, with great unction, "that one treated the eyes and the other attended to the feet."

Original Communications.

THE LANE LECTURES ON THE SOCIAL ASPECTS OF DERMATOLOGY.

By MALCOLM MORRIS, F. R. C. S. ED.,

LONDON,

SURGEON TO THE DEPARTMENT OF SKIN DISEASES, ST. MARY'S
HOSPITAL.

LECTURE I,

delivered in San Francisco, September 2, 1901.

INTRODUCTORY. — *Dermatology, the Cinderella of Medicine; the Skin a Microcosm of Pathology; the Sphere of the Dermatologist; the Progress of Dermatology; the Founders of Dermatology: Robert Willan, Thomas Bateman, Erasmus Wilson; Characteristics of the British School; the French School: Alibert; the Vienna School: Ferdinand Hebra; Dermatology in America; Causes of Progress: Cellular Pathology and Bacteriology; Flora and Fauna of the Skin; the Nervous Factor in Cutaneous Disease; the Constitutional Factor; Advance in Treatment; New Therapeutic Methods; Scope of the Lectures; Effects of Skin Disease on the Individual in his Social Relations; a Sound Skin in Presidents and Princes a Guarantee of Peace; the Artificial Decoration of the Skin and its Evil Consequences; Feigned Eruptions; Skin Diseases and Colonization.*

Professors of rhetoric teach that an orator should always begin by trying to conciliate his audience, or, as Quintilian puts it, to make the hearer "benevolent, attentive, docile." It may be presumed that the same advice holds good with regard to lectures. The precept is sound, but, as in the case of many other precepts, there is some difficulty in putting it in practice. How can I hope to make you benevolent and attentive, coming before you as I do a man unknown to most of you and with no special claim on your attention? And how can I expect to find you docile when doubtless you already know all, and possibly more than all, I have to teach? My first duty, therefore, is to apologize for my presence here; and if there are any who are inclined to think my presumption inexcusable, I can only follow the example of the first begetter of the human race and throw the blame on some one else. Dr. L. C. Lane, of this city, played the part of Eve, and I, though an unwilling Adam, gave way to the temptation. I confess I was dazzled by the honor of being invited to address such an audience, especially after such men as Christopher Heath, Clifford Allbutt, and Michael Foster, who were not only recognized as leaders in our medical Israel, but who hold positions that add official dignity to their personal eminence.

I was, however, induced to accept Dr. Lane's invitation by the thought that it was an honor done not so much to my humble personality as through me to dermatology.

DERMATOLOGY THE CINDERELLA OF MEDICINE.

The honor is all the more gratifying that in England, though it is the cradle of this particular branch of our art, dermatology is treated as the Cinderella of medicine. The dislike of specialism is not indeed so open as it was twenty years ago, but in the consulting ranks of the profession it is as strong as ever. It is natural that those who have taken all medical or surgical learning for their province should be dismayed to see their kingdom gradually being divided and given to specialists, and the feeling is therefore partly due to an unconscious antagonism inspired by the instinct of self-preservation, but it is mainly due to ignorance. The old Roman principle of administration *de minimis non curat prætor* used to be applied to medicine, and it was in the little things uncared for by the physician or surgeon that the specialist found his modest sphere of usefulness. A philosophical physician striving to solve the pathological riddle of the universe could scarcely bring his mind down to the close study of a pimple, nor is it to be expected that a surgeon whose hand habitually breaks open the Lord's anointed temple and who, like the soothsayers of old, looks for auguries in the innermost entrails should give heed to a scaly speck on the surface?

THE SKIN A MICROCOSM OF PATHOLOGY.

Yet in the skin we have a field of study that offers plenty of scope for the exercise of the highest faculties of observation, critical analysis, and generalization. On its surface may be seen not only the most varied expressions of internal disturbance, but examples, visible and palpable, of every process known to pathology, with its results, immediate and remote. The skin is in fact a pathological microcosm, and it is not too much to say that any one who should thoroughly understand all its manifold diversities of disease would by that knowledge alone be in possession of a key that could unlock the secret chambers of general pathology. No man need be more ashamed of studying the skin than of studying the brain and the nervous system, and if he finds in it enough to occupy his whole attention he has at any rate the satisfaction of feeling that in his narrow sphere he can often do more to relieve suffering than the man of larger aims. As Browning says:

"This low man seeks a little thing to do
Sees it and does it;
That high man with a great thing to pursue
Dies ere he knows it."

THE SPHERE OF THE DERMATOLOGIST.

But, narrow as is the sphere of the dermatologist, it is a highly important one, for the signs of many of the diseases which, if allowed to spread, cause great and far-reaching suffering, unhappiness, disablement, and death are written on the skin, though the warning is often lost for the want of a Daniel. And the writing is by no means easy to read. Every blotch and every bleb has its meaning, did we but know how to decipher it. The chief source of difficulty in interpretation is that, although the variety of causes that may set up disordered action in the skin is almost infinite, the modes in which the disorder is expressed are very limited in number. Hence a given effect may be produced by many different causes, and just as a blush may express love, anger, shame, pleasure, or excitement, so erythema may range in significance from a chilblain to a septic infection of the gravest kind. The dermatologist has, while studying with the closest attention the elements that form an eruption, to look at the manifestation of the disease as a whole. The single lesions are letters which have to be joined into words supplying the answer to the riddle.

And here I may refer to another difficulty which, though met with at almost every step in the whole territory of medicine, is perhaps a more serious stone of stumbling in dermatology than elsewhere. This is the tendency to mistake words for things. Goethe has well said that man when he does not know a thing invents a name for it to hide his ignorance. The vocabulary of the dermatologist is made up of words of learned length and thundering sound, so that it might well seem as if, like Holofernes and his friends, he had been at a great feast of languages and stolen the scraps. But it must be admitted that a considerable part of our terminology is mere sound and fury, signifying nothing but uncertain facts and very dubious theories.

THE PROGRESS OF DERMATOLOGY.

In spite of all difficulties, however, the dermatologist may fairly profess to have reclaimed one of the waste lands of pathology and brought it to a condition of comparative fertility. It is remarkable that this has been accomplished virtually in a single century. At the end of the eighteenth century skin diseases were classified in a comfortably comprehensive manner into dry tetter and wet tetter, or, according to John Hunter's famous division, into those which sulphur could cure, those which mercury could cure, and those which the devil himself could not cure.

THE FOUNDERS OF DERMATOLOGY.

To Robert Willan belongs the credit of the first successful attempt to reduce the chaos of skin dis-

eases to something like a cosmos. I use the word "successful" not as meaning, if I may borrow Pope's famous phrase about Newton, that "God said, Let Willan be and all was light"; but that Willan's predecessors, Plenck, of Vienna, and Lorry, of Paris, meritorious as their work was, were voices crying in the wilderness to which no one paid heed. Willan was so far successful that he got the medical profession to listen to him. In 1790 he was awarded the Fothergillian gold medal by the Medical Society of London, to which he had submitted the outline of a plan for the arrangement of any description of cutaneous diseases. In 1798 he published a thin volume on eruptions, and in 1808 appeared the first volume of his treatise *On Cutaneous Diseases*, which he did not live to complete. Fragment as it is, it forms a not unworthy monument to the man who laid the foundations of scientific dermatology. Willan's classification was clearly founded on that of Plenck, and, like the Austrian physician, he grouped diseases simply according to their objective appearances. In looking at his Order III (exanthemata), where measles and scarlet fever are grouped with urticaria and erythema, one is reminded of Fluellen's comparison of his native country with the kingdom of Alexander the Great: "There is a river in Macedon; and there is also, moreover, a river at Monmouth . . . and there is salmons in both."

What makes Willan's work the starting point in the development of dermatology is his judgment in the selection of terms and his accuracy in defining them, and especially his wonderfully vivid and faithful word pictures, drawn from Nature, of the varied appearances produced by diseases of the skin. Willan had a disciple and an evangelist in Thomas Bateman, whose writings made his "learned preceptor's work known and gave an impetus to the study of dermatology. Like Willan, Bateman founded his teaching on objective appearances, and this continued to be the dominant doctrine in England till about the middle of the century, when Erasmus Wilson introduced an anatomical classification, grouping skin diseases not according to the physical characters of the eruptions, but according to the structure in which the morbid process took its origin.

CHARACTERISTICS OF THE BRITISH SCHOOL.

As I am not giving a history of dermatology, I will say nothing about the work of living men. Perhaps, however, I may be allowed to say that the characteristics of the British school of dermatology are those commonly held to be distinctive of the British intellect in every sphere of work. From Willan to Hutchinson, British dermatologists have been, first of all, observers. Like Newton, they have been cautious in framing hypotheses, but the facts col-

lected by their patient labor have gone to the building of the solid edifice of modern dermatology.

THE FRENCH SCHOOL.

In France a school of dermatology arose independently in the early days of the nineteenth century. Alibert has the great merit of directing the attention of his countrymen to diseases of the skin, but his own teaching was obscure and fantastic. What was said of one of the old Spanish monks, Feyjoo, who wrote a vast treatise on human error, might be applied to Alibert: That a statue should be erected to him at the foot of which his own works should be burnt. French dermatology, for a long time bore the impress of the national mind, notably the tendency, as Taine expresses it, of striding over facts and hurriedly landing on a conclusion resting on an insecure basis of theory. Writers of the French school have too often, in face of the mystery of the ætiology of skin diseases, found comfort in that blessed word "diathesis"; and when no recognized diathesis was available they made no scruple about inventing one that would suit their purpose. When there was no obvious cause for a skin affection, it was attributed to a "dartrous," "herpetic," or "psoric" diathesis, and the honor of medicine was saved.

THE VIENNA SCHOOL.

The year 1844 saw the dawn of a new era in dermatology. Ferdinand Hebra applied the teachings of pathology to the study of skin diseases, classifying them according to the nature of the processes which they exemplified. His teaching, founded as it was not only on observation, but on experiment, speedily revolutionized dermatology, and the students who flocked to Vienna in a few years spread his doctrines all over the world.

DERMATOLOGY IN AMERICA.

Here in America the medical profession knew little and cared less about skin diseases during the first quarter of the nineteenth century. No special institution for the treatment of cutaneous affections existed in the United States till 1836, when an Infirmary for Diseases of the Skin was established in New York, and the first physician who lectured on the subject in America was Dr. H. D. Bulkley, father of Dr. L. D. Bulkley. For many years America got its dermatology ready made from France; at a later period it imported a better product from Vienna. As late as 1871, however, Professor James C. White, who gave the first course of lectures on diseases of the skin at Harvard ten years earlier, complained that at that time America had contributed little to dermatology, which he said had hardly then found a place among his countrymen as an

acknowledged specialty. Now America is in the very forefront all along the line of advance in dermatology.

CAUSES OF PROGRESS.

The chief cause which has contributed to the progress made since Hebra placed dermatology on the right track has been the application to skin diseases of cellular pathology and, later, of bacteriology. We have thus gained a clearer understanding of the mechanism by which skin lesions are produced and of the causes which set that mechanism in motion. Bacteriology has already thrown light on the ætiology of many diseases which half a century ago were impenetrable mysteries.

FLORA AND FAUNA OF THE SKIN.

The parasitic agencies concerned in the causation of tuberculosis and leprosy have been dragged into the light of day, and, although the specific ætiological factor of syphilis has so far eluded the most persevering search, it may safely be assumed to belong to the same order of living organisms. We know the causes of sycosis, furuncle, impetigo contagiosa, carbuncle, and glanders, and, what is perhaps more important, we know the causes of the secondary suppurative processes which complicate so large a proportion of affections of the skin. All this knowledge we owe to bacteriology, and it may be expected with every confidence that the expansion of that branch of biological science—and its landmarks are being moved every day—will bring with it a corresponding widening of the dermatological horizon.

Discovery has also been active on a parallel line of research along which explorers have but lately begun to work. The study of diseases caused by vegetable fungi is only in its infancy, but already many facts of the highest practical importance in regard to their origin and transmission have been revealed by the labors of M. Sabouraud and others. I shall have a good deal to say about the results of those researches in a subsequent lecture.

The skin has its fauna as well as its flora, but as to animal parasites our knowledge is doubtless nearer finality than in any other part of dermatology. But even in the case of so common an affection as scabies, the cause of which is visible to the naked eye, there are problems that still await solution.

THE NERVOUS FACTOR IN CUTANEOUS DISEASES.

An ætiological factor which beyond all doubt plays an important part in the causation of skin diseases of one kind or another is disordered function or actual lesion of nerves. The difficulty is to define its sphere of influence. In dermatology the nervous system is to a certain extent a harbor of refuge in threatened diagnostic shipwreck. But we have learned from Weir Mitchell and others what damage

may be done to the skin by trophic disturbance; and in a large number of skin affections the cause of the evil is traceable to the vasomotor machinery having somehow got out of gear. In one or other of these ways the nervous system is accountable for zona, erythema, pemphigus, scleroderma, and various forms of cutaneous œdema, hæmorrhage, or ulceration. Reflex irritation of the vagus, by the presence in the stomach of shell-fish, strawberries, or other food noxious to the individual, will cause urticaria. A defect of innervation in any part of the skin surface lessens the power of resistance in that place and opens the way to microbic invasions. This is probably the explanation of many cases of eczema, lichen, and other affections. Or, again, an existing disease may be greatly aggravated by supervening nervous disorder. The affection itself may be trivial—a simple eczema or pruritus ani—but the force of the nervous explosions which it causes may transform it into a formidable and intractable disease. Or the nervous disorder may find expression in intense cutaneous irritation, making the patient's life almost unbearable and threatening to destroy his reason without leaving a mark on the skin, except those made by his own nails. In these days of nervous overstrain such neuroses of the skin are in my experience very common, and they are among the most distressing cases that a dermatologist can be called upon to treat. Some striking examples will be given when we come to deal with the subject more fully.

THE CONSTITUTIONAL FACTOR.

Though "dyscrasia" is not the root of all cutaneous evil that it was once held to be, the constitutional factor must not be altogether left out of account. The eruptive fevers have their characteristic rashes, and the taint of syphilis may, as we all know, produce almost every variety of skin lesion. The circulation of toxins in the blood causes eruptions on the skin, as is seen in diphtheria and other diseases when the serum treatment is employed. The prolonged operation of some similar cause, such as the presence of slowly produced toxins or of ptomaines in the blood, might explain the origin of some skin diseases. Gout, too, though perhaps not directly a cause of definite skin disease, is an aggravating circumstance in many—notably in eczema. Glycosuria, again, is often associated with certain forms of pruritus and herpes, with boils and carbuncles, and with a special variety of xanthoma.

ADVANCE IN TREATMENT.

In the treatment of skin diseases there has also been a great advance. The knowledge of the cause has in many cases shown us how to deal effectively with the disease. This is especially the case in re-

gard to parasitic affections, which form a considerable proportion of dermatological practice. During the last twenty years new parasiticide agents of great power have been introduced; of these I need mention only resorcin, ichthyol, and chrysarobin. Of more importance even than new remedies are the better methods of handling both old and new which we have learned. The pastes, plaster mulls, varnishes, soaps, sticks, and other devices for the application of remedies, which we owe to the ingenuity of Pick, Unna, Lassar, Brooke, and others, have revolutionized the local treatment of skin disease. A mode of treatment which gives really brilliant promise is Finsen's phototherapy. The results obtained with it in Copenhagen have excited the attention of the whole medical world, while in my own hands and in those of others in London they have been most encouraging in lupus vulgaris and rodent ulcer. In the application of the Röntgen rays, too, another method of treating malignant superficial ulcers has been found which is in certain cases superior to the concentrated light rays. In subsequent lectures full details of these methods and the results which I have so far obtained by their means will be given.

Of the newer remedies for internal use, one can hardly speak so positively. Thyreoid extract has not answered the somewhat too enthusiastic expectations at first formed of it; tuberculin has a limited value as an adjuvant to local treatment in lupus; serum therapy has been tried in syphilis, leprosy, and tuberculosis, but, though favorable results have been reported here and there, the treatment has not yet gained for itself the right of citizenship in the medical commonwealth.

To sum up: If any skeptically minded person were to ask if, after all, we at the present day know much more about skin diseases than was known by Willan, it is possible to answer the question with a very decided affirmative. We know far more about the ætiology than was, or could have been, dreamt of by him; we also know much more about the processes of diseases whose outward and visible manifestations are seen on the skin. We not only know more, but, as Carlyle would say, we *can* more; even in cases which we are unable to cure we can give relief to an extent that would have been impossible at the beginning of the last century.

SCOPE OF THE LECTURES.

Before going further I am anxious to ease your minds of any lurking fear that I am about to inflict upon you a course of dermatology. You may remember Dr. Johnson's reply to a fond mother who was impressing on him the *difficulty* of a piece which her daughter had just played for his delectation: "Madam, I wish it had been impossible!" You, I

am sure, would be more courteous than the sage, who, like Mark Anthony, was rude in his speech; but even if I succeeded in the difficult task of giving an account of all the manifold ills the skin is heir to within the compass of these lectures, you would doubtless feel the wish to which Dr. Johnson gave blunt expression. A synopsis of dermatology would be tedious and out of place; it would, moreover, be impertinent in a country where I am more fitted to be a learner than a teacher. I propose therefore to confine myself to certain aspects of dermatology which have never, as far as I am aware, been previously treated as a whole.

The scope of these lectures will include a survey—necessarily brief and, indeed, cursory—of the chief diseases of the skin (1) as they affect the individual in his relations to his social environment, (2) as they affect the health, prosperity, and development of the community of which he forms a unit.

Every dermatologist thinks it a duty to himself to construct a new plan of classifying diseases of the skin, and you will therefore not think it strange if I begin with a classification. This I know is a word of fear, which will excite dismal apprehensions; I hasten therefore to say that it is not so much a classification as a division. Some diseases of the skin are dangerous to life; others without directly threatening life cause such tortures as to make life almost unbearable; while others again only cause disfigurement. Examples of the first of these categories are to be found in mycosis fungoides, rodent ulcer, and pityriasis rubra; of the second, in zona, which may develop into chronic neuralgia of the cutaneous nerves, and in prurigo, eczema, lichen, and other diseases causing itching; and of the third, in lupus, rosacea, alopecia, areata, erythema, and premature grayness of the hair. These categories may be combined in varying degrees: For instance, a disease which is at first disfiguring, like mycosis fungoides, or a cause of annoyance and torture, like dermatitis herpetiformis, in the course of its evolution becomes dangerous to life. Or an eczema of some covered part of the skin may spread to the face or hands and become disfiguring.

A character found in a considerable proportion of affections belonging to all three categories is *infectivity*. This quality is from one point of view the most important of all, as it may entail a social boycott of all degrees of severity from segregation on a lonely island to exclusion from school—a form of ostracism, it must be admitted, generally borne with philosophic fortitude by the victim. We hear much in these days about the brotherhood of man, and there is assuredly nothing in which this brotherhood is more distinctly manifested than the sympathy—in the literal sense of the word—with which we are liable to suffer from each other's diseases. Under

this head come a motley group of diseases ranging from the inoculation of tubercle to the migration of a flea.

EFFECT OF SKIN DISEASE ON THE INDIVIDUAL IN HIS SOCIAL RELATIONS.

Apart from their effects on the health of the patient, skin diseases may cause loss of occupation, interference with education, and banishment from social life. Thus, workers will not tolerate a sufferer from lupus among them, and eczema of the hands makes certain trades impossible for the patient; corns may, as in Gilbert's ballad, mar the steps of the ballet girl; ringworm may cause the exclusion of a child from school for months, even for years; pruritus ani or pudendi enforces a life of loneliness on the unfortunate subjects. An affection of the skin of little or no consequence in itself may be important to the happiness of individuals and families owing to the unfounded suspicions to which it may give rise. I quote an illustration from Watson's *Lectures on Physic*, as much for the pleasure of adorning my bald discourse with a fragment of his incomparable style as for the aptness of the particular instance: "Herpes præputialis is a very common and very trifling species affecting the foreskin; but it might be readily mistaken for the result of the poison of syphilis, and so cause much alarm and distress to the subject of it, and entail upon him perhaps a needless course of mercury, and bring unmerited suspicion upon the person with whom, whether lawfully or unlawfully, he might have been connected."

A SOUND SKIN IN PRESIDENTS AND PRINCES A GUARANTEE OF PEACE.

In a larger sphere skin diseases may have far-reaching effects on nations. What troubles may not be due to a disfiguring blotch or an irritating eruption in one having in his or her hands the destinies of men? Pascal says that if Cleopatra's nose had been longer by an inch the course of history would have been changed; with equal reason it may be affirmed that, if the "Serpent of old Nile" had suffered from rosacea, the battle of Actium would never have been fought. How much of Marat's lust for blood may have been due to the chronic skin affection from which he suffered? How much of the ruthless cruelty of Henry the Eighth to the "evil humors" which transformed him from one of the handsomest men of his day to a bloated mass of eruptions and running sores? We know that indigestion caused by eating not wisely but too well of shoulder of mutton stuffed with onions made Napoleon lose the battle of Leipsic. May not the itch from which he suffered at one period of his career have been responsible for one of the savage out-

bursts of temper which made him kick one of his generals in the stomach and even attempt to lay hands on an ambassador? The physicians of Louis the Fourteenth kept a careful diary of his health, and you can read there of the trouble caused by the august patient's bowels and of the heroic fortitude with which the monarch endured the administration of countless enemata and the withdrawal of gallons, nay hogsheads, of his royal blood. It would be interesting to trace the connection between these evacuations and depletions and his political acts; if this could be done accurately, it would doubtless appear that the state of the king's health had a marked influence on the character of his rule. And greater even than the influence of a loaded colon on mind and temper is that of an irritable and inflamed skin. Let us therefore pray that princes and proconsuls, presidents and other potentates, may always keep a sound skin on a sound body. There could hardly be a better guarantee of peace and good will among men.

THE ARTIFICIAL DECORATION OF THE SKIN AND ITS EVIL CONSEQUENCES.

Another point where dermatology touches social life is in the dangers that may be caused by foolish attempts to decorate the skin. We all doubtless agree with the poet that beauty when unadorned is adorned the most, but we know that among a large class of people of all ranks the precept is treated as the maxims dictated by the wisdom of experience mostly are. We have, like Hamlet, heard of the paintings by means of which women, not content with the face God has given them, try to make themselves another. They will also make themselves hair of a hue different from that of Nature; even men will try to hide the frostmarks of the approaching winter of age by the use of hair dyes. All these things are fraught with danger for the skin and not infrequently for the general health. A few years ago tattooing was a fashionable craze among the gilded youth of London; it is well known that disease of the most serious kind may be communicated by this process. The same statement applies to the custom of piercing the ears for earrings, a relic of barbarism which seems to be dying out among us.

FEIGNED ERUPTIONS.

Another function in regard to society which may be alleged for dermatology is the detection of imposture and malingering. Skin eruptions and ulcers of the most varied description can be produced by artificial means, and this is done to excite sympathy, to escape work or military service, or from the mere pleasure of deception; in cases of the latter kind the patient will often inflict considerable pain on herself, prompted apparently by the love of

Art for Art's sake. Every now and then one hears of an hysterical girl on whom the marks of divine favor are supposed to be plainly written in the form of stigmata. The subject of feigned eruptions is one of the most interesting in dermatology; it is also of great importance from a public point of view, for impostures of the kind referred to may mislead weak minds into errors that may have deplorable and far-reaching consequences. Other marks are sometimes seen on the skin in which a superstitious fancy might easily see the sign manual of the Evil One. There is a curious condition of the cutaneous surface in which it readily takes the impression of any object applied to it, or in which anything may be drawn or written on it as on a sheet of living paper. This is the effect of a disturbance of the vasomotor apparatus of the skin which will be described later.

SKIN DISEASES AND COLONIZATION.

In regard to the effects of skin diseases on the development of a race, in the present state of knowledge, it is not possible to do more than throw out a few hints which may perhaps suggest some fruitful line of research to other workers. We can only glance at the results of the prevalence of leprosy in Europe in the Middle Ages and at the possibilities for widespread mischief that still lurk in its smouldering ashes. The skin diseases peculiar to the tropics also require consideration in so far as they may be obstacles to colonization.

Gentlemen, I have sketched a rough outline of the lectures which I shall have the honor of delivering to you. I have indicated some of the problems to be discussed, and others will meet us as we proceed. I do not pretend to be able to offer a satisfactory solution of them all. But a clear statement of them may be useful as supplying a hint as to the direction in which the solution is to be sought.

The Coming Academic Greatness of America.—Dr. George Bagot Ferguson, President of the British Medical Association (*British Medical Journal*, August 3d), in his presidential address on Scientific Research: the Indispensable Basis of All Medical and Material Progress, speaking of medicine one hundred years ago, says: "Among the other great names of France a hundred years ago, I should mention Bayle, Bretonneau, of Tours, and Alibert, and the surgeons Boyer, Larrey, Roux, and Dupuytren, a galaxy unmatched then in any other part of the world. Small wonder that the earnest students of all nations flocked in those days to Paris, and still more so a few years later, when we should need to add to our enumeration the names of Corvisart, Cloquet, Louis, Cruveilhier, Andral, and Bouillaud; just as they are now flocking to Germany, and will soon, I believe, betake themselves to America, and hereafter to London, if only its newly reconstituted teaching university turns out as successful as we all hope it may be."

PROFESSOR MAX SCHÜLLER'S VIEWS ON MALIGNANCY.

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There has recently appeared from the hand of Professor Schüller, of Berlin, a small book entitled "*Die Parasiten in Krebs (Carcinoma) und Sarkom.*" As, at the present time, this work is not available to many of those who are interested students of malignant tumors, I purpose giving in the following article a brief outline of the methods and results of the investigations which he has been conducting during the past eighteen months. I believe that a perusal of the original work, and I hope of this article also, will convince even the sceptical, that malignant tumors are of parasitic origin, and that in their production the organisms herein described are the essential agents. In their description I have followed the German text very closely. The illustrations have been copied from the original, with the kind consent of the author and the publisher.

The author's researches, which have been very numerous and very conclusive, were based on the two following premises: First, "The mere search after organisms or similar objects in the histological picture, without the guidance of predetermined forms, can only lead to error," there being no possible way by which to determine whether or not the discovered forms belong in reality to the sought-for parasite. The proof of this is to be seen in the unending discussions that have occurred, concerning the parasitic or non-parasitic origin of certain appearances that have been observed for years in various microscopic preparations from malignant tumors. Secondly, if a parasite is truly present in the tumor within the body, it is most probable that it has obtained its nourishment directly from the cells and fluids immediately surrounding it; that is, the tumor tissue itself has acted as the culture medium. If that were true, a section of tumor, outside the body, would not only contain the parasite, if present, but also all the nutritive elements required for its growth. The tissue itself would serve as the culture medium, and growth might be expected if the other conditions necessary for this were fulfilled. Those conditions were unknown. However, the avoidance of any contamination of the tissue to be used for experiment was, *a priori*, a necessity. The deleterious effect of cold on many organisms was remembered, and measures were taken to avoid chilling the specimen, even for a short time. The effect of cold had previously, rarely if ever, been considered; its importance will shortly appear.

Keeping in mind the premises mentioned above, the first researches were directed to the discovery and growth in pure culture of any micro-organisms

to be found in sections of tumors. Various forms of previously unknown organisms having been discovered, these were studied to determine their relationship to each other, and to the changes occurring in the surrounding culture media. A study of numerous sections, prepared for microscopic examination, was then pursued to determine whether similar forms could be found in ordinary malignant tissue, and if so, under what conditions. At the same time numerous inoculations were made in rabbits, first to determine their possibility, and later to determine the changes in the tissues consequent on a growth of the organism.

For the formation of the cultures, the following method was employed: Immediately after the removal of a tumor or an infected gland, it, or, if too large, a section of it, was placed in a covered sterile vessel; this latter was surrounded by water kept at a temperature of 38-39° C. Immediately after the close of the operation, a small piece was removed from the central, or most healthy, portion of the specimen in the vessel, and was placed in a warm, sterile, culture tube. This was then tightly closed with a rubber stopper or with an ordinary cork; in the latter case, this was sealed with varnish or wax, to prevent drying or the entrance of fungi. The tubes were then placed, usually wrapped in dark paper, in an automatic thermostat, kept at 37.5° C. In all the manipulations the greatest care was exercised to prevent external contamination. Only sections from healthy portions of the tumor were ordinarily taken. For it was soon discovered that, in sections taken from fatty, degenerated, and ulcerated portions, the organism usually failed to grow; and, moreover, the ulcerated portions frequently contained adventitious bacteria. Direct sunlight was unfavorable; and cooling of the specimen, if only for a few minutes, resulted in the death of all the organisms. The non-recognition of this latter fact will probably explain most of the previous failures to cultivate the parasite.

The changes and appearances to be observed in the culture tube are, briefly stated, the following: After from three to seven days there appear on the walls of the tube numerous minute sago-like pearl-gray or yellowish granules; these are firmly attached and are not disturbed, if, by an inversion of the tube, the few drops of fluid which have collected therein are allowed to flow over them. The tissue at first remains about the same in appearance. Later, however, firm tissues become softer and darker, but retain their structure; soft tissues become disintegrated into a reddish brown pap; loose, highly vascular tissues become a thin bright red fluid, like fresh blood, and often so remain for many weeks; later, it likewise becomes gradually darkened to a dirty brown; tissue containing very little

blood assumes a reddish-yellow color. There is developed, also, at the same time, a peculiar odor, which is somewhat dissimilar in carcinoma and sarcoma, and which appears to be characteristic for each. It differs entirely from that of putrefaction. A microscopic examination of two slides from the same tumor, prepared at the same time and under the same conditions, except that one was from a section which had previously for several days served as a culture medium, showed the following surprising differences: "The slide prepared from a 'normal' carcinomatous section, and stained with hæmotoxylon-alum or carmine-alum and picric acid, showed all the structural details, especially the nuclear formation, wonderfully clear and well defined, the other, from a culture section, stained at the same time and in the same manner, showed those same details most imperfectly; the cell outlines were everywhere indistinct, the nuclei badly stained or quite unstained, and their forms very indefinite. Where the latter section took the stain the colors were quite different. A dirty grayish-blue to grayish-brown appeared, instead of the blue and dark violet; a dirty brown in place of the brilliant red; and a pale, washed-out yellow instead of the bright yellow. The striations of the muscle fibres appeared but little changed. Their nuclei took the stain, but were increased in number and size, and somewhat distorted.

These differences can be regularly observed in any firm tumor tissue that has served for only a few days as a culture medium. In those which have been so used for a longer time the cells become more and more blached, and finally they appear broken down into fine granular masses; the nuclei become more and more indistinct and unstainable; the tissue assumes an homogeneous washed-out color, in which darker and lighter parts are intermixed. In such preparations there is often not a single tissue cell to be recognized. These changes show, not only the wonderfully decomposing and destroying power of the organism, but also the impossibility that any of the cultures used later for inoculation should have contained tissue cells capable of transplantation. It may be noted here, that most of the stained preparations prepared from culture sections did show stained elements. These belonged, however, as will be shown later, not to the cells of the tissue, but to the parasites.

The microscopical examination of several of the sago-like granules, removed from the culture tube and placed on an object slide, showed them to be formed principally of peculiar glistening, usually light-yellow, but also colorless or yellowish-brown, capsular-like bodies, which might be designated "capsules." They varied between from three to eight times the size of a red blood corpuscle; might

be empty or air-containing, or filled with a golden-yellow or golden-brown granular substance, with or without a nucleus. They were usually oval in form, or polygonal, with rounded corners; occasionally they were round. The walls were clear, highly refractive, and apparently pierced by pores. They might occur singly, in masses, or in chains; in the latter case they were joined, not end to end, as the chain-bacteria, but by broad flattened extremities. In addition to the capsules, however, there were always present a greater or less number of minute spherical bodies, of granular structure and golden-brown or greenish- or golden-yellow color. On first glance they appeared to be covered with minute bristle-like projections, which radiated at right angles from the surface. They closely resembled a green chestnut burr, or a gooseberry which possessed a large number of spines. Hence the author names them provisionally, "grossulars."

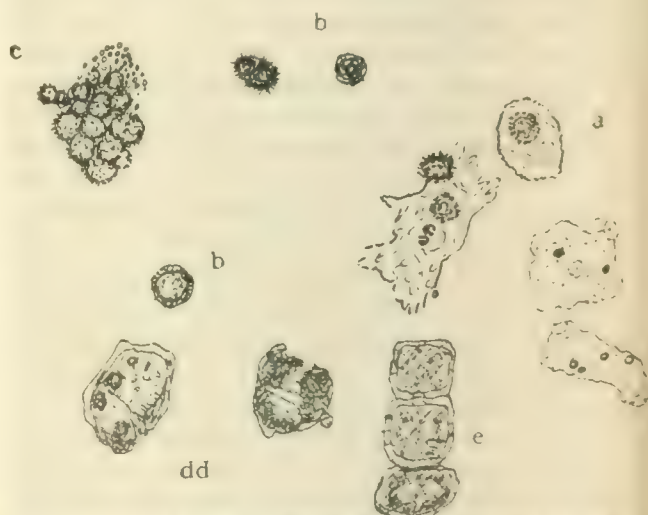


FIG. 1. From a giant cell sarcoma. *a b c*, grossulars; *c* in degenerated cells; *dd*, flattened capsules containing grossulars; *e*, capsules. Magnified 900 diameters.

In size they varied within wide limits; the largest approached the size of capsules; the smallest under a magnifying power of 1,000 diameters appeared about the size of a large coccus, from which, however, they could be distinguished under a still greater magnification, through their characteristic structure and appearance. They frequently showed from one to four equal-sized nuclei. The wall appeared doubly contoured and highly refractive; it was intersected at right angles by numerous radiating dark lines, whose significance will be best studied in hanging drop preparations (Fig. 1). The relationship existing between the grossulars and capsules was discovered through a study of the intermediate forms. These were to be found in all preparations, but their number and variety depended upon the character, age, and condition of the specimen. Some were usually to be found in the sago-like granules; but they were more numerous in the

fluid which developed in the culture tube. This also contained the extreme forms, the capsule and the grossular. In order to obtain a sufficient number and variety of forms for study, the culture should

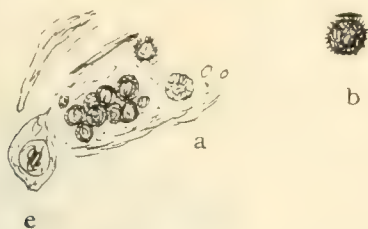


FIG. 2.—From a three-day-old culture. Tongue carcinoma. *e*, epithelial cell; *a*, young grossulars in a broken capsule. Magnified 900 diameters. *b*, grossular magnified 1,200 diameters.

be at least ten days old. Observed in a drop, from such a culture, many of the capsules present a nucleus, and a more or less homogeneous protoplasm; others a single or multiple nucleus, more or less distinct, and a granular protoplasm; others a yet more granular protoplasm, the granules being distinct, and appearing as separated rounded or angular bodies, of varied form and surprisingly glistening structure. These latter deserve special mention,

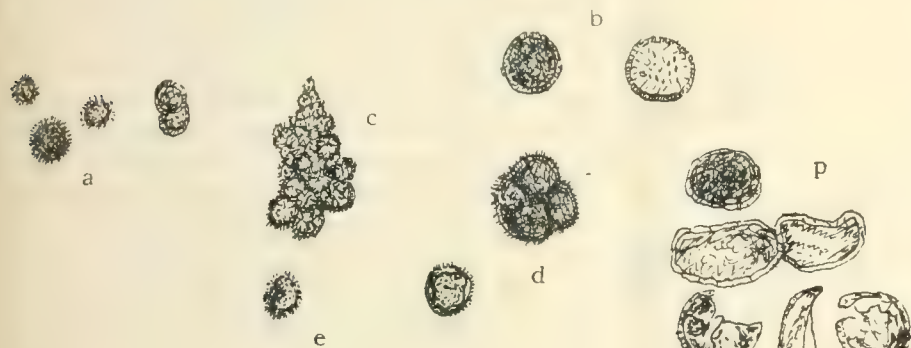


FIG. 3.—From a living carcinoma culture. *a*, *b*, *c*, *d*, *e*, grossulars; *e*, with contraction appearances; *d*, organism of appearance and character of the grossular with several young grossulars within; *p*, capsules partly torn; from a dry preparation. Magnification 900, immersion, except *b*, which is 1,200.

as similar bodies are frequently to be seen in tumor tissues, free and within the cells; still other capsules are found distended with small granular spherical bodies, which, in structure and appearance, exactly resemble those described above as occurring free, except that they are somewhat darker. Finally occur the ruptured capsules and free forms (Fig. 2). These latter occur in various sizes; many reveal a simple, others a three or fourfold, division of the cellular protoplasm. Some show the nucleus likewise divided into two, three, or four equal parts. Further researches, especially hanging drop observations and inoculation experiments, have shown that these develop directly into capsules. But even in the cultures there are often found examples of grossulars, which, even before they have reached the size, form, and color of capsules, show within them-

selves three or four spherical bodies of the color and form of the youngest organisms (Fig. 3).

Having thus determined, within the sections of tumor used as a culture-medium, the presence of a micro-organism, and having to some extent studied several of its forms, it next became necessary to discover and identify similar forms in sections prepared for microscopic examination. Conversely, in the microscopic section, only those forms which were similar to those met with in culture could be allowed to belong to the organism under consideration. Very numerous investigations have shown that the various forms of the organism above described are to be recognized in all properly prepared sections from malignant tumors. There can exist no longer any doubt that in tumor formation these organisms play a most important rôle. Their exact relationship to the malignant process has been elucidated through the observance of the living organism in hanging drop preparations, and a study of the results obtained by inoculation. In the hanging drop, moreover, not only can the growth and development of the organism itself be easily watched, but its reaction to various external influences, and

the results of its presence and growth on living tissue can also be determined. For its preparation and preservation certain precautions must be observed. The drop should be obtained from the fluid exuded by a normally developing culture specimen, preferably about the tenth day; before that time the organisms are neither so numerous nor so varied in form. The hanging drop chamber should be sealed to prevent

drying, for the observations are often continued at intervals during many weeks, and drying kills the organism. It must be examined on the warm stage, and, when not under observation, kept in a thermostat at the body temperature. At no period must any chilling occur; this results in the almost immediate death of the organism, and the appearance of the dead and degenerated forms, hereafter to be described. In order merely to recognize the various forms of the organism, the lower powers of the microscope will suffice; but for a study of their structure only the best oil-immersion lenses and eye-pieces, giving a magnification of from one thousand to fifteen hundred diameters, have proved suitable. With the latter, also, the Abbe condenser must be used.

Thus observed, the grossular appears as previous-

ly described, a more or less spherical body, dark golden-brown or bright golden-yellow in color, with a greenish tinge and studded with minute bristles. The wall and cell protoplasm can be easily distinguished, the one from the other. There is often a nucleus, or two, three, or four equal-sized nuclei. By careful focussing the radiate stripes in the cell wall are discovered to be pores, and the fine, bristle-like projections on the surface to be cilia-like prolongations from the cellular substance through those pores. These processes are in almost constant motion. They can be withdrawn into the central mass, in which condition the organism becomes smooth, usually paler, and more resistant to deleterious influences. Changes of form can also be seen to take place within the cell protoplasm; and the cells are apparently, if only to the slightest extent, possessed of independent motion. From time to time particles of matter are arrested by the cilia, and occasionally such have been seen to enter the cell through a distended pore, and to remain for a longer or shorter time visible within its protoplasm. They were then either absorbed, or, by a reverse process, extruded from the cell.

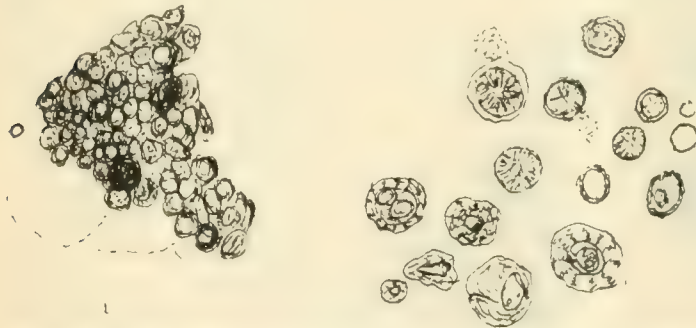


FIG. 4. *a*, clump of dead, pale, mostly air-containing grossulars; *b*, colorless, dying, and dead forms; *c*, degeneration forms. From various carcinomatous cultures. Magnified 900 diameters.

In addition to the previously described forms, there were, in many cultures, a greater or less number of pale or colorless smooth forms, with radiate borders, but without cilia and without motion. They occurred singly or in groups. These, together with still more atypical forms, pale and swollen or crumpled and contracted or broken and disintegrated, could be seen to develop in the hanging drop out of the normal forms, by exposing them to various deleterious influences, as cold, absolute alcohol, sublimate solution, infection with putrefactive bacteria, and others (Figs. IV. and V.). The rapidity of these degenerative changes, for such they undoubtedly are, varies according to the nature of the deleterious influence, and also with the age of the culture, the forms found in old cultures proving, as a rule, far more resistant than those found in young cultures. Although the pale, smooth forms appear to be the first stage in the degenerative process they

are yet possessed of vitality, and can recover themselves under suitable conditions. They are frequently met with in old cultures, and are then, perhaps, a resting stage. The other degenerated forms are dead and beyond possible recovery. Most of

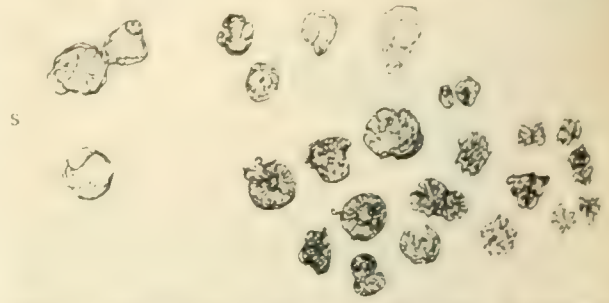


FIG. 5.—Various forms resulting from the action of alcohol on young living grossulars; *s*, sarcoma; *c*, carcinoma. Magnified 900, immersion.

these forms are frequently met with in sections prepared for microscopical examination, the various manipulations having killed and distorted the organism.

The addition of a drop of human blood to a hanging drop, in which occur many such pale, smooth forms, results after a few hours in the gradual transference of the blood coloring matter to the parasite, and is followed, on the succeeding days, by a rapid growth of the organism and the disintegration of the red blood cells. There are yet two other varieties which must be noted: one, highly pigmented, which only differs from the normal in an excess of pigment, so that its color is extremely dark and its structural details not easily recognized; the other, a crystallized form, in which the grossular is completely obscured, being incrustrated by crystal-

line masses, which often resemble a human femur in shape. This also contains an excessive amount of pigment (Fig. VI.). Both forms regain a normal appearance on the addition of a strong solution of potassium-hydrate or of hypo-chlorite of sodium;

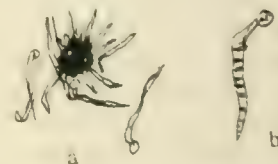


FIG. 6. From a cervix carcinoma, unstained, imbedded in glycerin. Dark, brownish-black, pigmented grossular beset with crystalline masses. *a*, magnified 900 diameters; *b*, one such crystal by still greater magnification.

at the same time, large amounts of pigment appear, dissolved in the solution. But forms so treated are not permanent; the continued working of the reagent rapidly results in their disintegration. The

pigment is an iron derivative and is obtained from the hæmoglobin. This loss of hæmoglobin and degeneration of the red blood cells may partly explain the rapid anæmias that accompany malignant tumors, especially the highly pigmented forms.

Concerning yet other characteristics of the organism presented in culture media, the following are the most noteworthy. The attempt to cultivate the parasite on various artificial media, under the most careful attention to all the details previously discovered to be necessary, resulted in absolute failure. The addition of rabbit's blood to a normally developing culture speedily resulted in the death of the organisms; but, on the other hand, by the occasional addition of fresh, normal, sterilized human blood the culture could be kept virulent for months. Whilst the growth of putrefactive bacteria rapidly results in the death of most of the organisms, there frequently remain single forms, which fail to develop, but have all the appearances of the living organisms. Their significance is not understood.

In order to observe the results produced by a growth of the parasite on living tissue, hanging drops were prepared in the usual manner, and to these were added minute, carefully sterilized particles of skin removed from the arm, or scrapings from the mucous membrane of the lip. On the second day, beginning nuclear division was distinctly evident in the cells of the mucous membrane; on the following days the process rapidly continued, so that, soon, some cells contained four, and others five, nuclei. By the second or third day parasites had entered several of the cells, and these cells soon became cloudy and then disintegrated. The epithelial cells were far more resistant. After ten days nuclear and cellular division had occurred in the cells in the neighborhood of the parasites, but few had become disintegrated. The connective tissue cells suffered in the same manner, either undergoing cell division, or disintegration, as a result of the parasites' activity. Carcinomatous epithelium is far less resistant than normal epithelium; eight days usually sufficed for nearly all the cells of the former to become degenerated.

The description of the parasite, thus far, holds good for both sarcoma and carcinoma. The differences between the two are slight and not always very distinct. The odor of the culture of each seems to be more or less characteristic for itself. The organism in sarcoma is, in general, considerably lighter, more golden-green in color, but this may not hold true for individual cells. In form, the grossulars of carcinoma are regularly round or oval; those of sarcoma, on the contrary, show, in addition to the round forms, numerous slightly irregular forms. Of most importance, however, are the differences in the sizes of the two organisms; the

grossulars of carcinoma show less variations in size, and the minute forms are comparatively few or absent; in sarcoma, however, the minutest, that is to say, forms minute, even with a magnification of one thousand diameters, constitute a considerable proportion of the parasites present.

By means of these criteria, cultures of the two organisms can usually be easily distinguished; and these differences, especially that of size, also remain true of the organisms when they occur in tumor sections.

A detailed study of the histological appearances and changes occasioned by the growth of the parasite in the tissues would necessitate a study of the complete pathology of malignant tumors. A brief description of the methods necessary for their recognition therein must suffice.

Either living or dead tissue may be examined. If the living parasite is to be sought for, a small piece from the former should be teased in a few drops of normal salt solution, in a warmed watch-glass, or on a warmed stage, and examined in the hanging drop. This must be done shortly after the removal of the tumor, and all opportunity of chilling must be avoided. The parasite will be seen in its characteristic forms and color, as described for the hanging drop. For the examination of the parasite in dead tissue, either teased specimens or sections are suitable. For the former, a small piece should be teased in absolute alcohol; after a few minutes' dehydration the alcohol should be absorbed with filter paper, the specimen cleared with one of the ethereal oils (oil of Bergamot, oil of lavender, xylol, or other similar oil), and examined without staining, either in the oil or after mounting in balsam. In such preparations, the capsules and grossulars are easily recognized by their before-described characteristic form, color, and structure.

For the preparation of sections, small pieces should be hardened, and then imbedded in celloidin; paraffin is not so suitable. The section on the slide may be simply cleared in oil, like the teased specimen, or it may be stained according to the rules hereafter to be given. If, as sometimes happens in old specimens hardened in alcohol, the oil also decolorizes the organisms, potassium, or sodium hydrate in five-per-cent. solution may be advantageously substituted; they have, however, this disadvantage, that specimens so prepared are not permanent. Whether cleared in oil or alkali, the capsules may be recognized in chains or groups, by a magnification of one hundred and twenty diameters, through the yellowish-brown, spotted appearance, which they give to the otherwise clear tissue. The grossulars can be seen by a magnification of about two hundred diameters as glistening brownish or

yellowish dots. But, for exact recognition, a far stronger magnification is necessary.

As a simple stain, hæmatoxylin-alum is the best. A few drops of this, used only momentarily on the section, followed by absolute alcohol and a clearing oil, allows the various histological details to appear with the greatest clearness, but leaves the grossulars and capsules unstained, in their natural colors. A longer working of the stain gives the organisms a bluish tinge, and they then become very difficult to recognize. As a differential stain the following has, thus far, proved the best: Strong watery solution of thionin, for from five to thirty minutes. Careful washing with distilled water to remove superfluous stain. Oxalic acid solution, $\frac{1}{2}$ to 1 per cent. for from one quarter to one half a minute; absorption of acid with filter paper; dehydration with absolute alcohol; clearing with xylol, and mounting in balsam. The grossulars appear violet-red, the tissues blue to blue-green; the pigmented and incrustated (crystallized) forms appear green, and the capsules are frequently colored violet to greenish. Boric acid and alcoholic solution of hydrochloric acid can be substituted for the oxalic

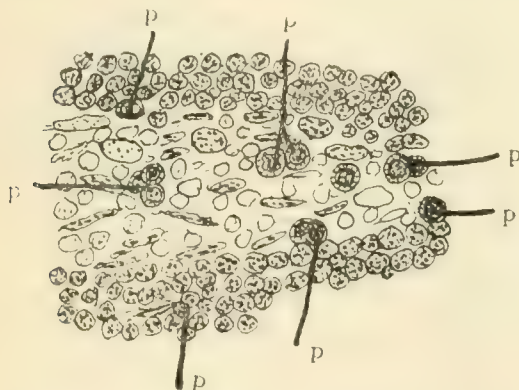


FIG. 7. From an axillary gland. Carcinoma of the breast. *p*, parasites in the already altered but not yet carcinomatously-affected gland. Magnified 900 diameters.

acid solution, with only slight change in the developed colorings. The differential stains are especially valuable for the study of the entrance point of the parasite into the tissues, and the routes along which it is propagated. The former is apparently, as a rule, through minute lesions of the epithelium of the skin or mucous membrane; the latter, through the lymphatic channels; but space forbids my considering this here. It will suffice to note that the parasites are usually arranged in zig-zag or spiral lines, singly or in groups. In tissue recently infected, they are usually few in number, and the changes which their activity occasions in the cells can readily be studied. Both the connective and parenchymatous cells are affected. The first noticeable change consists in an increase in the size of the nuclei and in the amount of contained chro-

matin; this is accompanied by an increase in the size of the cells, and is soon followed by cellular division. Many degenerated leucocytes are often seen; whether they proliferate appears doubtful (Figs. 7 and 8). In glandular tissue, the cell proliferation results in obliteration of the lumen, destruction of the limiting basement membrane, and in the invasion of the neighboring tissues (Fig. 9). The epi-



FIG. 8. From an axillary gland. Carcinoma of the breast. *c*, carcinomatously-affected. *p*, parasites. Magnified 900 diameters.

thelial pearls are produced through the inclusion of a parasite within an epithelial cell, and the proliferation of others around it. Why such vast differences exist between the various forms of tumors belonging to the same class, is as yet unknown. But that, however, does not affect the main proposition, that all the different forms are produced by the organisms at present under consideration.

Having now very briefly considered the appearance and mode of development of the parasite, both in culture and living tissue, there yet remain to be noticed the results of inoculation experiments on rabbits. These have been numerous, and uniformly successful. They were always conducted with fluid taken from active cultures, in which micro-

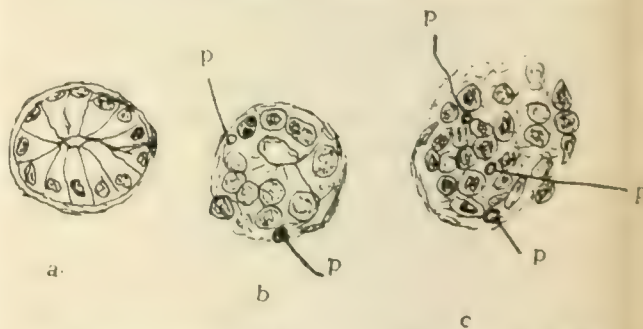


FIG. 9. Different stages of carcinomatous development in three glands lying near each other. *a*, practically normal; *b*, nuclei, large, irregular, crowded inward; *c*, cells increased in number; lumen disappeared; limiting basement membrane broken through.

scopical examination showed the absence of structural elements, excepting the parasites; some were conducted with fluid showing only young organisms, others with that showing both capsules and

grossulars. The results were the same. Inoculation was frequently followed by an inflammation of greater or less severity, often by necrosis, at the site. This appeared to be due to the irritant qualities of the culture. Apart from these, however, an examination of tissue taken a few days later from near the site of inoculation, showed the parasites in active development; those in which only grossulars had been injected showed many capsules, in all stages of development. Proliferation and degeneration of the neighboring cells were everywhere met with. Nor was that all. Wandering of the parasite into adjacent and widely separated points, and the formation of metastatic deposits were extremely common. These secondary tumors were found in all parts of the body; adjacent lymph nodes, spleen, kidney, liver, lungs, intestinal tract, etc. In all, the parasite in several of its various forms, could be recognized and the appearances of the tumors were identical with corresponding appearances in man.

We have thus presented an organism which can be grown in pure culture, which can be readily identified through its peculiar form, color, and mode of development, which occurs invariably in tumors, and which produces the same by its inoculation. There would, therefore, seem to be no reasonable doubt that these are the elusive parasites which have been so long sought. Whether any of the organisms previously described as occurring in tumors, will allow themselves to become identified with the one here described, we do not know; but it is certain that this cannot be identified with *Blastomycetes*, or any other organism which grows on ordinary culture media and is tolerant of a temperature that very rapidly proves fatal to the one just described. It apparently belongs to a class of animal parasites of which practically nothing is known. Certain researches of the author would tend to show that non-malignant tumors are produced by somewhat similar parasites belonging to the same class, and that under certain conditions these are either transformed into the malignant form, or assume malignant qualities which results in the same proliferation of cells as that caused by the described forms. But of this too little is known to say anything definite.

The foregoing researches would tend to prove the infectious nature of the disease, but in what manner it is propagated is absolutely unknown. Analogy would suggest that some form of the organism must exist outside the body; and many histories have tended to confirm that view; but it remains for future research to prove the correctness of the theory, by discovering the parasite outside the body.

In view of the extreme sensitiveness of the organism to cold and ordinary antiseptics, the danger

of infection during an operation must be very slight; the result of continued association with an infected person, on the other hand, is more open to question. That same susceptibility which reduces the risk of infection also leads us to hope that it will be possible to devise or discover measures for the prevention and cure of this class of diseases. Certainly none would welcome such a discovery more heartily than those surgeons and physicians who have in their care distressing but inoperable cases.

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THE CLINICAL DIAGNOSIS OF CARCINOMA OF THE ŒSOPHAGUS, AND THE TECHNICS OF GASTROSTOMY*

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The object of this paper is simply to classify the different locations of carcinoma of the œsophagus, facilitate the diagnosis of the affection, and give a description of a simple and rapid method for performing gastrostomy, and I shall leave aside the report of cases. Carcinoma of the œsophagus is relatively infrequent, and after my personal researches I should place it at about one in every fifteen hundred cases of cancer. It is generally believed that the affection is hardly ever met with in the female, but, out of 44 cases observed in the Institute of Pathology of Berlin, published by Petri, there were three in females. Of the seven cases that have come under my observation, all have been in males. From this it would appear that the use of alcohol, and more especially tobacco, may be important as an ætiological factor.

As to the age of the patients afflicted, carcinoma of the œsophagus follows the general, but by no means absolute, rule of carcinomatous neoplasms, being usually met with after the age of forty.

The determining cause usually escapes detection, but there have, nevertheless, been cases reported which were certainly produced by an irritation from a foreign body such as a cherry-stone. Sometimes the patient is suddenly made aware of the presence of the growth, while at others its symptoms slowly progress.

The most frequent situation of carcinoma of the œsophagus appears to be the lower third of the organ, at the junction of the cervical with the thoracic portion. Carcinoma of the upper portion of the œsophagus is usually a simple extension of a carcinomatous process of the larynx or pharynx, while that of the lower end is sometimes, although rarely,

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due to the extension of a cancer of the stomach. Histologically, carcinoma of the œsophagus is usually a lobulated pavement-cell epithelioma, but cylinder-cell epitheliomata arising from the glands of the œsophagus have been reported.

The site of carcinoma of the œsophagus explains the frequency of the complications arising during its progress. At its lower third the œsophagus is in relationship to several important organs that the neoplasm finally compresses and surrounds, and in which it produces an ulcerated process. According to the organ which it attacks, the disease takes on a different clinical aspect, with symptoms, progress, and an end which are quite characteristic, and which I shall endeavor to distinctly classify. For this purpose I have divided these forms into five groups, which I shall rapidly describe, beginning with the classical simple type of the affection which presents no complications.

This group of carcinomata of the œsophagus is far from being uncommon, and Lacour mentions twenty-four cases out of seventy-five that he collected. In this form of the disease the first symptom which declares itself is the difficulty that the patient experiences in swallowing solid food. The dysphagia occurs suddenly in some instances, while in other cases it develops slowly, becoming more and more intense, while the pain increases as the stricture produced by the neoplasm becomes tighter.

When the stricture has closed to such a degree that food can no longer enter the stomach, the œsophagus becomes filled with the alimentary mass and dilates above the obstruction, forming a pocket which varies very much from one case to another. In a case that was under my care an hour-glass dilatation was found at the autopsy.

The food collecting in this supplementary stomach, so to speak, which sometimes has a capacity of more than a litre, produces a phenomenon which constitutes a symptom of the greatest importance, namely, a regurgitation of food, which has very improperly been called œsophageal vomiting. When the pocket is filled it empties itself on account of the exaggerated tension of the walls of the tube, muscular reaction, and nervous irritation, and this occurs from a few minutes to two hours after food has been taken, according to the capacity of the pocket.

This regurgitation differs from vomiting in that it is accomplished without any effort. The food expelled is free from gastric juice, but may occasionally contain a little blood. It is usually in a very liquid state from the saliva that is swallowed. As the patient finds it very hard to make the food go down, he instinctively chews it longer in order to render it more fluid. Picard believes that this abundant salivation is due to compression of the superior laryngeal nerve by the growth.

Hiccough is infrequent, and only exists, in all probability, when some of the branches of the pneumogastric nerve have been excited, which results in a reflex action, and thus produces the hiccough. The "bruit de glouglou" which may be heard when the patient swallows a liquid is not frequently present in this group of cases, as it is caused by the air escaping through the stricture, which is replaced by the liquid swallowed.

Lymphatic metastases are not always present. The breath is extremely foetid, and the saliva finally makes its exit incessantly from the mouth, mixed with particles of food.

As to the general symptoms, they are the same as in other types of carcinoma, but in the group that we are now considering, the progress of the disease is generally rapid, with the exception of some cases where the neoplasm remains latent for several years. Usually the patient will die from inanition in a few weeks if an operation is not undertaken.

The second group of cases, which is by far the most frequent, may be properly called the tracheo-bronchial type, not only on account of the extensive and intimate relationship that the œsophagus has with the trachea and the large bronchial tubes, but also on account of the tracheo-bronchial lymphatic glands which are often involved by a metastasis, resulting in a disintegration and secondary infection occasionally, from which fistulæ between the trachea and œsophagus or the œsophagus and the bronchial tubes are formed. Symptoms of compression are first noticed when the neoplasm in the œsophagus begins to press on the posterior aspect of the trachea, and finally almost completely occludes the lumen of the latter, and ultimately results in a permanent dyspnoea with pulmonary emphysema.

In this type of compression the respiration takes on a particular character; inspiration is long and difficult, and the air can be heard to whistle as it goes through the obstructed lumen of the trachea. Expiration, which is also very difficult, occurs in two stages, so to say, as if the weakened patient had not the strength to perform the act all at once. The respiration may also be interrupted by very trying attacks of coughing.

It is this difficulty of expiration and attacks of coughing which are the cause of the pulmonary emphysema produced by the prolonged and forced dilatation of the pulmonary alveoli. Tracheotomy has been resorted to in several cases to alleviate these symptoms, but its use is questionable, because the growth is generally situated so low that the incision in the trachea cannot be made below it. The compression of the trachea usually results in death by asphyxia.

The most frequent complication in this group is ulceration. The neoplasm becomes adherent to the

trachea from an inflammatory process which invades the peritracheal cellular tissue, while in other cases adhesions between the organs takes place by the intermediary of the hypertrophied carcinomatous lymphatic glands.

The neoplasm, having invaded the mucous membrane of both the œsophagus and the trachea, becomes ulcerated, so that after a variable lapse of time the two organs are suddenly put into communication after a more or less severe hæmorrhage has taken place. It sometimes happens that unfortunate attempts at passing a bougie hasten the occurrence of the perforation. It is easy to understand that a perforation may take place between the œsophagus and the bronchial tubes if the neoplasm is situated at the level of the bifurcation of the trachea. The left bronchial tube is more frequently perforated than the right, but in some cases both have been involved.

The symptoms of perforation into the respiratory canal vary according to the extent of the perforation. If the opening is narrow and indirect, it may not be noticed during life, but if it is very large it will cause very serious disorders, such as intense dysphagia, attacks of coughing during deglutition, and an abundant expectoration of alimentary substance. Death from asphyxia usually occurs rapidly after this accident has taken place, and at autopsy spots of hepatization are found in the lungs, produced by alimentary débris which plug up the bronchial tubes and act just like an embolus in their effects.

The third group of cases may be called the laryngeal, and under this title we may class two different forms, one being the result of extension of carcinoma to the mucous membrane, muscles, and cartilage of the larynx, while the second is due to the compression or inclusion of the laryngeal nerves.

The first type is most infrequent, because primary carcinoma of the œsophagus rarely makes its appearance at the level of the larynx, but when both organs are affected the neoplasm usually begins in the larynx and only secondarily invades the œsophagus. This type is only a modification of the tracheal variety, and has the same symptoms, namely, dyspnœa and attacks of coughing and suffocation. When the vocal cords are involved there are other symptoms, such as hoarseness, which is partial if one of the vocal cords alone is involved, but finally complete aphonia takes place.

Fauvel relates two cases; in both there was dysphagia, then dysphonia with expectoration of blood, and finally death occurred from cachexia and inanition. Green also has put on record a case in which there was necrosis of the thyroid and cricoid as well as several rings of the trachea.

The second type is not much more frequent than

the one we have been considering, and is always extremely serious. The special objective symptoms are produced by a paralysis of the inferior vocal cords. At the same time, when troubles of deglutition occur, the patient also notices a change in tone of his voice, which is very husky, and very soon complete aphonia makes its appearance. At the same time respiration becomes difficult, on account of paralysis of the glottis, attacks of suffocation occur with tracheal tugging, and simultaneously a certain amount of emphysema due to the difficulty in expiration.

Now, if the vocal cords are examined with the laryngoscope, it will be found that anatomically they are perfect, but at the same time it will be noticed that either one or both are immovable in spite of the efforts made by the patient to speak. When both cords are paralyzed on account of lesions of both recurrent nerves, the glottis remains half open; it is lax and both vocal cords are seen to move slightly when air passes through. As far as I am aware, no well-marked case of spasm of the larynx from lesions of the recurrent nerves due to carcinoma of the œsophagus has been recorded. What is specially remarkable in this type is the great rapidity with which the patient dies cachectic, in spite of absence of ulceration occurring in the neoplasm. It would appear that it is principally due to a respiratory insufficiency from compression of the trachea as well as to paralysis of the recurrences, which are inspiratory nerves and dilators of the glottis.

The pleuropulmonary complications following carcinoma of the œsophagus may be produced by the extension of the malignant mass to the lung, but often also pneumonia or pleurisy or a combination of both is met with, although the lung and pleura are free from the neoplasm. When extension of the growth does occur, we may have either a serous or a purulent pleurisy, a hydropneumothorax or pneumonia. Usually one finds a mixed lesion; there are a few carcinomatous nodules disseminated in the pulmonary tissue which have become the nucleus of hepatization, but carcinoma can never reach the lung without involving the pleura, and consequently, along with a pulmonary lesion, there is always a pleurisy, usually with a bloody liquid. This pleurisy may be encysted and give stethoscopic signs of pneumonia.

Both pleurisy and pneumonia occur suddenly during the progress of carcinoma of the œsophagus without any signs of perforation or extension of the neoplasm into the lung. Certain authorities compare these symptoms to those of pulmonary congestion following a strangulated hernia, which has been attributed to a neuritis of the sympathetic nerve by Verneuil in his important writings on this subject.

Fernet, Fabre, and many other authorities believe

that a neuritis of the pneumogastric is the cause of pneumonia. The neoplasm surrounds the pneumogastric nerve or compresses it, its fibres become degenerated in many cases, its physiological action becomes partially or totally abolished, and everything takes place as has been demonstrated by the experiments recorded by Valsalva, Morgagni, Legallois, Vulpian, Claude Bernard, Talamon, and Letulle, who found that a true pneumonia ending in death would result after the section of both pneumogastric nerves.

It is evident that this theory is most plausible and is more than a hypothesis, because it is based on experimental facts, but, nevertheless, there are cases where, in spite of an almost complete disorganization of the pneumogastric, no pulmonary lesion existed. And we know of several cases in which both pneumogastrics were embedded in the neoplasm with neoplastic nodules developed between the fibres of the nerves, which presented a large number of degenerated fibres, and, nevertheless, both lungs were absolutely normal.

Cases of this description in no way injure the theory that pneumonia is due to a neuritis of the pneumogastric, but they simply go to show that these nerves may be almost completely disorganized without having their functions entirely abolished, for if a very small number of fibres remain intact, respiration will continue normally.

There is still another circumstance which gives credit to this theory, and that is that usually, if not always, the pneumonia or the pleurisy occurs on the right side, and it is precisely the right pneumogastric which has the most intimate relationship with the œsophagus, and consequently is more often compressed or surrounded by the neoplasm than the left nerve. The theory of the production of pneumonia by a neuritis of the pneumogastric is being generally abandoned at the present time, and I think with justice. Now, all authorities who have written on this subject up to within a short time have neglected to take into consideration a very essential factor and one that is always present in pneumonia complicating carcinoma of the œsophagus, and that is *infection*.

This infection presents a number of causes; it may be produced by partially fermented alimentary matter which is brought by regurgitation into the neighborhood of the respiratory orifice. Then we have infection by ulceration and through tracheal or bronchial fistulæ, which is always rendered very easy on account of the weakened condition of the patient.

The influence of compression or disorganization of the pneumogastrics, nevertheless, exists, but is not the principal cause of a pulmonary complication, and simply allows infection to take place by placing

the lungs in a lower state of vitality, for it is well known that suppression of the innervation of an organ favors infection, and in this way we can explain the condition arising in the lungs.

It would appear to me that we can attribute the formation of gangrenous points in the lung to the same cause. Several cases have been reported where there was compression or degeneration of the pneumogastric, but this appeared to be only an adjuvant cause of the infection, in the same way as a stricture of the trachea by producing faulty aeration, or stricture of the œsophagus producing inanition.

The fifth and last group of carcinoma of the œsophagus that I have to describe is the cardiovascular form. The heart and large vessels are in too intimate relation with the œsophagus to escape lesions in many cases where this organ is the seat of carcinoma, and consequently we often meet with complications either of the heart or pericardium, the aorta, the carotid, the inferior thyroid artery, the brachiocephalic trunk, or the vena cava or the subclavicular veins. Now, if carcinoma develops in the œsophagus at a point where the aorta is situated between this organ and a resisting plane, such, for example, as the vertebral column, the aorta would naturally be compressed as the neoplasm increased in size, and as a natural result the lumen of the blood-vessel would be narrowed, and the blood torrent arriving against it with considerable force would finally dilate its walls and produce a true aneurysm below the stricture; and consequently we have for the first type what may be termed the aneurysmal.

I would mention that the formation of this dilatation is not a necessary result, for the stenosis may be extremely narrow without producing a consecutive dilatation.

A carcinoma of the œsophagus may develop without exercising any compression on the aorta, but an inflammatory process may be produced resulting in a disorganization of the tissues which ends by an ulceration of the large vessels and finally perforation. This may be termed the ulcerating type.

The aneurysmal type is very difficult to diagnose unless the presence of the neoplasm has been discovered before the formation of the aneurysm; otherwise one of the two will be overlooked. Both the aneurysm and the neoplasm of the œsophagus are often deprived of several of their important symptoms. The aneurysm manifests itself by a souffle and by a retarded radial pulse, and both these signs may often be absent or be attributed to other causes.

Now, in cancer of the œsophagus, there may be complete absence of enlargement of the lymphatic glands, and as to the dysphagia, many are the in-

stances of aneurysms of the aorta which have opened into the œsophagus, and where this symptom was never complained of by the patient. Dysphagia is a symptom belonging to both carcinoma of the œsophagus and aneurysm of the aorta.

It would also be more than difficult to make a diagnosis of carcinoma of the œsophagus in those instances where the patients complain of a dysphagia which suddenly appeared after an emotion; the diagnosis of aneurysm would certainly come to one's mind first, and, nevertheless, the necropsy will show that the affection was in reality carcinoma of the œsophagus.

The diagnosis of the ulcerating type is no easier than that of the aneurysmal. The symptoms to which it gives rise are very indefinite, and may be attributed to many other pathological conditions. Sometimes, although rarely, pain is complained of in the right hypochondrium, while in other instances it is seated in the back, at a point corresponding to the lesion, but this pain often only occurs at the time the perforation takes place, and even then may be wanting.

A more important and surer sign is the expectoration of blood that the patient never forgets to mention if it has occurred, but it is often difficult to ascertain whether it comes from an ulcerative process in the bronchial tubes, trachea, or œsophagus, and it is usually only at the autopsy that the exact nature of the lesion is discovered. If the growth extends into an artery, death will take place from hæmorrhage, but if it involves the veins, the consequences, at least the immediate ones, are less serious, because perforation or rupture of a vein from ulceration is preceded by the formation of a thrombus which obliterates the lumen of the vessel and thus prevents hæmorrhage. Naturally, in this case the patient may die from an embolus, which is a very common occurrence in almost any form of carcinoma.

(To be concluded.)

A Michigan Medical Association Conserving Its Rights.—The Mason County (Mich.) Medical Association has decided officially to take active measures leading to the prosecution and conviction of all physicians who visit Epworth Heights and practise their profession there without first complying to the terms of the State law respecting registration. The community idea which has been adopted by the Ludington Health Association is rapidly gaining new friends and the membership is constantly increasing. This community scheme is probably the first attempt to use the idea of cooperation in such a direction and a large number of scientists and investigators are watching the experiment with great interest, as is evidenced by the large number of inquiries which the secretary has received from every part of the country.

Correspondence.

LETTER FROM TORONTO.

the Winnipeg Meeting of the Canadian Medical Association.—The Question of a Medical Defense Union for All Canada.—Dominion Registration.—The Formal Addresses.—The Papers and Discussions.

TORONTO, September 7, 1901

The meeting at Winnipeg of the Canadian Medical Association was the thirty-fourth annual meeting of that organization, and it has generally been pronounced by those members in attendance to have been the best yet held. Dr. H. H. Chown, of Winnipeg, was the president, and he had associated with him as general secretary, Dr. F. N. G. Starr, of Toronto. The convention opened on the morning of the 28th of August and continued up to the evening of the 30th, and a holiday session was held on Saturday, when the entire membership was taken in hand by the Canadian Pacific Railway and a most enjoyable excursion was had through the great and famous wheat belt of Manitoba, with luncheon served by the ladies of Brandon during a short stay in that thriving city of the plains. Other entertainments were not lacking, indeed, the whole convention was a round of entertainments interspersed with scientific sessions. A fine reception was held by the ladies of Winnipeg at Wesley College; the board of directors gave the delegates luncheon at the Winnipeg General Hospital; a special excursion down to old Fort Garry, where the company was most hospitably entertained by the commissioner of the Hudson Bay Company and Mrs. Chipman; a visit to the Ogilvie mills, where another enjoyable time was spent, and a reception following at Government House made up a series of social functions which the members in attendance at the Winnipeg meeting will not be likely to forget soon.

One of the most important discussions which took place was that on the question of the formation of a medical defense union for the whole of Canada. This subject was introduced by Dr. Russell Thomas, of Lennoxville, Province of Quebec, who had been delegated to the association by the St. Francis District Medical Association, of Quebec, to bring this matter to the attention of the Canadian Medical Association and to have the scheme of medical defense perfected and consummated. The St. Francis Association had already a medical defense union in operation, with some sixty members, and Dr. Thomas was authorized to hand this organization over to the Canadian Medical Association, to have it become in-

incorporated in the more national and representative body. The convention adopted the scheme unanimously and forthwith drafted a constitution and elected officers for the ensuing year. Dr. R. W. Powell, of Ottawa, was elected president; Dr. McKinnon, of Ottawa, secretary; and Dr. James Grant, Jr., of Ottawa, treasurer. Another question of medical politics fully discussed was that of Dominion registration. Delegates were present from every Province with but one exception, and these pledged their Provinces to stand by the scheme as outlined by Dr. Roddick, of Montreal, who has now for many years had this matter in hand. It is fully expected that at the coming session of the Dominion Parliament this matter will receive final settlement.

The scientific part of the meeting was well up to the average, and was perhaps better than the average. The addresses in medicine, gynecology, and surgery were noteworthy efforts. Of the former, Dr. J. R. Jones, of Winnipeg, discharged himself ably. His subject matter principally dealt with the question of medical education, and he was an advocate of an increased standard of medical matriculation, a curtailing of didactic lectures, and a more general plan of clinical instruction. The address in gynecology took the form of a lantern slide demonstration, conducted by Dr. Thomas S. Cullen, of Baltimore. This dealt with cancer of the uterus and proved a demonstration highly instructive and most appreciable to the members of the association. A former assistant of Mr. Treves's, Dr. O. M. Jones, F. R. C. S., gave the address in surgery. He dealt with surgery of the stomach, reviewing the history of this branch of surgery and recounting the deductions he had arrived at from an experience of twenty-six of his own operations. The president's address was well worth hearing. It referred to the Province of Manitoba and the great future it had before it, to the city of Winnipeg, its sewerage system and its water supply. Winnipeg has a first-class water supply. One artesian well supplies the whole city. This well is some seventeen feet in diameter and about forty-eight feet deep. It pumps from two to three million gallons a day without any diminution in supply. It is supposed that this well taps an underground passage connected with Lake Manitoba, a lake some 130 miles long; so it will be seen that the water supply of the city of Winnipeg is almost inexhaustible. Dr. Chown also referred to the burning question of tuberculosis, and spoke of the case of young farmers in the west who were continually falling victims to this scourge; if heredity and infection from other sources were eliminated, he asked, where did they contract tuberculosis if not from cattle?

There were many excellent papers delivered at this meeting. Dr. H. M. Bracken, health officer of

Minnesota, delivered an able paper on the small-pox epidemic on this continent. He believes that the disease was introduced into the United States by refugees from Cuba before the war with Spain. Dr. Kennedy, of McLeod, Alberta, read a paper on mild small-pox, in which it was interesting to note that this disease had not occurred among Indians on the reserves, who were periodically vaccinated, and that not a case occurred among the Galicians, the Doukhobors, or the Roumanians settled in the Canadian Northwest Territories, people who are vaccinated in youth, and people who were vaccinated on their voyage across the Atlantic and then again on their landing at Halifax. This, Dr. Montizambert, the Director-General of Public Health for the Dominion, considered very valuable information indeed. An important resolution was unanimously adopted by the meeting on this question, calling the attention of the people to the importance of vaccination and revaccination.

Dr. H. A. Bruce, of Toronto, showed a very interesting specimen taken from the stomach of a young married woman of twenty-six years. It was made up entirely of hair and was about twenty-four inches in length and about two inches in diameter at the larger end, gradually tapering off to a point at the other. Dr. Henry Howitt described a new and original operation performed by him for the relief of ovarian-tension pain. It consisted in cross-sections in the capsule of the ovary. He has found it to give immediate and lasting relief. Dr. Laphorn Smith, of Montreal, described an operation which was the first performed in Canada for ureterovaginal fistula, which consisted in the transplanting of the ureters. The operation was entirely successful.

One of the features of the meeting was a lantern slide demonstration of skin diseases, which was conducted by Dr. Francis J. Shepherd, of Montreal. A valuable discussion on tuberculosis took place on the last evening of the meeting. This was opened by Professor Russell, of the University of Wisconsin, in a very valuable paper on human and bovine tuberculosis. Dr. A. J. Richer, of Montreal, contributed a paper on the sanatorium treatment, while Dr. Gilbert Gordon, of Toronto, dealt with the ætiology and early diagnosis of the disease. An animated discussion ensued which resulted in a resolution being adopted calling on the Dominion government to grant aid to sanatoria and also for the prevention and treatment of this disease. Montreal was selected as the next place of meeting, in 1902, and it was suggested that the meeting of the following year be held in British Columbia. These officers were elected: President, Dr. Francis J. Shepherd, of Montreal; treasurer, Dr. H. B. Small, of Ottawa; general secretary, Dr. George Elliott, of 129 John Street, Toronto.

THE PRESIDENT'S CASE.

A CONSECUTIVE ACCOUNT OF THE SHOOTING
OF PRESIDENT McKINLEY AND OF THE
MEDICAL AND SURGICAL FEAT-
URES OF THE CASE.*(By Telegraph.)*

THE PRESIDENT RALLIES AFTER A BAD NIGHT.

BUFFALO, N. Y., *September 13, 9 a. m.* — Dr. Stockton was called in yesterday. Food disagreed with the President.

He is critically ill. Symptoms of heart failure developed during the night, but the patient rallied after administration of digitalis and strychnine. The situation is most grave.

*(By Our Special Correspondent.)*BUFFALO, N. Y., *September 10, 1901.*

WILLIAM McKINLEY, twenty-fifth President of the United States, while holding a public reception under the auspices of the directors of the exposition in the Temple of Music at the Pan-American Exposition in Buffalo, N. Y., on Friday afternoon, September 6, 1901, was shot. At his right stood John G. Milburn, president of the exposition company, and at his left George B. Cortelyou, his private secretary. The President's assailant was Czolgosz (pronounced Scholgosch), a Russian Pole by extraction, about twenty-eight years old, a native of Detroit, Mich., and a resident of Cleveland, O. His confession shows him to be an anarchist of the extreme type.

The President and Mrs. McKinley were spending a few days in Buffalo, the guests of the exposition, and the day before the attempt upon his life had passed some hours upon the grounds, during the course of which the President made one of his most masterful speeches. On the fateful day he visited Niagara Falls in the morning, going direct to Lewiston by the New York Central Railroad and returning to the Falls by the Gorge Road. Luncheon was served to the President's party at the International Hotel, lasting from 12.30 to 1.30, after which the electric power house and other places of interest were visited, it being Mr. McKinley's first visit to Niagara Falls.

THE SHOOTING.

Promptly at the appointed hour the function began, with a dense crowd awaiting to participate. The people formed in line and were meeting a cor-

dial greeting by the President as he shook the hand of each. In a few minutes Czolgosz, who had followed his victim two days, awaiting an opportunity to kill him, approached with his right hand grasping a revolver wrapped in a handkerchief and held up against his right breast to convey the idea that his hand was injured. He offered his left hand to the President, at the same time pressing the revolver with his right against the President's breast, and fired two shots in rapid succession. This occurred at 4.07 p. m. Instantly James B. Parker, a stalwart negro, struck Czolgosz a powerful blow in the neck which felled him and prevented a third shot. John W. Foster, a secret service officer in the United States employ, also about the same time grappled the would-be assassin, and his fiendish work was ended. But, meanwhile, what of the distinguished victim of this diabolical act! The President felt his breast with his right hand and was supported to a chair that had thoughtfully been brought by Secretary Cortelyou and Mr. Milburn. Almost immediately the motor ambulance was summoned from its station at the Emergency Hospital inside the grounds. In the short time pending the arrival of the ambulance the President cautioned his faithful secretary to be tender of Mrs. McKinley and most circumspect in giving the sad message to her. Happily, the President's wife was not present, but was a mile away, in blissful ignorance of the tragic scenes enacting, and it was not until 7 o'clock that she was most discreetly given the tidings by Dr. Rixey. It will be remembered how recently Mrs. McKinley had recovered from a well-nigh fatal illness on the Pacific coast, but she bore up bravely, with true womanly fortitude under the trying ordeal. I may add that she continues to comfort the President daily with her soothing words and firm, gentle, hopeful manner.

AT THE HOSPITAL.

Before it seemed possible for sufficient time to have elapsed, the ambulance arrived at Music Temple with the house physician, Dr. G. McK. Hall, and Mr. E. C. Hall, medical student, assistant. The motor ambulance, of the most approved pattern, was guided by Mr. T. Fellis, a third-year medical student, whose skilful management of the vehicle through the immense crowd at high speed is worthy of high commendation. The President was prompt-

ly and gently placed in the ambulance, where he was joined by Secretary Cortelyou and Mr. Milburn. Surrounded by a mounted escort commanded by Colonel Chapin, the mournful cavalcade proceeded rapidly to the Emergency Hospital, and at 4.18 p. m., eleven minutes after the shooting, he was placed upon the table and the examination began at once.

The hospital internes removed the President's clothing, ascertained the location of the wounds, and made ready for the surgeons who had been summoned by telephone. Mr. Edward C. Mann administered one fourth of a grain of morphine hypodermically, which served a good purpose in alleviating nerve strain. Dr. Nelson W. Wilson, sanitary officer of the exposition, was at a remote part of the grounds making an inspection when he was notified by one of the guards of the injury to the President. Dr. Wilson proceeded to the hospital, and, by virtue of his office, assumed control pending the arrival of the surgeons. This was at 4.35 p. m. The first to arrive was Dr. Herman Mynter, who brought with him Dr. Eugene Wasdin, of the Marine-Hospital Service. Dr. Mynter saw the serious nature of the wound, informed the President that the operation was necessary, and set about the usual preparations for an abdominal section.

THE OPERATION.

Dr. Wilson, the internes, and the nurses were all actively at work furthering the preparations when Dr. Matthew D. Mann, professor of obstetrics and gynecology in the medical department, University of Buffalo, arrived at the hospital, which was a few minutes after 4 o'clock. In five minutes more Dr. John Parmenter, professor of anatomy and clinical surgery in the institution above mentioned, came into the hospital. In ten minutes more Dr. Mann had made himself ready and by common consent of the surgeons, together with the approval of the President and his advisers, proceeded with the operation.

THE OFFICIATING SURGEONS.

At Dr. Mann's request Dr. Wasdin assumed charge of the anæsthetic and began the administration of ether at 5.20—one hour and fifteen minutes after the wound was inflicted. Dr. Wilson was asked to keep the record, Dr. Mynter to stand opposite the operator as first assistant, and Dr. Parmenter

to stand next to Dr. Mann as consultant and assistant. Dr. E. W. Lee, of St. Louis, a visitor at the exposition who came to the hospital before the other surgeons arrived, was asked by Dr. Mann to stand next to Dr. Mynter as an additional assistant. Dr. P. M. Rixey, who was summoned from the Milburn home, whither he went in company with Mrs. McKinley, arrived just as the operation began. Dr. Roswell Park had gone to Niagara Falls, and a special train to bring him to Buffalo was ordered by Harry Parry, general agent of the New York Central Railroad. It should be mentioned that the first, or uppermost, shot went through the President's clothing and made an abrasion about the centre of the sternum. The bullet was found inside the waistcoat and did no essential harm. The clothing was burned by the explosion of the powder at this point.

DETAILS OF THE OPERATION.

The President took the ether kindly and was well under its influence within the next ten minutes. The abdomen having been aseptically prepared, an incision three inches long was made lengthwise of the body and including the opening made by the ball—a 32 calibre—that was located four inches below the left nipple and an inch and a half to the left of the median line. The incision went through a deep layer of fat before the peritonæum was reached, hence the incision was enlarged another inch. A piece of cloth—probably a bit of undershirt—was found in the track of the missile, which looked as if it had been "punched out" by the bullet. Upon opening the peritonæum a bullet-hole was discovered in the anterior central portion of the stomach. This viscus was drawn up into the operation wound and the perforation after examination was closed with a double row of silk sutures (Czerny-Lembert). A little oozing of the stomach contents had occurred through the opening—all of which was wiped away. A further enlargement of the incision now became necessary in order to examine the dorsum of the stomach, upon which another opening was found. This was sutured in manner like unto the first, and the sluggish hands on the clock marked 6.12. The intestines were examined for possible wounds, but happily none were found, and these were wrapped in moist, hot towels. A previous hypodermic injection had been made.

and now 25 minims of brandy were similarly administered. A further search for the missile failed to discover it, but it became apparent that it had done no other vital damage, with the strong probability that it had lost itself in the thick lumbar muscles.

Dr. Roswell Park arrived about this time—6.25— and joined the staff as consultant. The abdominal cavity was flushed with normal salt solution and the closure began. Seven deep silkworm-gut sutures were employed and catgut was placed superficially between them. At about 6.50 the anæsthetic was discontinued and the abdominal bandage was applied. Thus the operation on which so much of moment depended was finished. The President's pulse was now 122, respiration 32.

The motor ambulance was again drawn up in front of the hospital and made ready. The President was tenderly borne into it by the internes. Dr. Park and Dr. Wasdin took their places, and it moved off under the guidance of Mr. Ellis, escorted by a detachment of mounted police, to the Milburn residence, where the President's faithful wife awaited his sad return. The other members of the surgical staff followed in a separate carriage.

Two nurses, Miss N. D. Barnes and Miss Catherine Simmons, together with a hospital bed and appliances, previously had been dispatched to the chamber set apart for the prostrate President. The other nurses who rendered service were Miss Walter, Miss Morris, Miss Barron, Miss Shannon, and Miss Dorchester.

A period of anxiety now commenced. A long and trying night, during which at any moment the unexpected might happen, was confronting the surgeons and the public. The great-hearted patient was not yet sufficiently freed from the effects of the anæsthetic to appreciate this trying period to its fullest degree. The longest night must end, and with the early morning came anxious inquiries for news direct from the bedside. Dr. Roswell Park and Dr. P. M. Rixey were the night staff.

Saturday, September 7th.—Dawn came with a clear sky and the sun arose in splendor, but it grew hot as the morning hours advanced. The first bulletins from Milburn house were as follows:

10.50 p. m., Friday—The President is rallying satisfactorily and is resting comfortably. Temperature 100.4°, pulse 124, respiration 24.

12 o'clock, midnight—Pulse 124, respiration good, temperature 104.4°.

1 a. m., Saturday—The President is free from pain and resting well. Pulse 120, respiration 24.

P. M. RIXEY,
ROSWELL PARK.

GEORGE B. CORTELYOU,
Secretary to the President.

2.30—The President is sleeping and resting fairly easy.

3.00—No change in the President's condition. Miss McKinley, daughter of Abner McKinley, Mrs. A. J. Duncan, Mrs. William McKinley Duncan, Colonel Myron T. Herrick, and Mrs. Charles P. Miller, all of Cleveland, arrived at 2.45. Five hundred telegrams have been received so far.

4 a. m.—The President continues to rest well. Temperature 101.6°, pulse 110, respiration 24.

P. M. RIXEY, M. D.,
GEORGE B. CORTELYOU.

6 a. m.—The President has passed a good night; temperature 102°, pulse 110, respiration 24.

P. M. RIXEY,
ROSWELL PARK.

GEORGE B. CORTELYOU,
Secretary to the President.

9 a. m.—The President passed a fairly comfortable night and no serious symptoms have developed. Pulse 146, temperature 102°, respiration 34.

(Signed.) T. M. RIXEY,
MATTHEW D. MANN,
ROSWELL PARK,
HERMAN MYNTER,
EUGENE WASDIN.

The last bulletin, issued at 9 a. m., immediately after the morning consultation of the surgical staff, was of a disquieting nature, for it told of a high pulse rate, an advancing temperature, and a rapid respiration effort. Its explanation was sought all day long of everybody who might know. Physicians were questioned at every opportunity and thousands of telegrams were received on the subject. None was able to tell and all were apprehensive that the worst was at hand. A midday bulletin gave a slightly more hopeful coloring—pulse 136, temperature 102°, respiration 28—but later the pulse was given at 140, with temperatures and pulse substantially the same.

Sunday, September 8th.—An early morning train brought Dr. Charles McBurney, of New York, whose experience as a surgeon is great, and whose judgment as a consultant was sought. He was

added to the consulting staff. The morning bulletin was more encouraging and was as follows:

Sunday, 9 a. m.—The President passed a good night, and his condition this morning is quite encouraging. His mind is clear and he is resting well. Wound dressed at 8.30, and found in a very satisfactory condition. There is no indication of peritonitis. Pulse 132, temperature 102.8°, respiration 24.

(Signed)

P. M. RIXEY,
HERMAN MYNTER,
ROSWELL PARK,
EUGENE WASDIN.

GEORGE B. CORTELYOU,

Secretary to the President.

From this time onward there was a steady, gradual decline in the pulse, temperature, and respiration rates, and a feeling of confidence slowly took possession of everybody, making Sunday a cheerful day, with justifiably hopeful prospects.

Monday, September 9th.—The air around the Milburn home was decidedly cheerful this morning. The Vice-president, members of the Cabinet, Senators, and other public men wore smiling faces, and a spirit of congratulation beamed in their countenances. The morning bulletin justified all this, as will be observed:

9.20 a. m.—The President's condition is becoming more and more satisfactory. Untoward incidents are less likely to occur. Pulse 112, temperature 100.8°, respiration 28.

P. M. RIXEY,
M. D. MANN,
ROSWELL PARK,
HERMAN MYNTER,
EUGENE WASDIN,
CHARLES MCBURNEY.

GEORGE B. CORTELYOU,

Secretary to President.

The important feature of the bulletin is that the President's pulse has dropped ten beats.

As the day wore on a further improvement took place and everybody felt reassured.

Tuesday, September 10th.—This was decidedly the day of the best record and the bulletins speak for themselves:

7 o'clock—The President has passed the most comfortable night since the attempt on his life. Pulse 118, temperature 100.4°, respiration 28.

P. M. RIXEY,
ROSWELL PARK.

GEORGE B. CORTELYOU,

Secretary to the President.

9 o'clock—The President's condition this morning is eminently satisfactory to his physicians. If no complications arise a rapid convalescence may be expected.

Pulse 104, temperature 99.8°, respiration 26.

This temperature is taken by mouth and should be read about one degree higher by rectum.

P. M. RIXEY,
M. D. MANN,
ROSWELL PARK,
HERMAN N. MYNTER,
EUGENE WASDIN,
CHARLES MCBURNEY.

GEORGE B. CORTELYOU,

Secretary to the President.

The evening reports from Milburn house confirm those of the early part of the day. Public men, officials, and those nearest the President are departing and everything tends to indicate confidence in his recovery. The following summary of the surgery done is interesting and succinct:

One bullet struck the President on the upper portion of the breast-bone, glancing and not penetrating.

The second bullet penetrated the abdomen five inches below the left nipple and an inch and a half to the left of the median line.

The abdomen was opened through the line of the bullet wound. It was found that the bullet had penetrated the stomach. The opening in the front wall of the stomach was carefully closed with silk sutures, after which a search was made for a hole in the back wall of the stomach. This was found and also closed in the same way.

The further course of the bullet could not be discovered, although careful search was made. The abdominal wound was closed without drainage. No injury to the intestines or other abdominal organ was discovered.

The patient stood the operation well. After it the pulse was good; rate of 130. The President's condition at the conclusion of the operation was gratifying and justified hope of recovery.

The essentials that have contributed to this almost assured success are: First, a modern, well-equipped hospital at the exposition within easy reach. Second, prompt and skilful surgery. Third, prudent, watchful care. Fourth, a sensible, courageous, amiable, healthy patient.

THE LATEST REPORTS.

(By Telegraph.)

BUFFALO, September 12, 1901.—At last evening's consultation of the staff, the President's condition was found still steadily improving. At 4 in the afternoon Dr. Wasdin made a blood count, the blood being taken from the lobe of the ear. The red cells were slightly below normal in number, which might be expected from several days' fasting, but the white corpuscles were not in excess of the normal standard, which is more important as indicating the absence of sepsis. At 11 o'clock the following bulletin was issued, dated 10 p. m.: "The President's condition continues favorable; the blood count corroborates the clinical evidence of absence of any blood poisoning. He is able to take more nourishment and relish it. Pulse 120, temperature 100.4."

(Signed)

RIXEY,
MANN,
PARK,
MYNTER,
WASDIN,
MCBURNEY.

CORTELYOU, Secretary.

At midnight, quietude reigned at the Milburn house, and so ended another day of splendid progress by the nation's beloved Chief toward assured recovery.

This (Thursday) morning the rain that began falling during the latter part of the night was still continuing with some severity. Another booth has been erected for the correspondents and telegraphers, so the camp with a number of tents for the soldiers and newspaper men presents a military as well as a busy appearance. The morning consultation at the usual hour revealed further encouragement after a restful night. The President inclines to talkativeness in spite of efforts to prevent it, and this morning asked for a cigar. The experimental feeding of beef-juice by teaspoonfuls having proved useful, the amount has been increased, and to-day a little food of a more solid nature will be allowed.

9.30 a. m.—Pulse 120, temperature 102°. The entire staff are confident, as is apparent by their manner, that convalescence has become fully established, even if they deem it prudent not to say so officially. A grateful people looks trustingly forward to a consummation so devoutly to be wished.

ATTEMPTS ON THE LIVES OF PREVIOUS PRESIDENTS.

Medical History of Garfield's Assassination.—On July 2, 1881, at 9.20 a. m., President Garfield was shot by Charles J. Guiteau, a man who had been disappointed in seeking for an office. The scene of the assassination was the station of the Baltimore and Potomac Railway, in Washington. The weapon employed was a British bulldog revolver of 0.44 calibre, with 20 grains of powder and a bullet weighing 200 grammes. The range was eight feet. The assassin fired two shots, the second of which took effect. At the first shot the President turned, and the second shot entered opposite the tenth intercostal space, about four inches from the median line, on the right side. As the bullet struck him, the President fell on his knees and then on his right side, vomiting as he fell.

Almost immediately symptoms of cardiac failure set in, and when, four minutes after the shots had been fired, Dr. Smith Townshend came in, he found the President in a state approaching syncope. He administered brandy and aromatic spirits of ammonia and made a hasty examination of the injuries. The vomiting continued from time to time, and after a second dose of stimulants the patient rallied. In a few minutes Dr. Purvis and Dr. Bliss arrived, and the patient was moved to an upper room of the station, where he rallied from the first shock and was prepared for removal to the White House. He complained of pricking sensations in the right leg and foot.

On the arrival at the White House an effort was made to ascertain the nature of the injury, and the President was fully conscious and cheerful, but his pulse was weak and rapid. The entrance of the wound was found as above stated, and on palpation the eleventh rib was found fractured. The probe passed downward and forward. The wound was dressed antiseptically, and morphine given for the pain. At four in the afternoon the pulse was 132, the temperature subnormal, 96.8° F., and there were evidences of internal hæmorrhage. At 11.20 p. m. the reaction from the shock began, and the condition improved gradually. On the morning of the 3d the temperature and respiration were normal and the pulse was 115, the patient resting comfortably. At 2 p. m. there were vomiting, slight tympanites, and marked rigidity of the abdominal muscles, but no pain, and no rise of temperature beyond 100°.

On the 5th Dr. D. Hayes Agnew, of Philadelphia, and Dr. Frank H. Hamilton, of New York, were called in consultation. As it was impossible to find the direction of the ball, no interference was advised. The progress from this point seemed favorable. The patient took liquid nourishment,

the fluctuations in pulse, temperature, and respiration were not important, but he complained of pain in his feet. On the 23d the patient had a chill, followed by a pulse of 120 and a temperature of 104°. Two days previously a pus sac had been discovered extending under the skin and subcutaneous tissue below the twelfth rib, under the latissimus dorsi, and it was evacuated by gentle pressure. This sac was considered to be superficial, and not the cause of the symptoms; a free incision was made and small fragments of the broken rib were removed. On July 26th the opening between the fractured ends of the eleventh rib was enlarged and the detached end removed. Now the condition remained more or less uniform until the 6th of August, when a slight febrile movement was observed. A soft catheter was passed into the wound and reached the crest of the ilium. The wound was washed out through the catheter with potassium permanganate. On the 8th it was decided to drain at the dependent part of the tract, and this was done, the necessary opening being made under ether. The operation was followed by comparative improvement. On the 14th there was vomiting and no food could be retained, so that rectal feeding had to be used till the 17th. On the 18th a swelling of the right parotid appeared and developed into an abscess; this was accompanied by facial paralysis, which later slightly improved. The channel of the wound was kept clean by irrigations with potassium permanganate and carbolic acid. At about this time a number of small pustules appeared on various parts of the body, probably as the result of sepsis. On August 26th there was a discharge of the parotid abscess into the ear and mouth, and the inflammation extended to the pharynx, larynx, trachea, and bronchi. Acute catarrhal bronchitis developed and there was some hypostatic condition due to the decubitus. The abscess was evacuated and the condition improved.

The President was now removed to the seashore at Elberon, N. J., where he gradually improved until September 15th, when there developed a limited bronchopneumonia. On the 17th he had a severe chill, followed by a sharp rise of temperature. Mental disturbances were now noticed, and there was a pain over the anterior mediastinum which recurred every six or twelve hours. This pain was caused by the rupture of an aneurysmal sac which dissected progressively, at irregular intervals, the surrounding cellular tissues, until it burst into the peritonæum. On the 18th there was another chill and the pains continued at intervals. The fever fluctuated considerably during these last days.

On the morning of the 19th the pulse was 106, feeble, the temperature 108.8° F. (?), and there was another chill. The day was passed in comfort, but

the alarming symptoms of the morning did not abate and the President died at 10.10 p. m.

The post-mortem showed the following conditions: The ball had entered opposite the tenth intercostal space, about four inches to the right of the median line. It went forward and downward, inclining a little from right to left. It impinged upon the eleventh rib and produced a comminuted fracture thereof. Thence the bullet was deflected to the left, and pierced the eleventh external intercostal muscle and the subpleural portion of the diaphragm, just above the right ligamentum arcuatum. It then went through the circumrenal tissue between the right kidney and the twelfth rib, and pierced the attachment of the psoas at the first lumbar vertebra. It went through the body of the first vertebra from right to left, emerged at the left of the spine and pierced the left psoas, entered a plane of adipose tissue between the left kidney and the pancreas, crossed the posterior surface of the pancreas, wounding the splenic artery in transit, and was lodged (encysted) in the external third of the pancreas. In addition to the fractures of the eleventh and twelfth ribs and of the body of the first lumbar vertebra, there had therefore been a wound of the splenic artery.

The pus burrowing down from the ribs formed a superficial abscess and then burrowed downward and forward in the direction where the ball was supposed to have gone. The pain in the feet and inguinal region is explained by the vertebral injury, and the wound of the splenic artery was followed by a traumatic dissecting aneurysm which caused death when it emptied into the peritonæum.

It was extremely unfortunate that the complicating fractures and ensuing caries and suppurations should have misled the surgeons as they did. Had the correct diagnosis of the bullet's course been made, the prognosis might not have been so unfavorable.

Medical History of Lincoln's Assassination.—The medical history of Lincoln's case was brief, for he lived but a few hours after the fatal bullet had entered the brain. On the evening of April 14, 1865, the President, accompanied by his wife, Major Rathbone, and Miss Harris, attended the performance of *Our American Cousin* in Ford's Theatre, Washington. The Presidential party occupied a box near the stage. At about 10.30 p. m., John Wilkes Booth, an actor, jumped into the box from the stage and fired at the President's head from behind, holding his weapon, a "common single-barreled pistol," at close range. The bullet entered the cranial cavity through the occipital bone, a short distance above and behind the left temporal, and passed through the cerebral tissue forward toward the frontal lobe. There is said to have been little

hæmorrhage immediately after the injury, though a newspaper stated next morning that the box was found bespattered with blood. Brain substance was, however, oozing out of the wound from the first. The President became unconscious immediately and did not regain consciousness until the end. He was removed, as soon as the confusion would permit, to a private house opposite the theatre and the surgeon-general was sent for. The respiration was labored, the pulse 44 and feeble, the eyes were closed, the left pupil was contracted, the right widely dilated, and there was in both pupils total insensibility to light. At the theatre some one called for stimulants and an attempt was made to make him swallow some brandy, but this was impossible. At 11.30 p. m. twitchings of the facial muscles on the left side set in, and continued for from fifteen to twenty minutes. Soon after the patient was placed in bed, the wound began to discharge blood and brain tissue, and this discharge continued till 5.30 p. m. It was noticed that so long as the discharge continued, the respiration and pulse were fairly good, but no sooner had it ceased than there were changes for the worse in both pulse and respiration. The patient's head was held so as to facilitate the flow from the wound. At 2 p. m. the wound was probed with a silver probe, and about three inches from the entrance it met an obstruction in the shape of a piece of the occipital bone. Two inches farther the bullet was felt, and, on passing it, the sound came upon fragments of the orbital plate of the left orbit. No further probing was attempted. The bedside notes taken by Dr. Abbott (*New York Herald*, Sunday, April 16, 1865) show no record of temperature, but the pulse and respiration and the other principal symptoms were recorded every five minutes. At 12.30 p. m. ecchymosis appeared in both conjunctivæ, and at 12.55 the patient became restless and struggled with his arms. At 1.30 he became more quiet, and continued so until the respiration became regular and he fell asleep. At 6 a. m. the pulse began to fail alarmingly. At 7 symptoms of dissolution were noted, and at twenty-one minutes and fifty-five seconds past seven Lincoln breathed his last, his heart continuing to beat for a few seconds longer. At the autopsy the bullet was extracted from the frontal lobe.

From the first moment there had been practically no hope, and at 1 a. m. the newspapers printed dispatches from Washington saying the President would not live through the night.

The Destruction of House Flies Recommended.

—The Board of Health of Lonaconing, Md., has recommended the destruction of house flies as a sanitary measure. An anti-pigpen law will also go into effect at the end of the hog-killing season.

Therapeutical Notes.

For Chronic Otorrhœa.—According to the *Gazzetta degli ospedali e delle cliniche* for May 21st, Verbitsky recommends:

R Potassium iodide. 15 grains;
Tincture of iodine. 150 minims;
Absolute alcohol, { of each. 225 "
Glycerin, }
Powdered iodoform. 15 grains.

M.

A small quantity of this fluid is to be injected into the auditory canal, and into the tympanic cavity.

Hæmostatic Pills.—According to the *Gazzetta degli ospedali e delle cliniche* for May 21st, Poulet prescribes the following pill with advantage:

R Extract of hydrastis canadensis. . ⅓ of a grain;
Extract of hamamelis virginica. . ⅓ "
Ergotin. 1½ grain;
Tannin. q. s. for one pill.

M. One to be taken every four hours.

The Treatment of Tuberculosis with Ichthyol and Creosotal.—Goldmann (*Arte medica*, July 21st), at a recent meeting of the Medical Club of Vienna, recommended the following solution for internal use:

R Carbonate of creosote. 225 grains;
Dissolve in rectified spirit. . . . q. s.;
Add ichthyolate of ammonium. 150 grains;
Peppermint water. 6 ounces.

M. Three teaspoonfuls daily, in sweetened coffee, at the beginning of meals.

To conceal the taste of ichthyol, the author uses pills easily soluble and containing:

R Ammonium ichthyolate. 1½ grain;
Carbonate of creosote. ⅔ of a grain;
Peppermint oil. q. s.

M. ft. pil. From three to twelve pills daily. After a short use of the ichthyocreosotal the anorexia ceases, and in some cases there is an augmentation of body weight of as much as eight or nine pounds weekly.

Santonin in the Lightning Pains of Tabes.—Dr. Negro (*Giornale della Reale Accademia di Medicina di Torino*; *Revista de medicina y cirugía prácticas*, July 14th) has successfully used santonin in the lightning pains of tabes. Of eleven patients treated therewith, eight were much benefited; two were temporarily benefited, and one not at all. Dr. Negro administered seventy-five centigrammes of santonin, divided into three doses at intervals of three hours, and in the acute attacks, fifty centigrammes. The pain became much diminished within three hours after the first dose, and ceased completely by two hours after the second. It should be stated that the santonin was always used during the crises, not in the intervals. None of the patients has been subjected to this treatment more than four or five times in the course of two or three months.

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THE ATTEMPT ON THE LIFE OF THE
PRESIDENT.

For the third time within less than forty years, the assassination of a President of the United States has been attempted. The country, and for that matter the whole civilized world, save the human vermin that includes the wretched creature who figured as the assailant in this latest act of savagery, stood aghast when, on Friday evening of last week, the announcement was spread by telegraph that William McKinley, twice called by the free voice of his countrymen to the Presidential chair, had been murderously assailed while he was graciously greeting all who chose to approach him. In attendance at a great exposition of the continent's civilization, he was subjected to a dastardly assault utterly abhorrent even to barbarism.

But there is a bright side to the atrocious occurrence, and it redounds to the glory of our profession. Surgical assistance that could not have been surpassed anywhere in the world, even if the assault had been expected and elaborately prepared for, was brought into play almost instantly, and at the time of our going to press it seems reasonably certain that it has been successful. The emergency hospital provided by the authorities of the Pan-American Exposition has served its purpose well, to the credit of those authorities be it said. The great concourse of people present—horror-stricken for a moment, but giving ear for but an instant to the thought of vengeance on the spot—quietly dispersed, and the miserable assailant was left with nothing to face but a lenient law. As for the city of Buffalo, it was able to provide immediately from its own population surgeons capable of coping suc-

cessfully with the terrible injury that the President had sustained. Not that others of our large towns could not do the same thing; but Buffalo has done it.

Dr. Matthew D. Mann, the professor of gynecology in the University of Buffalo, an old New Yorker, is to be congratulated most heartily on the outcome of his work. Experienced laparotomist as he is, we can well imagine the truth of a newspaper statement which credits him with saying that when he began to realize that he was operating on the President of the United States he felt appalled and would have given all his possessions to be out of the case. If in the case of so important a patient anything goes wrong by mere chance, the public has an unpleasant propensity to criticize. The public cannot be blamed for this, for it knows no better, but its criticism is galling all the same, and the stoutest-hearted of us all might well recoil before the chance of having it visited upon him. There was an element of the heroic, therefore, in the assumption by Dr. Mann of the task he was called upon to perform. That his performance of it has been demonstrated to have been utterly beyond the possibility of criticism shows him, if that were needed, to be a surgeon without a flaw. Dr. Charles McBurney, of New York, who was subsequently in attendance as a consultant, is reported to have said that the President would owe his life "to the promptness and surgical skill which his professional attendants showed." Nothing could be truer; nothing could be more gratifying to our *esprit de corps*.

Among Dr. Mann's colleagues in the case, either at the time of the operation or subsequently, have been Dr. Rixey, of the navy, the President's family physician; Dr. Roswell Park, Dr. Herman Mynter, and Dr. John Parmenter, Buffalo surgeons of great reputation; Dr. Charles G. Stockton, an eminent physician of Buffalo; Dr. Eugene Wasdin, of the Marine-Hospital Service; Dr. Charles McBurney, the noted New York surgeon; and Dr. Edward Wallace Lee, a well-known surgeon of St. Louis, who chanced to be on the grounds of the exposition. That such a body of representative medical men could be assembled at short notice is little short of marvellous. Their entire unanimity as to the conduct of the case and as to the prognosis given out from time to time is a matter for the utmost congratulation.

The behavior of the President himself is worthy of remark. He does not seem to have suffered from shock, and the absence of such a condition must have exerted early encouragement upon the surgeons, for it showed at least that there was no serious internal hæmorrhage. Two shots had been fired, but the President was at first in doubt if they had struck him. At no time did he show any lack of courage or hopefulness; indeed, it seems likely that he has not at any time entertained a misgiving as to his recovery. He submitted unhesitatingly to the operation as soon as its necessity had been stated to him, and he has been a tractable patient throughout.

Elsewhere in this issue we print a detailed account of the case by a special correspondent, a well-known Buffalo physician, who was present during the operation. Nevertheless, a brief statement of its features will not be out of place here. The assailant's pistol, of 0.32 calibre, was discharged twice at short range. One of the bullets struck the thoracic wall, but failed to penetrate it, and inflicted only a superficial wound of no practical importance. The other bullet penetrated the upper region of the abdomen at a point about five inches below the level of the nipples and about an inch and a half to the left of the median line. It passed through both the anterior and the posterior wall of the stomach, and is supposed to be embedded in the muscular structures at one side of the vertebral column, although it may have dropped into the peritoneal cavity after emerging from the posterior wall of the stomach. The gastric aperture of entrance was, as is usual, small, but the aperture of emergence, posteriorly, was large and ragged. To get at this wound of exit, the wound of entrance having been closed, it was necessary to make rather a long incision through the abdominal wall and to turn the stomach so that its posterior surface presented almost directly forward. Care having been taken to make sure that no important structure other than the stomach had been injured, to cleanse the peritoneal cavity of extruded gastric contents, and to secure an aseptic condition of the peritoneal surfaces, it remained to refresh the edges of the posterior gastric perforation and close it and the external incision with sutures. All this was accomplished deliberately and most cautiously under general anæsthesia induced with ether. The President took the anæ-

thetic well, and its after-effects were not pronounced. His pulse, respiration, and temperature have been above normal since the operation, but not to any such degree as to occasion much alarm. For several days he was nourished by rectal enemas, but at the time of this writing he has taken a little food by the mouth and has borne it well. He has had sufficient natural sleep, and has seldom been in real discomfort beyond that necessarily consequent on the strictness of his enforced quietude. He has expressed a desire for food, and there have been intestinal movements. This is the picture of a man who, barring extraordinary and most unexpected complications, is on the high road to recovery, and we rejoice to be able to indicate that result as to us eminently probable.

A wound of the stomach is a very serious injury. A bullet wound simply of penetration, in which the missile remains within the organ, is highly dangerous, but one with an opening of emergence also, with all the probability, amounting almost to certainty, of the escape of irritating and poisonous gastric contents into the peritoneal cavity, is far more dangerous still. Under the old methods of treatment, which were little more than symptomatic or expectant, a fatal issue of either form of perforation of the stomach was well-nigh certain, though penetrating wounds of the organ were occasionally recovered from, almost wholly in consequence of the unaided efforts of Nature. Even with our present surgical resources, such an injury as the President received would almost inevitably prove fatal if any considerable length of time had to intervene between the reception of the wound and the resort to operative aid.

The attempted assassination of President McKinley inevitably recalls the all too successful attacks on President Lincoln in 1865 and on President Garfield in 1881. We therefore give on another page of this issue of the *Journal* condensed accounts of their injuries. We hope it will never be necessary to add to the list of attempts on the life of a President, and, to avoid that necessity so far as may be possible, we would urge the need of a military guard for the President at all times and the abolition of the senseless and perilous ceremony of Presidential hand-shaking with the individuals making up promiscuous popular gatherings.

What are the lessons of this occurrence for us as

medical men? In the first place, it should emphasize the importance of "first aid to the injured," of the establishment in connection with all great expositions and popular resorts of emergency hospitals as well equipped and as well managed as the one on the grounds of the Pan-American Exposition evidently is. In the next place, it should show us how operative gynæcology is blending with general surgery. A gynæcologist, the late Dr. James Marion Sims, was the first ardent advocate of operative intervention in cases of penetrating wounds of the abdomen, and now another gynæcologist, Dr. Mann, has been called upon in this great national emergency.

THE VILLAGE PRACTITIONER.

The September number of our highly esteemed contemporary, the *Montreal Medical Journal*, contains an excellent address delivered to the graduating class of the medical school of McGill University by Dr. William Gardner, the professor of gynæcology. It is a graceful and instructive address, dealing with many matters that are of importance to physicians, but it is on the text of its delineation of success in medicine that we must content ourselves with commenting in the present article. "By a successful career," says Dr. Gardner, "I do not mean that of necessity it must be a long and brilliant one. There are many obscure village practitioners who, in reality, are more successful than others who seem to float on the highest wave of worldly prosperity. To the country or village practitioner are given opportunities for the development of independent judgment and self-reliance, faculties or qualities which often remain latent in his brother of the city with ample opportunities for consultation when he is in deep water. In this way there are often developed in the country such men as we do not often see in the city."

It is indeed true that the exigencies of country practice are well calculated to bring out a man's latent abilities, and in fact many of the resources that are now the common property of the medical profession had their origin in a country emergency that was met by one of those happy thoughts that seem almost the outcome of inspiration. Which one of us who has attended medical meetings in various parts of the United States and Canada has

failed to make the acquaintance of more than one rural practitioner who impressed him as a master in medicine? Such are not the men who are ever ready to rise and join in the discussion of whatever topic may be under consideration; they are, rather, those who rarely have anything to say in public, but in a little group will emit over the mahogany a trenchant criticism in simple words, one founded on large experience and common sense. Such men exist in the cities, too, we are well aware, but they are indigenous, so to speak, to the open country, and it is there that they attain most surely to a commanding position in the community and in the profession.

A GIGANTIC PAIR OF KIDNEYS.

The "large white kidney" was recently exemplified in an extreme degree in a pair of kidneys shown at a meeting of a French medical society (*Gazette hebdomadaire de médecine et de chirurgie*, August 29th) by M. Haushalter. They were those of a boy, twelve years old, who had died of some acute disease. Each one of them weighed 4,200 grains, whereas the ordinary weight of the organ in a child of that age is stated to range from 900 to 1,200 grains.

"DANGEROUS ABNORMALS."

This term has been applied by Dr. Arthur MacDonald, of Washington, to such creatures as the wretch who last week plunged the country into grief by an attempt on the life of the President. The scientific study of such worthless "cranks" deserves all the encouragement that Dr. MacDonald desires for it, in order that they may be identified before they commit some atrocious crime, and dealt with accordingly.

MOSQUITOES AND LEPROSY.

At a recent meeting of the French Academy of Medicine (*Gazette hebdomadaire de médecine et de chirurgie*, August 4th) M. Blanchard suggested that mosquitoes might possibly convey leprosy, whereupon M. Chantemesse made the remarkable statement that, as a matter of fact, observations seemed to prove that the transmission of leprosy always took place during the night. It might have been well to give the foundation for such an astounding remark.

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general, during the week ending September 7, 1901:

Smallpox—United States

California....	Los Angeles....	Aug. 17-24....	1 case.	
"	San Francisco....	Aug. 18-24....	2 cases.	
Kansas.....	Wichita.....	Aug. 24-31....	1 case.	
Louisiana....	New Orleans....	Aug. 24-31....	1 case.	
Massachusetts.	Boston.....	Aug. 24-31....	6 cases.	
Minnesota....	Minneapolis....	Aug. 17-24....	5 cases.	
Nebraska....	Omaha.....	Aug. 24-31....	2 cases.	
"	South Omaha....	Aug. 23-30....	2 cases.	
New Jersey....	Newark.....	Aug. 24-31....	5 cases.	2 deaths.
New York....	New York....	Aug. 17-31....	37 cases.	12 deaths.
Pennsylvania.	Philadelphia....	Aug. 24-31....	31 cases.	2 deaths.
Utah.....	Salt Lake City....	Aug. 19-24....	2 cases.	
W. Virginia...	Wheeling.....	Aug. 18-31....	1 case.	

Smallpox—Foreign.

Austria.....	Prague.....	Aug. 10-17....	1 case.	
Belgium.....	Antwerp.....	Aug. 3-10....	1 case.	
Brazil.....	Rio de Janeiro....	July 28-Aug. 4..	42 deaths.	
Colombia....	Panama.....	Aug. 19-26....	10 cases.	
France.....	Paris.....	Aug. 3-17....	19 deaths.	
Gt. Britain...	Dundee.....	Aug. 10-24....	4 cases.	
"	London.....	Aug. 10-17....	13 cases.	2 deaths.
India.....	Bombay.....	July 30-Aug. 6..	2 deaths.	
"	Calcutta.....	July 27-Aug. 3..	5 deaths.	
"	Madras.....	July 27-Aug. 2..	9 deaths.	
Italy.....	Messina.....	Aug. 10-17....	7 cases.	1 death.
"	Naples.....	Aug. 10-17....	119 cases.	17 deaths.
Mexico.....	City of Mexico....	Aug. 18-25....	2 cases.	
Russia.....	Moscow.....	July 27-Aug. 10.	4 cases.	3 deaths.
"	Odessa.....	Aug. 3-17....	1 death.	
"	Warsaw.....	July 27-Aug. 10.	2 cases.	5 deaths.

Yellow Fever.

Brazil.....	Rio de Janeiro....	July 14-23....	7 deaths.	
Colombia....	Bocas del Toro....	Aug. 21....	1 case.	
Costa Rica...	Port Limon.....	Aug. 11-18....	8 cases.	4 deaths.
Cuba.....	Camagneyagua....	Aug. 17-24....	1 case.	
"	Matanzas.....	Aug. 31....	2 cases.	

Cholera.

India.....	Bombay.....	July 30-Aug. 6..	8 deaths.	
"	Calcutta.....	July 27-Aug. 3..	17 deaths.	
"	Madras.....	July 26-Aug. 2..	26 deaths.	
Japan.....	Yokohama....	July 20-Aug. 3..	2 cases.	
Straits Settlements.	Singapore....	July 6-13....	1 death.	

Plague.

Brazil.....	Rio de Janeiro....	July 14-28....	4 deaths.	
China.....	Hongkong.....	July 13-27....	35 deaths.	
India.....	Bombay.....	July 30-Aug. 6..	158 deaths.	
"	Calcutta.....	July 27-Aug. 3..	11 deaths.	

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending September 7, 1901:

DISEASES	Week end'g Aug. 31		Week end'g Sept. 7	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever....	114	25	83	27
Scarlet fever....	66	6	65	8
Cerebro-spinal meningitis....	0	3	0	2
Measles.....	47	9	39	0
Diphtheria and croup....	108	6	95	16
Small-pox.....	19	4	6	4
Tuberculosis....	194	130	212	128

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending September 7, 1901:

BRATTON, THOMAS S., Captain and Assistant Surgeon. The leave of absence granted him is extended one month.

DALE, FREDERICK A., First Lieutenant and Assistant Surgeon, is granted leave of absence for one month.

PERLEY, HARRY O., Major and Surgeon, will proceed to Plattsburgh Barracks, N. Y., for duty.

REBERT, M. A., Captain and Assistant Surgeon, United States Volunteers, will proceed to the Philippine Islands on the Army transport *Sheridan*.

REYNOLDS, FREDERICK P., Captain and Assistant Surgeon, is granted leave of absence for one month.

STRONG, RICHARD P., Assistant Surgeon. The leave of absence granted him is extended seven days.

The following-named officers will report in person to Colonel CALVIN DE WITT, president of the examining board at the Army Medical Museum Building, Washington, for examination as to their fitness for promotion: ALFRED E. BRADLEY, Captain; PHILIP G. WALES, Captain; BENJAMIN L. TEN EYCK, Captain; BASIL H. DUTCHER, First Lieutenant, and FRANKLIN M. KEMP, First Lieutenant, assistant surgeons, United States Army.

GREENLEAF, HENRY S., First Lieutenant and Assistant Surgeon, will proceed to the Presidio of San Francisco to relieve HERBERT G. SHAW, First Lieutenant and Assistant Surgeon, who will report at Alcatraz Island, California, for duty.

The following-named officers are detailed to represent the Medical Department of the Army at the annual meeting of the American Public Health Association, to be held in Buffalo from September 16 to 20, 1901: WILLIAM P. KENDALL, Major and Surgeon, and EDWARD L. MUNSON, Captain and Assistant Surgeon.

Society Meetings for the Coming Week:

MONDAY, September 16th.—New York Academy of Medicine (Section in Ophthalmology and Otology); Hartford, Connecticut, Medical Society; Chicago Medical Society.

TUESDAY, September 17th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, September 18th.—Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark).

THURSDAY, September 19th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, September 20th.—New York Academy of Medicine (Section in Orthopaedic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending September 7, 1901.

BOGERT, E. S., Medical Director, retired. Detached from the Boston Navy Yard and ordered home.

CRAWFORD, C. A., Assistant Surgeon. Detached from the *Constellation* and ordered to the Naval Hospital, Chelsea, Massachusetts, to relieve R. R. RICHARDSON, Assistant Surgeon.

DECKER, C. J., Surgeon. Ordered to the marine recruiting rendezvous, San Francisco, to relieve V. C. B. MEANS, Surgeon.

EDGAR, J. M., Surgeon. Detached from the *Amphitrite* and ordered home to await orders.

GARTON, W. M., Assistant Surgeon. Detached from the *Indiana* and ordered to the Naval Academy to relieve J. F. MURPHY, Assistant Surgeon.

HUNTINGTON, E. O., Assistant Surgeon. Ordered to the Naval Hospital, New York.

KITE, I. W., Surgeon. Detached from the *Monterey* and ordered home to await orders.

MCDONNOLD, P. E., Assistant Surgeon. Detached from the Naval Museum of Hygiene, Washington, and ordered

to the *Constellation* to relieve C. A. CRAWFORD, Assistant Surgeon.

MEANS, V. C. B., Surgeon. Detached from the marine recruiting rendezvous, San Francisco, and ordered to the *Monterey* to relieve I. W. KITE, Surgeon.

MURPHY, J. B., Assistant Surgeon. Detached from the Naval Academy and ordered to the *Indiana*.

SMITH, G. T., Surgeon. Ordered to the *Amphitrite* to relieve J. M. EDGAR, Surgeon.

THOMPSON, E., Assistant Surgeon. Detached from the *Solace* and ordered home to await orders.

WINSLOW, G. F., Medical Director. Ordered to the naval recruiting rendezvous, Boston, October 1st.

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ending September 5, 1901:

BARNESBY, P. N., Acting Assistant Surgeon. Granted leave of absence for one month from September 1st.

BLUE, RUPERT, Passed Assistant Surgeon. Granted leave of absence for ten days from September 2d.

COBB, J. O., Passed Assistant Surgeon. Granted ten days' extension of leave of absence.

EBERSOLE, R. E., Acting Assistant Surgeon. Granted leave of absence for seven days from September 3, under Paragraph 181, *Regulations* of the Marine-Hospital Service.

GWYN, M. K., Assistant Surgeon. Granted leave of absence for one day.

OAKLEY, J. H., Passed Assistant Surgeon. Granted leave of absence for two months from September 17th.

PARKER, H. B., Assistant Surgeon. To proceed to Amite City and Abita Springs, Louisiana, for special temporary duty.

RUSSELL, H. C., Assistant Surgeon. To proceed to Cleveland and assume command of the service during the absence of W. J. PERTUS, Surgeon.

WARREN, B. C., Assistant Surgeon. Granted leave of absence for fourteen days from September 14th.

The Medical Association of Central New York recently held its thirty-fourth annual meeting at Buffalo. About 175 physicians from all parts of the State were present. The convention selected Syracuse for its next annual meeting, and the following officers for the ensuing year were elected: President, Dr. A. L. Behan, of Canandaigua; secretary, Dr. C. A. Greenleaf, of Rochester; treasurer, Dr. W. M. Brown, of Rochester.

The Lake Keuka Medical and Surgical Association finished its annual session at Grove Springs, N. Y., on August 14th. About 100 were in attendance, among them many prominent physicians and surgeons from Rochester, Buffalo, Elmira, Hornellsville, and smaller towns. Dr. Parkill, of Hornellsville, was elected president, and Dr. Smith, of Avoca, secretary. The vice-presidents hold over for another year.

A Joint Medical Society Meeting.—The joint summer meeting of the Fox River Valley Medical Society and the Northwestern Medical Association was held on August 13th at the Chain of Lakes, Wis., there being an attendance of about 100 of the leading physicians from different parts of the State. Dr. A. W. Slaughter, of Green Bay, presided. The following papers were read: Epilepsy in Regular and Irregular Forms, by Dr. Richard Dewey, of Wauwatosa; Remarks on the

Uterine Artery, by Dr. Byron Robinson, of Chicago; Two Rare Cases in Surgical Practice, by Dr. C. O. Thienhaus, of Milwaukee; A Case of Cerebral Tumor with Autopsy, by Dr. N. P. Mills, of Appleton.

The Erie County Hospital Alumni Association of Former Internes is the name adopted by graduates from that institution in Buffalo who have associated themselves together for the purpose of fostering a fraternal spirit, the sustaining of the interest in the work of the hospital and for the discussion of medical subjects. The first annual meeting, at which organization was perfected, was held at the hospital and the following officers were elected: President, Dr. George Word, of Staten Island; vice-president, Dr. Milton Messenger, of Swormville, N. Y.; secretary, Dr. F. W. Filssinger, of Buffalo; treasurer, Dr. George F. Mills, of Buffalo; librarian, Dr. Louis J. Beyer, of Buffalo; executive committee, Dr. Frank Lock, of Buffalo; Dr. Marshall Clinton, of Buffalo; Dr. Arthur Whaley, of Buffalo. After the election a paper was read by Dr. George Word on The Home Treatment of Pulmonary Tuberculosis.

The Queens-Nassau Medical Society.—The midsummer meeting of the Queens-Nassau Medical Society was held at the Edgemere Hotel, Edgemere, L. I., on September 4th. The meeting was opened with a short address of welcome to the members and guests by the president of the society, Dr. William H. Zabriskie, of Glen Cove, after which the following papers were read: Amaurosis from Alcohol, by Dr. Frank Van Fleet; Uric Acid as an Etiological Factor, by Dr. Walter D. Ludlum; Reports of Unique Cases of Malaria, by Dr. F. T. DeLano and Dr. W. H. Zabriskie. The papers were followed by a discussion on The Advantages and Disadvantages of a Physician in General Practice Serving Upon a Hospital Staff, which was opened by Dr. John R. Hinkson. In the business session which followed eleven applications for membership were voted upon. The society was organized in 1806 as the Queens County Medical Society and is one of the oldest in the State of New York.

Mental Scientists Under Arrest.—Helen Post, her husband, Colonel C. C. Post, and her son-in-law, C. F. Burgman, were arrested at Daytona, Fla., on August 24th, charged with using the mails for fraudulent purposes. The three were taken to Jacksonville for a preliminary hearing before United States Commissioner William Archibald. The offense alleged consisted in sending through the mails circulars professing to cure patients at a distance by means of mental science. Mrs. Post claimed the power to heal all kinds of diseases, even to restore the blind to sight, holding that no disease was incurable by her method of treatment.

Wisconsin Physician Fined for Failing to Report a Case of Small-pox.—Dr. H. Booth Kendall, of Menasha, Wis., was recently convicted of failing to comply with the law which requires a physician to report a case of contagious disease and was fined \$75 and costs. An appeal will be taken to

a higher court. Dr. Rodermund was on the stand in the interests of the defense for a long time and made the most of the opportunity thus given to expatiate upon his pet theory of anti-contagion. It developed in the testimony that neither Dr. Kendall nor Dr. Rodermund are graduates of accredited medical colleges. The authorities are preparing to take action to prevent Dr. Kendall from continuance in practice.

A Third Death from the Yellow Fever Experiments in Havana.—A third death from yellow fever, resulting from the bite of a mosquito, occurred on August 24th. The victim was Miss Clara Maas, of New Jersey, who succumbed on the seventh day after she was taken ill. Of the six persons bitten by mosquitoes recently in the course of the yellow fever commission's experiments, three have died, while the other three are said to be suffering from only light attacks of the disease. Miss Maas was a nurse at Las Animas and wished to become immune.

Chiropodists for the Army Suggested.—Colonel Philip Reade, U. S. A., recently made a recommendation that the army shall have pedal surgeons, or chiropodists. The duties of the pedic surgeon are to be defined in the terms of the contract, the same as with other contract surgeons. Speaking of the recommendation, Colonel Reade stated: "We have dental surgeons and veterinarians, but no pedic surgeons. It would seem reasonable that care should be given to the soldiers who have suffered from foot troubles during the rainy seasons. The sufferings are from enlargements of the joints, bunions, corns, and other pedal ailments, due to shoes that are too tight because of swollen feet. We should follow the practice of Spain and employ pedic surgeons, whose duty it would be at intervals to care for the feet of the men without cost."

The "Central University of Medicine and Science," at 68 Montgomery Street, Jersey City, to which reference was made in our issue for August 31st, p. 413, regarding a charge that the manager, John W. Norton-Smith, had been selling medical diplomas to all comers at \$10 each, was found, on investigation, to be duly incorporated under the laws of New Jersey. The assistant prosecutor advised that measures be taken to forfeit the charter Smith had secured from the State. When this condition of affairs was placed before the counsel for Smith, he submitted a proposition that Smith should consent to a forfeiture of the charter in consideration that no further action be taken. This was agreed to, and Smith yesterday surrendered himself. He was taken before Justice McCormick, and gave bail in \$200 to await the action of the Grand Jury on a charge of obtaining money on false pretenses. This is merely precautionary, however, in order that Smith may be held to his agreement.

Foreign News Notes.—It is announced that on the 6th of October a statue in honor of the late M. Pasteur will be unveiled at Arbois, where M. Pasteur pursued his early studies. The statue is to be of heroic size, the subject being represented as seated in an arm-chair in an attitude of meditation.—A new French journal of medicine has

appeared in Egypt, entitled *l'Égypte médicale*. It is published in Alexandria and edited by the president of the sanitary council of Egypt.—At the Nineteenth Congress of Balneologists it was resolved to erect a memorial of Dr. Brehmer, who died in 1889.—A congress devoted to the exposition of all remedies against seasickness is to be held in Ostend during the closing days of this month and the early days of September.

Disease in the Philippines.—The medical officers in the Philippines have made some important contributions to science in the circulars they are publishing on the subject of tropical diseases. The information contained in these publications is furnished by the Army Pathological Laboratory, which has been in charge of First Lieutenant R. P. Strong, assistant surgeon, now at the Army and Navy General Hospital, Washington, D. C. He was for some time president of the board for the investigation of tropical diseases. The subject chosen for this initial pamphlet was that of the intestinal parasites found in the Philippines. This important subject lies at the root of a very great proportion of all diseases afflicting the troops. The researches on the amoeba of dysentery have been particularly thorough, and some idea of the amount of work of the laboratory may be gained from the statement that this little book is based on 386 carefully made necropsies and 1,793 microscopical and bacteriological examinations of the intestinal contents. The primary object of these circulars is to furnish physicians arriving in the Philippines with a summary of the diseases to be found there. The second and third circulars had for their subjects dysentery and bubonic plague, respectively.

The Council Bluffs (Iowa) Medical Society met recently and elected the following officers: President, Dr. D. Macrae, Sr.; vice-president, Dr. J. H. Cole; treasurer, Dr. H. B. Jennings; secretary, Dr. F. W. Dean. It was decided to raise the fee for night calls to \$5. Heretofore the schedule adopted by the society several years ago provided a minimum fee of \$3 and a maximum of \$5. Now there is to be a flat rate of \$5. Since telephones came into general use doctors say they are frequently called out of bed after a hard day's work on trivial cases not demanding immediate attention. They think that when their patients realize that every night call means a \$5 fee they will not be called out of bed, except when absolutely necessary.

Hospital Property Pledged.—A deed of trust was placed on record on August 13th by the directors of Providence Hospital, Washington, D. C., conveying to Pemberton S. Hutchinson, of Philadelphia, Pa., and Richard W. Tyler, of Washington, trustees, all of square No. 764, which is bounded by D, E, Second, and Third Streets, Southeast, to secure the Philadelphia Saving Fund Society, of Philadelphia, in the payment of the sum of \$200,000, within ten years. The loan will bear interest at the rate of 4 per cent. per annum. It is stated that the loan was made by the directors of the hospital under authority of an act of Congress of February 6th last.

Hospital Buildings and Endowments.—The New York Medical College and Hospital for Women, at One Hundred and First Street, near Central Park West, proposes to erect an addition to its present buildings. The new structure will adjoin the present college buildings.—The cornerstone of the Confederate Home Hospital was laid with appropriate ceremonies on August 14th.—Work on the erection of the new hospital and nurses' home on Long Island, in Boston Harbor, has begun.—Christian Endeavorers in the Presbyterian Church are to build in San Juan, Porto Rico, a general hospital, to be under the charge of the Presbyterian Board of Home Missions. The proposed building, with equipment, is to cost \$8,000.—Plans for the new buildings of the German General Benevolent Society's hospital in San Francisco, have been received. More than a dozen elaborate designs were submitted. The society proposes to erect a modern hospital in place of the present wooden building. A feature of the new hospital will be the isolation of patients suffering from tuberculosis. The total cost is to be \$250,000, and it is estimated that it will require \$30,000 more to equip the building.—The building committee of the Hospital of the Good Shepherd, Syracuse, N. Y., will complete the improvements at the institution late next month or early in October, after two and a half years' work and an outlay of \$150,000 in new buildings and equipment. The new buildings will then be formally opened. The administration building, now nearing completion, will have cost, when ready for occupancy, \$75,000, and the entire property after all the work is completed will be valued at \$250,000.—The contracts for building the Upper Michigan Peninsula Hospital for the Insane, and several infirmary cottages at Milwaukee, Wis., have been awarded. They call for an outlay of \$65,000.—The cornerstone of the Confederate Home Hospital, at Higginsville, Mo., was laid with appropriate ceremonies on August 14th.—The Lawrence (Mass.) General Hospital is to be enlarged by the addition of a new building, and the construction of an operating ward.—The appropriation of \$6,500 for the Louisville (Ky.) City Hospital will be used for the purchase of new supplies and for alterations.—A board of officers met a few days ago at Fort Mason, Cal., to consider the selection of a site for a new hospital at that post.—A \$5,000 improvement in the way of a further addition to the Bethesda (O.) Hospital has been ordered to be constructed immediately.—The Uniontown (Pa.) Hospital Association has begun active work toward raising the \$5,000 necessary before the appropriation made by the legislature of \$19,000 for a State hospital can be utilized.—Extensive improvements are about to be made in the Deaconess's Hospital at Louisville, Ky.—The Emergency Hospital at Buffalo, N. Y., which has been in course of construction for some time, will be ready for occupancy on October 1st.—Work has begun on the new nurses' home of St. Joseph's Hospital, Milwaukee, Wis. The structure will be of brick, two stories high, with a frontage of forty feet and a depth of seventy-one feet. It will cost \$9,000 and is to be completed

by November 1st.—Several designs have been submitted to the Board of Trustees of St. Luke's Hospital, St. Louis, Mo., for the new structures of the institution, and it is understood that suggestions have been made for the general design to be followed. Selection of the plans will be made in a few weeks. The total cost of the new structure is estimated at \$400,000. It is estimated that \$200,000 will be spent by the trustees upon the erection of the administration building alone, the wings to be added later.—The governors of the Western Hospital, Montreal, are discussing the plans for the erection of four new wings, to cost \$25,000 each.



Births, Marriages, and Deaths.

Born.

LUMBARD.—In New York, on Sunday, August 18th, to Dr. and Mrs. Joseph Edward Lumbard, a son.

WALKER.—In Bluffs, Illinois, on Thursday, August 29th, to Dr. and Mrs. J. R. Walker, a son.

Married.

BEEDLE—PFISTER.—In St. Louis, on Wednesday, September 4th, Dr. Hubert Beedle and Miss Ida Pfister.

CARDY—HARVEY.—In Philadelphia, on Thursday, September 5th, Dr. Henry Cardy, of Chester, Pennsylvania, and Miss Alice Harvey.

CONNELLY—FRENCH.—In Brooklyn, on Tuesday, September 3d, Dr. Frank F. Connelly and Miss Delta E. French.

CREEVEY—ELLSWORTH.—In New Hartford, Connecticut, on Thursday, September 5th, Dr. George Mason Creevey, of New York, and Miss Lucy Morris Ellsworth.

KILROE—HERNON.—In New York, on Wednesday, September 4th, Dr. Edward P. Kilroe and Miss May Hernon.

Died.

ARONSTEIN.—In San Francisco, on Tuesday, August 27th, Dr. Adolph Aronstein, in the sixty-sixth year of his age.

BERKEMEYER.—In Allentown, Pennsylvania, on Sunday, September 8th, Dr. Louis C. Berkemeyer, in the sixty-first year of his age.

BULLARD.—In St. Johnsbury, Vermont, on Wednesday, September 4th, Dr. Gates B. Bullard, in the seventy-second year of his age.

BURNAP.—In Windsor Locks, Connecticut, on Tuesday, September 3d, Dr. Sydney R. Burnap, in the sixty-eighth year of his age.

COX.—In Chicago, on Friday, August 30th, Dr. William Cox, in the fiftieth year of his age.

DORSEY.—In Braymer, Missouri, on Monday, September 2d, Dr. Dennis B. Dorsey, in the sixty-eighth year of his age.

FOREST.—In Renick, Missouri, on Tuesday, September 3d, Dr. S. M. Forest, in the fifty-fifth year of his age.

LUCKET.—In Alexandria, Louisiana, on Thursday, August 29th, Dr. Robert L. Lucket, in the thirty-seventh year of his age.

MCCOMB.—In Hawthorne, Pennsylvania, on Thursday, September 5th, Dr. Alonzo D. McComb, in the forty-seventh year of his age.

PULVER.—In Torrington, Connecticut, on Tuesday, September 3d, Dr. Hudson J. Pulver.

SCHIFF.—In San Francisco, on Monday, September 2d, Dr. Gustavus Schiff, in the seventy-eighth year of his age.

TREVV.—In Travilah, Maryland, on Thursday, August 29th, Dr. James C. Trevv, in the sixty-third year of his age.

Pith of Current Literature.

*Journal of the American Medical Association,
September 7, 1901.*

The Practice of Obstetrics. By Dr. E. Gustave Zinke.—The author lays stress upon the fact that the most luxurious home, provided with all the modern sanitary arrangements is not superior in safety to the most humble, but well-prepared and properly conducted, maternity hospital. He believes that the prejudice against hospital deliveries can be as easily overcome as the antipathy which existed in the past against the hospital for any kind of treatment, medical or surgical.

Position of the Woman during Delivery. By Dr. William D. Porter.—In the author's practice the woman lies on her back across the bed, her hips well to the edge and on a Kelly pad. The patient's legs are separated and extended, and supported over the knees of the obstetrician, who sits on a chair facing the bed at a convenient distance. The position is not tiresome to the patient or to the physician and can be maintained for hours without discomfort to either. The author asserts that with this position there is less liability of infection with faecal bacteria; fewer examinations are necessary, and there is better control of the head at the time of delivery, and consequently less danger to the perinæum. Cleansing after labor can be more thorough. There is less danger of infecting the eyes or cord of the child, and less risk of its aspirating fluids into its air passages.

The Prophylaxis and Treatment of Puerperal Sepsis. By Dr. John F. Moran.—The treatment of sepsis depends upon the skill and judgment of the physician and the condition of the patient. It is not justifiable to open the abdomen without some physical reason. The different forms of sepsis should be thoroughly understood, for an operation is not required, except in pathogenic infection. When the operation is performed early many organs are needlessly sacrificed; if performed late the mortality is increased. When there is continued fever with increasing physical signs, the operation is permissible; without the latter, general symptoms would indicate systemic infection and surgical measures can only hasten the end.

The Indications and Contraindications for the Use of the Curette in Obstetric Practice. By Dr. Henry D. Fry.—The curette is but a poor substitute for the finger. It is of prime importance in a given case to ascertain the nature of the infective agent, or agents, before resorting to the curette. The foul discharge that accompanies the action of the bacillus of putrefaction is a safe guide to indicate the use of the instrument. In the absence of that sign the indication is not clear, and we must rely upon the culture test. The culture must be taken with the strictest detail to aseptic work.

A Case of Streptococcus Infection following Labor—Operation and Recovery. By Dr. William H. Humiston.—The author records an inter-

esting case; and, because of its gravity, and the gratifying results obtained, he hopes that the report may stimulate others to use the vaginal in preference to the abdominal route.

Remarks on Spinal Surgery, with Illustrative Cases. By Dr. Andrew J. McCosh.—The author's conclusions are: (1) The risk of the operation of laminectomy is slight; (2) early operation is of the greatest importance: operate before the onset of degenerative changes; (3) in tumor cases do not waste time with antisyphilitic treatment; (4) operate rapidly: employ but few artery forceps or ligatures; (5) support of the spinal column after operation is generally unnecessary.

Spina Bifida, or Hydrorrhachitis. By Dr. Paul F. Eve.—Each individual case is a law unto itself. In the author's case, the child operated upon was less than three months old; the tumor was rapid in its development, and threatened rupture was imminent; the pedicle was small, and consequently easily dealt with.

The Immediate and Remote Effects of Brain Injury.—By Dr. D. S. Fairchild.

Diabetes Mellitus in Childhood, with Report of a Case. By Dr. A. C. Cotton.

Albuminuria in Disease of the Kidney in Infancy and Childhood. By Dr. John R. Rathmell.

Traumatic Affections of the Uvula. By Dr. Seymour Oppenheimer.

Twin Conception. By Dr. J. Prosser Harrison.

A Case of Primary Retroperitoneal Sarcoma. By Dr. Richard R. Smith.

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Correction of Occipitoposterior Positions through Seizure of the Anterior Ear by Two Fingers in the Vagina. By Dr. Robert L. Dickinson.—The manœuvre suggested by the author is available whenever the ear is within reach. Two fingers are pushed in beneath the pubic arch and the ear caught between their tips. The middle finger being longer than the index, would be better placed against the back of the ear if the reach is a long one, or if the patient is stout or sensitive. The index, however, with its greater strength, has more pushing power when its tip lies behind the ear. It does not matter whether the palmar or dorsal aspect of the finger is applied to the head. The palm toward the pubes gives the longer reach. The cartilage of the concha furnishes a resisting projection on which pressure is exerted, or the flap of the ear gives a handle to pull upon. During a pain that rotation which has been gained is held, and progress is resumed after the passing of the pain.

Disease and Sin. By Dr. George M. Gould.—The author figures the actual expense per annum of sickness and death to the people of the United States as three thousand million dollars—figures which fully justify the demand for the establishment of a national bureau of health, with a cabinet officer at its head. The figures are very much larger than they need be, and such a bureau

would easily save a thousand times its expense. The saving or loss of money is, of course, not a consideration, but this method of stating the fact is adopted by the author to bring it home to the imagination. We have a double warrant as good physicians and as good citizens for joining in social movements to bring about a better civilization. There is no prevention of disease without stifling the causes of disease. Wherever sin exists it works itself out finally in sickness and death. The man who says his sole duty is to cure disease, and not to bother about sin or society, is a bad physician and a poor citizen. In a hundred ways he can influence his neighbors and his nation to lessen disease and death, besides by what the text-books call therapeutics. The best therapeutics is to render therapeutics unnecessary.

Resections and Exsections. By Dr. Fernand Henrotin.—The author is in favor of radical procedures, and he believes that where radical operations fail conservative operations would not succeed.

What is True Conservatism in the Treatment of Appendicitis? By Dr. Miles F. Porter.—The author in two columns gives the result of (1) timely operation, and (2) of conservative treatment, or operation only when other treatment fails. The immediate mortality of prompt operation is less than two per cent.; the danger of hernia, nil; the danger of bowel obstruction slight; danger of recurrence, none; danger of secondary abscess, none. The immediate mortality of the conservative method is more than ten per cent. of operated cases and more than two per cent. of all cases. The danger of hernia is considerable. The danger of bowel obstruction is real. The danger of recurrence—thirty-three and a third per cent. of cases not operated upon, and more than two per cent. of cases treated by incision and drainage. Secondary abscess is not infrequent. The author concludes that timely diagnosis and early operation is the truly conservative treatment of appendicular inflammation.

The Manifestations of Rheumatism in Children. By Dr. William Fitch Cheney.—Every complaint of pain in the limbs made by a child should receive careful attention. A positive diagnosis of rheumatism may be impossible at the time, but a negative diagnosis is equally impossible. It must be remembered that the absence of redness or swelling does not exclude rheumatism in children, as it would in adults, or does the absence of fever. Endocarditis always threatens in the rheumatism of children, and rest should be enforced.

An Unusual Type of Small-pox with Fatal Termination. By Dr. Louis Leroy.

The Future of the Negro from the Standpoint of the Southern Physician. By Dr. Seale Harris.

Boston Medical and Surgical Journal, September 5, 1901.

Under what Circumstances (Except Emergencies) is it Desirable to Operate in Cases of Gall-

stones for Radical Cure or for Relief? By Dr. Maurice H. Richardson.—The author considers that inasmuch as the diagnosis of gallstones can be made only when they begin to offend (except, of course, during abdominal operations for other causes), gallstones should be removed either as soon as they begin to offend or at the most favorable period after their immediate ill effects have had time to subside. By the most favorable moment he means that period of time when there is no infection of the gall-bladder to contaminate the field, no impaction in the common duct to increase the difficulties and dangers of dissection, and no jaundice to induce hæmorrhage or to impair the patient's power of recovery. In many cases the favorable moment follows recovery from the disturbances of a transitory biliary colic unattended by jaundice; in others it follows the disappearance of jaundice after passage of the stone; in others, the subsidence of fever and other signs of a biliary affection. In all cases of jaundice one should wait a reasonable time for that favorable moment, in the hope that the stone may escape from the common duct into the duodenum, and that bile may reappear in the stools.

Obstructive Diseases of the Lower Bowel. By Dr. Henry O. Marcy.—In an interesting article the author considers: (1) The conditions extraneous to the bowel; (2) the obstruction caused by its contents; and (3), the pathological conditions belonging to the viscus itself. He regards the resection of the lower bowel for cancer by approaching it from above in many instances as a very great advance in modern technics. The lymphatic glands of the pelvis can be examined and removed if necessary as by no other route. The resection may be made much more accurately, and in many instances the function of the lower bowel preserved or restored. Cancer of the rectum is one of the most deplorable of all diseases. The last decade has, however, added greatly to the improved surgical methods for its relief and cure, but no field in surgery demands greater improvement in skill and technics or promises greater triumph in the relief of suffering.

The Indications for Operation in Malignant Neoplasms of the Stomach. By Dr. Charles Greene Cumston.—The surgical treatment of carcinoma of the stomach is indicated not only when stenosis is present, but also as a radical cure of the cancer itself. In every case where carcinoma is suspected, an immediate exploratory laparotomy should be advised, and every neoplasm that can be removed from the stomach should be excised. An exploratory operation is justified in every case where the patient is afflicted with gastric troubles, when (1) analysis of the gastric juice shows an absence of pepsin and the presence of lactic acid, and when (2) medical treatment carefully conducted is incapable of increasing the body weight and retaining it there.

Remarks on Tuberculosis and its Treatment. By Dr. Baradat.—The author has no hesitation in attaching himself to the method of antituberculous serotherapy introduced in 1889 by Richet and Hericourt, and by Bertin and Picq.

The Chemical Properties of Leucocytes. By Dr. Edward T. Williams.

Medical News, September 7, 1901.

A Study of the Temperature Laws in Epilepsy, based on One Thousand Observations. By Dr. William P. Spratling.—The author quotes from Bourneville, "Isolated attacks of epilepsy augment the central temperature." After making due allowance for diurnal variation, forty per cent. according to the author, would be the lowest of such cases showing increased temperature, and seventy per cent. the highest. The views of such eminent physiologists as Dalton, Kirkes, Foster, Landois, and Sterling, relative to the part played by muscular activity in creating heat, must in view of the activity of the muscular system in certain cases of major epilepsy, have great weight in determining the cause of heat production in these cases, wholly irrespective of any influence that might be exerted by the heat centres in the brain. In many petit mal and psychic attacks in which muscular activity plays so small a part, in which the temperature is often increased after seizures, such increase is due to a disturbance of the heat centre that is thought to exist in the cortex of the brain, or of the centre or centres that observers believe have been located in the corpus striatum and optic thalamus. Subnormal temperatures follow epileptic seizures in greater proportion after grand mal than after petit mal or psychic seizures, the proportion being fifteen per cent. of the former to ten per cent. of the latter types. In these cases there will usually be found to exist some chronic disease or general asthenic condition of long standing that lowers the stamina and vitality of the individual. The temperature in serial attacks runs uniformly higher than in isolated attacks, but not so high as in status.

The Treatment of Puerperal Infection. By Dr. David J. Loring.—The author lays stress on the fact that puerperal infection is wound infection, and that its treatment is essentially the treatment of wound infection. The dependence on the internal administration of drugs is delusive, and the proper treatment is surgical, and should be prompt, decisive, and radical from the beginning. In planning the proper surgical treatment, we should always have in view (1) the limitation of the infected area to the fullest possible extent; (2) the provision of abundant drainage for ptomaines and leucomaines and other tissue debris, the result of microscopic invasion; and (3) the introduction of some antiseptic, such as iodine in the form of iodoform, which will render the infected field sterile in the shortest possible time. With these principles in mind, the author has written an instructive paper.

Generalized Vaccinia. By Dr. John H. Hudleston.—The author has collected and tabulated all obtainable reports of cases of this eruption following vaccination. The table of these fifty cases is interesting. Self-inoculation is supposed to be the cause. As a rule, self-inoculation produces but one pustule or very few pustules. When, however, the skin is eczematous, self-in-

toxication may produce an almost unlimited number of pustules. Such cases are frequently reported as generalized vaccinia.

A Consideration of Hæmorrhoids. By Dr. John Turner, Jr.

Autotoxæmia. By Dr. William W. Pennell.

Medical Record, September 7, 1901.

The Work of the Sanitary Department of Havana, with Special Reference to the Repression of Yellow Fever. By Dr. W. C. Gorgas.—The author gives the deaths from yellow fever in the city of Havana, the cases of yellow fever in the city of Havana, and the deaths from yellow fever from March to July. Each table contains the statistics of a number of years, and upon being compared with similar tables for the present year it is evident that nothing but praise is due to the work of the sanitary department. The author feels confident that the destruction of the mosquito is the proper method for fighting this disease, and that eventually we shall be successful on these lines.

A Personal Experience in Radiography, together with the Technics of Stereoscopic Radiography. By Dr. Alexander B. Johnson.—The author has written an article of much interest on the subject.

Can Nasal Catarrh and Catarrhal Deafness be Cured? By Dr. Carolus M. Cobb.—The author gives the histories of some cases, and demonstrates that each case must be carefully studied, and even then, he points out, it may be a question of weeks, or even months, before we can be certain of the cause of the discharge. But, however, if we bear in mind that a chronic discharge into the throat is caused in the same manner as a chronic discharge in other parts of the body, and study the case in this light, we shall be in a position to treat it intelligently. Experience has convinced the author that the so-called catarrhal disease of the upper respiratory tract, with all its attendant complications, is curable, and the results of treatment will amply repay one for the time and observation required.

The Need of Better Provision for the Proper Care of Cases of Delirium Tremens and Cases of Doubtful Mental Disease. By Dr. Henry C. Baldwin.—Aside from the humane standpoint and on purely economic grounds, the establishment of separate hospitals or of special wards in connection with the general hospitals for observation cases would, in most instances, cost less than the present system. Were such a place provided, many persons who are allowed at large because the police know of no place to which they can be sent, would come under early observation, and their condition would be determined in time to prevent crime. The first movement must be made by medical men.

A New Continued Fever. By Dr. Edgar G. Spratling.

Philadelphia Medical Journal, September 7, 1901.

On Streptothrichal Infections. By Dr. John H. Musser.—The author, from his observations and

those of others, concludes that the streptothrix in some varieties is pathogenic to man and gives rise to inflammatory, suppurative, and necrotic lesions in (a) the lungs, and (b) the skin, and (c) by metastasis, probably, in the brain and spinal cord and, rarely, other organs—e. g., the kidney. While this pathogenicity is more than likely and is primary, yet it must be remembered that it may be a secondary growth in the course of other infections.

Post-typhoidal Ulceration, and Abductor Paresis of the Larynx; Tracheotomy; Recovery. By Dr. D. J. Gibb Wishart.—Examination of the larynx during the course of an attack of typhoid fever is seldom made, partly because of the slight character of the laryngeal symptoms, but chiefly because of the difficulty of making a laryngoscopic examination while the patient is compelled to remain recumbent. The author records a case of ulceration of the vocal cord, attended by paresis of the abductors. The case is of especial interest as the lesion is rare among the recorded typhoidal lesions of the larynx.

Light and Radiance in the Treatment of Disease. By Dr. George G. Hopkins.—The author considers the treatment of carcinomatous growths by Röntgen rays. The most satisfactory cases for treatment are those in which the glands in the neighborhood of the diseased area are not yet infected. The author believes that the x-ray produces a change in the molecules of the embryonic cells. He points out that a current that is prolonged to too great a time limit, and is brought too near the patient, and is generated from an improper apparatus, may carry the effect of the x-ray current beyond what is desired. A case is given.

On the Use of the Röntgen Rays in the Diagnosis of Pulmonary Tuberculosis. By Dr. Hugh Walsham.—The author notes in the x-ray evidence that the diaphragm does not, as physiologists assert, become flatter with inspiration; it plunges up and down, piston-wise, with an unaltered curve. The movement of the diaphragm in tuberculosis is much less on the less affected side, and this when the disease is limited to one apex. The healthy chest in the living person is as clear as that of the dead body with thoracic viscera removed—any abnormal shadow seen in the skiagram is due to some pulmonary change. The x-rays are of great use in judging the size of a cavity, and there can be no doubt that it is possible to pick out in shadow a very small tuberculous focus in the lung. In all cases of suspected pulmonary tuberculosis a skiagram should be taken, and it is well to remember that a shadow can be detected on the photographic plate that would be missed on the screen.

Slow Pulse, with Special Reference to Stokes-Adams Disease. By Dr. Robert T. Edes.

Lancet, Aug. 1st 31, 1901.

Lessons to be Learnt from Vegetable Pathology. A Clinical Lecture. By Johnathan Hutchinson, F. R. C. S. Eng., F. R. S.

A Case of Cerebral Abscess complicating Gun-

shot Injury with Bilateral Loss of Peripheral Vision. By Alfred W. Sanders, M. D. Lond., F. R. C. S. Eng.—The author reports the case of a soldier who was struck by a rifle ball on the back of the head, the point of impact being one inch and a half to the right of the median line and two inches and a half above the occipital protuberance. The bullet did not penetrate, but glanced, splintering the bone in its passage. Ten days later an abscess developed which was opened, and it was found that the cavity extended into the brain for about two inches. Drainage was established and the wound gradually healed. After recovery it was found there was marked diminution of the visual fields, being limited to a very small area around a fixation point, not exceeding ten degrees in any direction. Half-inch type could not be read further away than two feet. No improvement was observed at the end of several weeks.

The case seemed to be a rare one, and it was difficult to explain such extensive impairment of vision from a lesion to the cortex which was apparently unilateral.

Some Recent Inquiries and Researches into the Poisonous Properties of Naphthaline and the Aromatic Compounds. By R. P. White, M. D. Edin., M. R. C. S. Eng., and John Hay, M. D. Vict., M. R. C. S. Eng.—The experiments of the writers both upon animals and themselves demonstrate that naphthaline and the aromatic series of compounds which are now so largely used in the manufacture of high explosives are poisonous in varying degrees. The naphthaline group appears to be much less dangerous than the benzene and toluene groups. The dinitro-benzene was found to be exceedingly poisonous, and this compound was also quite readily absorbed by the skin producing the characteristic symptoms.

On the Prophylaxis of Carcinoma. By C. B. Keetley, F. R. C. S. Eng.—In this paper the author takes the ground that the *materies morbi* of carcinoma is a living organism conveyed to the tissues from outside. Since almost all primary carcinomata are seated in the breast, the alimentary canal, the skin and the uterus, or in canals, ducts, and glands subsidiary to those parts or directly opening into them, he believes that the germ is conveyed to these parts by means of uncooked food or by contact with hands or clothing which has become soiled with material containing the germs of cancer.

Milk and the dairy products are considered to be the most prolific sources of infection. The germ apparently does not attack at once healthy surfaces, but requires time and rest to establish itself and takes advantage of ulcerated or otherwise injured spots. Therefore, in order to prevent the development of cancer: 1. Chronic inflammations, suppurations and especially ulcerations should not be neglected or allowed to drift. Still better, they should not be allowed to become chronic. 2. Well-known sources of irritation of mucous membranes and the skin should be avoided—e. g., smoking when any trace of soreness is discovered in the mouth or on tongue or lips, and the habitual use of strong condiments and spices is condemned. Workers in special

trades, such as chimney sweepers, should have any skin abrasions promptly treated. 3. Women should allow nothing to come in contact with the nipple except smooth, clean linen, cotton, or silk. All washing of the nipples and breast should be done by the woman herself and as gently as possible without touching them with the hands. During lactation especial care should be taken. 4. All food should be cooked or sterilized.

A Case of Spontaneous Gangrene in an Infant. By T. Armstrong Bowes, M. D. Cantab.—The writer reports the case of a child who was normal and healthy from birth and until the sixteenth day after. On that day, he refused the breast and became peevish, but the temperature was normal. On the following day, in the morning, a small vesicle was noticed in the centre of the back in the lumbar region which by evening had become a pustule. There was no history of traumatism. By the next day the pustule broke, leaving a circular ulcer surrounded by a dusky red area which became darker and extended until it reached half way to the shoulder blade. The inner portion around the ulcer became almost black, and the skin began to peel off. By the fourth day sloughing occurred, and the purplish area extended over nearly the whole back. That same day the child gradually sank and died.

The absence of traumatism or of any previous disease or cachexia points to this case as one of spontaneous gangrene.

Hospital Camp Sanitation in South Africa. By Burton A. Nicol, M. R. C. S. Eng., L. R. C. P. Lond.

Behaviour of Oxy-hæmoglobin, Carbonic-oxide Hæmoglobin, Methæmoglobin and Certain of their Derivatives in the Magnetic Field. By Arthur Gamgee, M. D. Edin., F. R. S.

Tonsillotomy Rash. By Wyatt Wingrave, M. D. Durh.—The author states that he has seen thirty-four cases of rash following operations for removal of the tonsils and adenoids during the past seven years and believes it occurs even more frequently than this statement would indicate. Of these thirty-four cases three proved to be scarlet fever, one diphtheria and the remainder were non-specific.

The character of the rash is described as either papular, roseolar or erythematous and appearing the second or third day, the favorite localities being the neck, chest, and abdomen, sometimes extending to the face and extremities. The earliest appearance noted was the first day following the operation and the latest the sixth. The duration was generally two or three days and after reaching maximum intensity the eruption disappeared rapidly without desquamation, but sometimes associated with intense itching.

The constitutional disturbance seemed to be usually slight, a rise of 1° or 2° in temperature being occasionally noted.

Examination of the blood during the week following the operation has generally shown an increase of monocular white corpuscles.

Tuberculosis, Bovine and Human. By Ferdinand Hueppe.—In this paper Professor Hueppe takes a decided stand in opposition to Koch's

statement that the bacilli of bovine and human tuberculosis are different organisms and that there is very slight evidence that the bovine bacilli can produce the disease in man.

This opposition is based on the ground that Koch's experiments were not carried far enough, and the fact that he did not produce tuberculosis from human bacilli in one breed of cattle was no proof that other breeds are not susceptible.

From mere negative experiments he does not believe it possible to form perfectly definite opinions in regard to the identity or non-identity of the exciting causes of disease.

Attention is called to the fact that a mistake was made in considering the bacteria of mammalian tuberculosis as different from those of avian; while later investigation showed that they belonged to one species and were modified by the differences in situation and nutrition. Much more difficult is it to believe that human and bovine bacilli, which, in their culture growth show great similarity, should be entirely different organisms.

Moreover, it seems strange to him that minute differences of appearance in the tubercle and cholera organisms should be considered to indicate different species, while in diphtheria a much greater difference is entirely ignored.

It has always seemed to him that predisposition and soil had a great deal to do with the development; that the "so-called tubercle bacillus" adapts itself to the particular member of the animal kingdom which happens to be its host, and when it has so adapted itself and become pathogenic for that animal it is not quite so pathogenic for another species of animal.

Infection from milk and other food he believes to be very common, and primary tuberculosis of the intestine need not necessarily result, for the bacteria may enter the tonsil. Moreover, in his opinion, primary tuberculosis of the intestines, especially among children, was much more frequent than Koch's statement would lead us to believe.

The war against tuberculosis in cattle should be kept up vigorously, both from an economic standpoint and also because of the danger to man.

Presse médicale, August 17, 1901.

Intestinal Occlusion in the New-born.—M. E. Weill and M. Pehu, in reporting a case, draw attention to the symptoms. Absolute constipation and entire absence of the passage of gas or fæces from the rectum, an unusual development of the abdomen with tympanites, oliguria, and visible peristalsis are the main features. The condition may rest upon an absence of the rectum, a Meckel's diverticulum, peritoneal bands or adhesions, a torsion, an invagination, a volvulus, or a congenital stricture of the large intestine. In the treatment, if intestinal enemata are not efficacious and the bowels cannot be moved from above, surgical procedures offer the best prognosis, even though an exact anatomical diagnosis of the condition cannot be made.

Asepsis of the Hands in Surgery.—M. L. Longuet says that theoretical discussions of the matter are valueless. Experimental evidence shows

that the usual methods of cleansing the hands can render them sterile, but the result is neither constant nor permanent. Clinical evidence proves that when disinfected hands touch septic material the ordinary methods do not suffice to render them aseptic again. The surgeon should, therefore, avoid everything septic, and the best way of accomplishing asepsis of the hands is by the wearing of impermeable gloves.

Centralblatt für Gynäkologie, August 10, 1901.

Air and Mercury Colpeurynter.—Dr. Ludwig Pincus describes a colpeurynter of his own devising for the purpose of vaginal dilatation. The principle on which it is constructed consists in the gradual dilatation of the vagina, and the mercury at the same time exercises a massage effect. It is suitable in cases of irritation of the pelvic muscles such as is induced by the various preventive measures. In cases of atony of the genital tract and in subinvolved uteri, as well as in atonic constipation and hæmorrhoids, it has been of service to the author. As a stimulant to labor pains it has been found superior to the water colpeurynter.

Treatment of Vaginismus by the Colpeurynter.—Dr. L. Huppert recommends highly the use of this instrument for vaginismus. The external genitals are first thoroughly cocaineized and the colpeurynter well anointed with some lubricant. After two or three weeks of this treatment, a cure of this condition is usually complete. It is important to keep the patient from all external irritation of the genitals during the treatment. Coitus, and other methods of treatment were strictly forbidden. Even vaginismus of gonorrhœal origin has yielded to the use of the colpeurynter.

Wiener klinische Wochenschrift, August 15, 1901.

Blood Examinations at the Bedside.—Dr. S. Pertot gives a preliminary paper describing a method he has devised for the immediate determination of the character of the blood. The principle depends upon the absorbability and color reaction of certain kinds of paper.

Mastoid Operations with Schleich's Local Anæsthesia.—Dr. G. Alexander reports eleven cases of mastoid operation performed with satisfaction under Schleich's local anæsthesia. The anæsthesia was evoked in layers and the operations were painless. In selected cases the author thinks that it is an ideal anæsthetic, as the patient can be made to retain the position best suited for the operation, and, if pain is caused, the patient can instantly notify the operator before the latter proceeds further.

Xeroderma Pigmentosum (concluded).—Dr. August Halle says that the pigment in this disease never enters the epithelium, but is deposited in the epidermis cells by chromatophores from the neighborhood of the blood vessels. The clinical symptom of the white spots represents no anatomical change, and is, therefore, not to be placed upon the same basis as the other symptoms of the disease. Carcinoma appears only late in the disease, and, as this malignant degeneration does not present itself in any other disease, the author considers this phenomenon as the gravest and most striking feature

of xeroderma pigmentosum. The author is not inclined to attribute the initial erythema to the influence of the sunlight alone, asserting that certainly a predisposition to some such disorder must exist. He compares the entire course of the disease to a phase of precocious senility.

Gazzetta degli Ospedali e delle Cliniche, July 21, 1901.

The Effect of Cacodylic Treatment. By Dr. C. Molon.—Cacodylate of sodium is an organic compound of arsenic which has the advantage of containing a considerable amount of arsenic in a soluble condition, and at the same time of being almost perfectly harmless. It contains 46.86 per cent. of arsenic, is very soluble in water, and is easily sterilized. The solutions are not irritating to the mucous membranes and may be injected subcutaneously without any bad effects. Sodium cacodylate has been used on a large scale during the past three years, and a considerable amount of statistical data has been collected on the therapeutical value of this remedy. The enthusiasm which marked its introduction has, however, considerably abated. The author has studied the effects of cacodylate upon the elimination of phosphorus by the organism. The fact that sodium cacodylate is eliminated in the urine almost unchanged, gave rise to the suspicion that the remedy has no influence whatever upon the tissues, as has been asserted. The author found, after a careful study of the metabolism in four patients, that there was an increase in the amount of urine and urea, while the phosphates underwent but very slight changes, these being probably due to the variations in the amount of phosphorus in the diet. During the treatment, the total amount of albumin was increased and the chlorides were below the normal. The author has also studied the weight and the condition of the blood in two patients. The weight diminished during the treatment in the first case, but, in the second, there was an increase of 2.600 kilogrammes. The changes in the number of red cells and in the hæmoglobin were not important.

Hot Air Treatment in Affections of the Nose. By Dr. U. Ambrosioli.—The application of hot dry air to the mucous membranes of the primary respiratory passages is followed by a feeling of dryness in the nose, and the mucosa becomes dry, red, smooth, and shining. There follows an aqueous discharge, which continues for a number of hours. Hot air may be used, therefore, in diseases of the nose which involve an alteration in the secretion and in all nervous affections of the nasal passages, such as those due to reflex changes, to changes in the general nervous system, or to perversions of the specific sensory function of the Schneiderian membrane. The applications are made by means of a special apparatus which is a modification of one already in use in dentistry.

Pratch, July 21 (August 2, New Style), 1901.

A New Method of Medico-legal Diagnosis for Human Blood. By Dr. M. A. Schirokikh.—In the early part of the present year Uhlenguth and, later, Wassermann and Schuetze suggested a new method for differentiating human blood from that of other animals. The author tested

this method and concludes that it is a most important help in medico-legal work, for by this process not only fresh blood can be distinguished, but old stains can be examined with trustworthy results.

The new test is based upon the fact first pointed out by Bordet and Tchistovitch, that if a rabbit is injected with the blood or serum of another species, the blood of the animal inoculated will acquire the property of forming precipitates in solutions of blood of the species used in the injection, but not in solutions of blood from other species. From five to six injections measuring eight or ten cubic centimetres each, of the blood serum of the animal whose blood is suspected in the stain, are given subcutaneously to a rabbit at intervals of two or three days. Six days after the last injection the rabbit is bled to death by opening the carotid. The blood is collected into a narrow cylinder and placed in iced water. The clot is separated artificially from the walls of the cylinder and allowed to contract. The serum is used for the blood test as follows: The material to be tested is dissolved in a 1.6 per cent. solution of sodium chloride and carefully filtered until perfectly clear. To four or five cubic centimetres of this solution in narrow test tubes half a cubic centimetre of rabbit's serum prepared as above is added. If the animal suspected is of the same species as that which was used for the injections in the rabbit, there will be a cloudy precipitate in the test tubes within a few minutes. An interesting fact from the viewpoint of biology, but of not much medico-legal importance, is that the blood of certain kinds of monkeys gives a reaction by this method, though the blood injected into the rabbit was human.

The only disadvantage of this method is the difficulty of preparing the specific blood serum for testing stains, and the fact that such serum does not keep for any length of time. This, however, could be obviated, perhaps, by keeping such serums in sealed tubes, or in a dry form, like vaccine.

On Peritoneal Adhesions. By Dr. E. J. Katsunsky.—The author deals here chiefly with certain chronic peritoneal adhesions which have been described by Gersuny as "typical." One of these is a false membrane extending across the outer leaf of the mesocolon, from the junction of the descending colon and the sigmoid to the parietal peritonæum. The other group of adhesions concern the distal end of the appendix, glueing it to the parietal peritonæum. The causes of these adhesions are not known, but they occur much more frequently in women than in men. In more than fifty per cent. of these cases neither the previous histories nor the examination of the peritonæum at laparotomy gave any suspicion of a preexisting peritoneal inflammation. Gersuny supposes that hæmorrhages into the peritonæum during the bursting of Graafian follicles may play a part in the causation of these adhesions in women, when no other cause is apparent. The author's clinical study of these adhesions convinced him that: (1) Peritoneal adhesions in general, and Gersuny's "typical" adhesions in particular, play an important rôle in the diseases of the peritonæum and abdominal organs, including

the pelvic organs of women; (2) the causes, clinical history, diagnosis, and treatment of these "typical" adhesions require careful and detailed study; (3) it is important to note their presence or absence in every laparotomy; (4) the presence of these adhesions must be taken into account, in operating for various conditions affecting the adjoining organs; if they are not removed the surgical interference may prove useless; (5) the presence of "typical" adhesions should be included in the list of contraindications for the vaginal method of opening the peritoneal cavity.

A few Words concerning Serious Head Injuries in Children. By Dr. L. M. Kontovt.—The author reports a number of cases of head-injuries in children. The skulls of children react differently to traumatism than those of adults. The bones are less resistant and there is a greater tendency to affect the contents of the cranium. For the same reason long, fissured fractures are less common in childhood. This is corroborated by the cases reported here. In all there were more or less severe cerebral symptoms, while the local injuries were less severe than would be supposed. In two cases the defect in the skull was closed by skin alone with good results, and without hernia, probably because the defects were small. In three years they became closed with bone. In one case the Mueller-Koenig operation was performed (the bony flap being taken from the forehead) because of a hernia. This operation cannot be employed in children of tender age, for in them the skull bones are too thin and cannot be split. In such young children celluloid plates are recommended. The prognosis in all these cases should be very cautious. In the author's nine cases, there were no cerebral or nervous symptoms of any kind two or three weeks after the disappearance of the symptoms that threatened life. Subsequent observation showed perfect recovery in all but two. In one of the latter there was a retardation of growth, in the other a defective memory.

Transplantation of Ovaries. Some Experiments upon Animals. By Dr. V. I. Loukashevitch.—The author's conclusions are as follows: (1) The ovaries of one animal may be transplanted into another castrated animal, and such transplantation may be made from a carnivorous animal to a herbivorous, and vice versa; (2) the transplanted ovaries adhere, are nourished normally, and sometimes functionate; (3) the essential conditions of a successful transplantation are: (a) Asepsis in operating; (b) careful suturing to the remains of the mesovarium as closely as possible, imitating the natural mode of attachment; (c) two ovaries should be transplanted, and as much of the ovarian tissue as possible should be transplanted; (d) pressure by neighboring organs should be avoided; (4) transplanted ovaries are not as a rule, long-lived, and, after a variable time, they begin to degenerate; (5) the cause of this degeneration is undoubtedly a lack of blood-supply; (6) in some cases, however, transplantation delayed the onset of atrophic changes in the genital organs, and premature obesity occurred; (7) in no case did impregnation occur when copulation was allowed.

Book Notices.

Lectures on the History of Physiology during the Sixteenth, Seventeenth, and Eighteenth Centuries. By SIR M. FOSTER, K. C. B., M. P., M. D., D. C. L., Sec. R. S., Professor of Physiology in the University of Cambridge, etc. London: H. K. Lewis. New York: The Macmillan Company, 1901. Pp. 310.

These lectures of the eminent author have already appeared in print, and an extended review is therefore unnecessary now. No one acquainted even slightly with medical history need be told of the importance of the centuries covered by Dr. Foster in his lectures as to the permanent influence which they exerted upon medicine in general and upon the anatomical and physiological sciences in particular. Certainly the reading of this book will serve to induce respect for this period of the "real beginnings of medicine." We commend the book heartily as a well-written epitome of the history of medicine for the period which it covers.

BOOKS, ETC., RECEIVED.

An International System of Electrotherapeutics for Students, General Practitioners, and Specialists. By Numerous Associated Authors. Edited by Horatio R. Bigelow, M. D., Fellow of the British Gynecological Society and of the American Electrotherapeutic Association, etc. Second Edition, thoroughly Revised and brought up to the Present Date, with Several entirely New Departments embodying the most Recent Developments of the Science. Edited by G. Betton Massey, M. D., Fellow of the American Electrotherapeutic Association, etc. Thoroughly Illustrated. Philadelphia: The F. A. Davis Company, 1901. Pp. x-1129.

A Treatise on the Acute Infectious Exanthemata, including Variola, Rubella, Scarlatina, Rubella, Varicella, and Vaccinia, with especial Reference to Diagnosis and Treatment. By William Thomas Corlett, M. D., L. R. C. P. Lond., Professor of Dermatology and Syphilology in Western Reserve University, Cleveland, etc. Illustrated by 12 Colored Plates, 28 Half-tone Plates from Life, and 2 Engravings. Philadelphia: The F. A. Davis Company, 1901. Pp. viii-392.

The Mental Functions of the Brain. An Investigation into their Localization and their Manifestation in Health and Disease. By Bernard Hollander, M. D. (Freiburg i. B.), M. R. C. S., L. R. C. P. Lond. Illustrated with the Clinical Records of Eight Hundred Cases of Localized Brain Derangements and with Several Plates. New York and London: G. P. Putnam's Sons, 1901. Pp. xvi-507.

A Guide to the Clinical Examination of the Blood for Diagnostic Purposes. By Richard C. Cabot, M. D. With Colored Plates and Engravings. Fourth Revised Edition. New York: William Wood & Company, 1901. Pp. xxi-494.

The *Æstivo-autumnal* (Remittent) Malarial Fevers. By Charles F. Craig, M. D. (Yale), Pathologist and Bacteriologist to the United States Army General Hospital, Presidio of San Francisco, etc. Illustrated by Two Colored Plates and Twenty-one Clinical Charts. New York: William Wood & Company, 1901. Pp. ix-221.

Practical First Principles simplifying the Study of Normal and Abnormal Structure and Function, and aiding Diagnosis. Designed for the Use of Students and Practitioners of Medicine. By A. H. P. Leuf, M. D., Philadelphia: The Medical Council, 1901. Pp. 5 to 105.

Sexual Hygiene. Compiled from Books, Articles, and Documents, many not heretofore published. By the Editorial Staff of the Alkaloidal Clinic. Chicago: Clinic Publishing Company, 1901. Pp. 7 to 200.

Libertinism and Marriage. By Dr. Louis Jullien, Surgeon of Saint-Lazare Prison, Paris, etc. Translated by R. B. Douglas. Philadelphia: The F. A. Davis Company, 1901. Pp. v-169.

Practical Dietetics. Food Value of Meat. Flesh Food not Essential to Mental or Physical Vigor. By W. R. C. Latson, M. D. New York: The Health-Culture Company, 1901. Pp. 72.

Miscellany.

A "Bacillus Pertussis."—Jachmann and Krause (*Zeitschrift für Hygiene und Infektionskrankheiten*, Vol xxxvi, fasc. 2; *Arte medica*, July 21st) have found in eighteen cases, with three necroscopic findings, a bacillus similar to that of influenza, which flourishes exclusively in culture media containing hæmoglobin, differently from like bacilli cultivated by other authors. This new bacillus they have named *Bacillus pertussis*.

Some Ophthalmic Complications of Plague.—Major F. P. Maynard, civil surgeon of Patna (*Journal of Tropical Medicine*, August 15th), says that during the epidemic in Patna he met with twelve cases of plague in which eye disease complicated the illness. Of the twelve patients examined, six recovered with one eye sound; for the remaining eighteen eyes the lesions were: (1) Cornea hazy in four, opaque in two, and sloughing in four; (2) iritis varying from a few spots of pigment on the anterior capsule to occlusion pupillæ, in twelve cases, and in three others the iris was prolapsed; (3) scleral staphyloma occurred twice; in both it was ciliary, and in each the dark projection was separated from the corneal margin by a strip of healthy looking sclera; (4) the lens was hazy in seven eyes and quite opaque in five; (5) the media were hazy in six; (6) the fundus was normal in three, showed hæmorrhage in one, and the appearance of a limited retinitis pigmentosa in one other; (7) the tension was diminished in twelve cases, normal in the rest; (8) vision *nil* in five, perception to light only in eight, and fairly good in five.

The most remarkable feature in the *post-mortem* examination was, that whereas in plague extensive hæmorrhage occurs in different parts of the body, in only one eye was some slight extravasation seen. Except in one case, perhaps, treatment was of no avail. In this case Major Maynard administered iodide of potassium and nux vomica internally, dropped atropine into the eye and applied blisters on the temples.

Case of Zinc Poisoning Due to Wearing Stockings.—Cases of poisoning from stockings are from time to time on record. Usually a tin preparation used in the process of dyeing is the offending agent. Dr. Adolf Jolles (*Allgemeiner Wiener medizinische Zeitung*, Jahrg. xlv, No. 10; *Edinburgh Medical Journal*, May) describes an interesting case in which the poisoning was due to zinc. The patient, a young woman, had more than six months previously suffered from a motor and sensory affection of the lower limbs, which, however, gave way to treatment. The soles of her feet were stained yellow, and this staining had immediately preceded the onset of her illness. She suffered from hyperidrosis of the feet, and the staining was attributed to the wearing of yellow silk stockings, but these were not at this time suspected as the cause of her symptoms. After recovery, she was for some months able to take long walks, but suddenly was again attacked with similar symptoms, but of a severer order—loss of coordination, paræsthesia, and severe pains in the lower extremities. Urine contained a

large amount of albumose, albumin, some tube casts, and a relatively large amount of zinc. The patient recovered, but the zinc was slowly eliminated, it being found in the urine, in varying quantity, for two months. Chemical examination of the stockings showed that chloride of zinc had been used for giving body to the silk, and that the dye was one of the azo-bodies, which was not fast, but easily washed out by hot water.

The author points out that chloride of zinc is a frequently used means of giving body to silk, especially of light fashionable fabrics. The silk is steeped alternately in a solution of this salt and a weak soda solution. When repeated again and again, this causes a precipitation of hydrated oxide of zinc on the silk, to the extent of about twenty-five per cent. of its weight. He strongly urges that no silk material should be worn next the skin.

Syncytioma Malignum.—Van der Hoeven (*Weekblad. Nederl. Tijdschr. v. Geneeskunde*, November 8, 1900; *Edinburgh Medical Journal*, May, 1901) arrives at the following conclusions: There are grounds for referring the syncytium to the foetal ectoderm, and the cells of Langhan's layer to the somato-pleura. In a normal placenta the proliferation of these cells is of a character intermediate between ordinary innocent cell proliferation and that of a malignant kind. In a mole, however, these cells have a malignant character. The mole itself is a malignant growth of two germinal layers, in which the signs of malignancy are somewhat less prominent, because the cells have free room for their development. The tendency of the cell elements to develop in broad tracts through Nitabuch's fibrinous layer is one manifestation of malignancy. Even in normal pregnancy syncytium may be found in the decidua, but such extensive penetration of the fibrinous layer is never met with. Before or after delivery these cells perish of themselves or are destroyed by the maternal tissues, and so rendered innocuous. But in the case of a hydatid mole many more cells grow in the maternal tissues; they have, moreover, a much greater tendency to proliferation, and they grow into muscular tissue. They have more vitality and so develop into deciduoma. Thus deciduoma will consist of syncytium, syncytium together with Langhan's cells, cells of Langhan's layer alone, or, perhaps, of syncytium, Langhan's cells and villous stroma. If the malignity of the mole is not marked, or if the mole is removed before the malignant proliferation has involved the maternal tissue, no deciduoma is formed. It sometimes happens, however, that a deciduoma appears when there has not previously been any mole, not even a partial one. Such a deciduoma owes its origin to a placenta, normal in other respects, but containing some epithelial cells with an abnormal tendency to proliferation. Finally, in exceptional cases, tumors described as deciduoma may be true sarcomata of the mucosa or muscular tissue of the uterus, and quite independent of pregnancy.

In the same issue of the *Edinburgh Medical Journal* (May, 1901) Dr. R. W. MacKenna concludes a very interesting original article as follows:

The epithelium of the chorionic villi is actively engaged in metabolism, and, being a foetal tissue, it has, like other embryonic tissues, a great capacity

for proliferation. The epithelial cells, in the course of the metabolic processes which they carry on, have to take into themselves a large amount of nutrient material. So long as they can hand on this material into the foetal circulation, they do not proliferate, but should any cause arise to irritate the cells, they devote much of the nutrient material passing through them to their own nourishment, and proliferate in virtue of the increased bioplastic energy awakened within them by the toxine.

The cells may be gifted with powers of malignant proliferation by the toxine, and may remain latent in the uterus unless and until some influence stirs them into activity to manifest their acquired characters.

That there are toxines circulating in the blood of all pregnant women is a well-known fact, and that certain conditions may increase the toxicity of the blood serum is also recognized (Ludwig and Savor, *Monatsschrift für Geburtshilfe und Gynäkologie*, Bd. I., Heft 5). Whether the chemical characters of these toxines are constant in normal pregnancies, is unknown, but it is to be expected that they will vary within certain limits. Thus we may have a variation in one direction reaching pathological dimensions, and giving rise to eclampsia; and in another direction, producing a malignant proliferation of the epithelium of the chorion.

That the formation of the particular toxine endowed with the property of stimulating epithelial proliferation is not a constant phenomenon of pregnancy, the rarity of the neoplasm shows. But in cases in which it does occur its action may be intensified by certain accidental occurrences, such as the death of the foetus. The foetal circulation will then cease, but the epithelium of the villi, in virtue of its great power of taking up nourishment, may continue to live actively; and as it is now under abnormal conditions, a smaller amount of toxine may dispose it to assume powers of malignant proliferation and invasion. That toxines may cause cells to assume wandering powers, we have a daily proof in the case of an abscess. The growth of the organisms in the abscess gives rise to a toxine which exercises such an effect on the leucocytes in the adjacent blood vessels, that they take upon themselves the power of migrating, and, penetrating the vessel walls, invade the surrounding tissue to ward off the attack of the organisms. Surely such embryonic tissue as the epithelium of the chorion may as easily be influenced by toxines as the leucocytes are.

From all we have written we draw the following conclusions: 1. Syncytioma malignum is a malignant degeneration of the cells investing the villi of the chorion. The involvement of the decidua serotina is a secondary feature. 2. There is great danger attendant upon the retention *in utero* of placental remnants, or fragments of hydatid mole; and in all cases of hydatid mole, abortion, or full-time labor, it is of the highest importance to make sure that no remnants of foetal tissue are left behind *in utero*. In the event of any repeated bleedings following the termination of gestation, the uterus should be explored and curetted, and the tissues removed examined microscopically. 3. The uterus and annexa should be extirpated immediately on the discovery of any certain signs of the disease, unless extirpation is strongly contraindicated. The treat-

ment is pithily summed up in the words—"Diagnostic précoce, intervention radicale." 4. The cause of the malignant changes in the cells is the presence in the blood of an irritative toxine of unknown composition.

Dr. McKenna adds that since writing this paper, he has read Haultain's (*Journal of the British Gynaecological Society*, July, 1899) admirable article, proving to the author's mind conclusively, that the tumor cells are only active in a fluid blood medium. This is a presumptive proof of his theory, that the malignancy of the cells depends upon the presence of an irritative toxine in the blood.

Experiments on the Asserted Antirabic Properties of Bile.—Professor Galavielle and Dr. Aoust (*Nouveau Montpellier Médical*, July 7th) review the investigations of Fraser, Wehrmann, Phisalix, Calmette, Koch, Franzius, Vallée, and Lebell. Fraser showed that a very small dose of bile, either serpent's or mammal's, could neutralize a fatal dose of venom. Wehrmann treated the venom with snake's bile and noted the diminution in its activity; he also neutralized tetanus toxine. Phisalix and Calmette found in bile the same neutralizing properties, but the bile acted only when mixed with poison and had no effect when introduced separately in a different part of the body from the poison. The bile had no real specific preventive potency. Koch found that a subcutaneous injection of ten cubic centimetres of bile from animals affected with bovine plague, at Kimberly, immunized sound animals. The immunity began about the tenth day, and was of such power that, after four weeks, an injection of forty cubic centimetres of infected blood was not dangerous. Franzius was led by this investigation to ascertain if bile had any effect on the virus of rabies. He first found that the bile of rabid rabbits was not virulent. He then studied the preventive action of bile in a series of experiments on rabbits, and arrived at the conclusion that the bile of animals dead from rabies neutralized the virus thereof. "This power," says Franzius, "is not due to a simple chemical action; it has to do with a veritable antitoxic power, for the bile of healthy animals (cattle, pigs, sheep), mixed with the virus and inoculated in the same conditions in no way affects the evolution of rabies." Vallée repeated and continued the investigations of Franzius and concludes: 1. That the bile of rabbits dead from plague does not contain any antitoxine of rabies. 2. The bile of the rabbit plays, in regard to the virus of rabies, the rôle of a very active antiseptic. In five minutes, an emulsion of virulent cerebellum is neutralized by an equal volume of bile. 3. The inoculation of a mixture of equal volumes of rabic virus and of the bile of a rabbit dead from rabies or of the bile of a healthy rabbit, does not kill the animals, but neither does it confer immunity. Lebell, in review of Franzius's work, as the result of his own experiments, concludes that: (1) The bile of rabid animals seems to have *in vitro* a certain neutralizing action upon rabic virus; (2) this bile seems also to have an attenuating action in the organism upon the fixed virus; (3) the bile of healthy rabbits exerts no attenuating action upon rabic manifestations; and (4), this attenuating action appears to be due to an antitoxic substance formed in the bile of rabid ani-

mals. Lebell, on receipt of Vallée's communication rejecting the antitoxic property of bile and affirming that if the bile was antitoxic it ought to behave itself in all respects as the other antitoxines did, and lose this property by heating, while his (Vallée's) experiments showed that rabbits inoculated with this bile did not contract rabies, repeated Vallée's experiments on this point and attained diametrically opposite results and consequently maintained his own conclusions.

Thus Lebell is in accord with Franzius save as regards the preventive property, and in complete discord with Vallée. Lebell and Franzius maintain the antitoxic power of bile, Vallée rejects it. Lebell and Franzius conclude that normal bile has no action on fixed virus; Vallée maintains the reverse.

Galavielle and Aoust next record their own experiments, in five series. A fixed virus was employed for injection into the brain, and experiments and check experiments were made (1) with bile taken immediately after death from a rabic rabbit that had succumbed after the usual interval (nine or ten days) to paralysis; and (2), with bile taken as aseptically as possible from a healthy rabbit. In the first series, three rabbits were inoculated with a mixture of virus and rabic bile, and then with virus and healthy bile. Of the first three, one died of convulsions from the operation, one was living at date, and one died eleven days later, paralysis having set in the day before; while, of the last three, one died fourteen days after inoculation, without signs of paralysis, one was without result, and the third rabbit survived. From these facts the author concludes that normal bile, like rabic bile, is capable of annihilating the action of the virus.

In the second series, two pairs of rabbits were injected with the virus, and, on the same day, one of each pair was injected subcutaneously, and one intravenously, with rabic bile and healthy bile respectively. Three died, paralysis occurring after an incubation period of seven days, while the fourth, in which an intravenous injection of normal bile was given, survived. The interpretation of this last fact is to be submitted later.

In the third series two pairs were injected several times with (a) rabic, and (b) normal bile, subcutaneously and intravenously respectively, and were subsequently inoculated with fixed virus. All died, paralysis occurring after an incubation period of six days with rabic bile, and seven days with normal. Neither bile, therefore, is preventive.

In the fourth series, rabic and normal bile, respectively, were injected, in repeated injections, into two pairs of rabbits, by the subcutaneous and intravenous methods, respectively, during the incubation period of a previous inoculation of fixed virus. All the animals died, paralysis supervening in due course. The bile, therefore, produced no effect.

In the last series, six rabbits were used. Three were injected with a mixture of fixed virus and rabic bile, and three with one of virus and normal bile, the bile and virus in either case having remained one hour, two hours, and three hours, respectively, in contact. This experiment confirmed the deductions from the first, in that three animals—two of the first group (rabic bile and virus) and one of the second group (normal bile and virus) survived; in the other three cases, death was accidental and had

nothing to do with the experiment. It is concluded from this that the duration of contact in the mixture has little to do with the result.

The authors' general conclusions are as follows: 1. The bile of a rabid rabbit appears to act similarly to normal bile; it possesses no *specific* anti-rabic properties. 2. The bile of both rabid and normal rabbits manifests an antivirulent action when in contact with the virus. 3. Some minutes' contact are necessary to neutralize the fixed virus. Prolongation of contact does not exert an influence proportioned to its duration. 4. Injections, neither of rabic nor of normal bile, appear to have any preventive action, whether made before or during inoculation with the virus.

Aerophagia.—Translated by George M. Foy, M. D., F. R. C. S. I.; Surgeon to the Drumcondra Hospital, Dublin. The following account of this interesting disease, by M. P. Lyonnet and M. F. Vincens, appears in the *Lyon médical* and was translated by Dr. George Foy for the *Dublin Medical Journal* for April:

Here is a young woman who arrived at the hospital with her physician, saying that she suffered from some stomach trouble. On hearing the history of her case we learn that she has lost her appetite; she finds herself greatly swollen after meals, her head and feet heavy, she was inclined to sleep; during her journey she was much troubled with eructations, occasionally she vomited; she is very restless and nervous, and has lost flesh. She took bicarbonate of sodium, which produced no effect. Hydrochloric acid and antiseptics were equally useless. During the recital of her story she three or four times suffered from a sudden explosive eructation. "This condition lasted all through the journey," said the patient, "which shows that I have flatulent dyspepsia."

Her physician then drew attention to the fact that the patient was silently, but rapidly, swallowing air; that she was a neuropath—which explained her gastric troubles.

We bring under your notice eight cases of aerophagia. Of these, M. Lannois furnishes the history of two, and M. Vauthey supplies us with six such. These will be sufficient to supply us with material to study the symptoms of the disease. These cases are such as we are apt to pass over as unimportant, and they are seldom referred to in treatises on diseases of the stomach.

As the name implies, the disease consists in swallowing atmospheric air. This deglutition may be voluntary or involuntary. The voluntary aerophagia is a physiological curiosity, and was the subject of a paper in 1891 by M. Aubert. This deglutition of air is produced by the same mechanism and in the same way as food is swallowed—the bolus of air is passed into and through the œsophagus as is a bolus of food. Air-swallowing is a very interesting performance, but it is but one part of the question.

"The swallowed air," says M. Aubert, "is got rid of in three ways—by absorption, by eructation, by the bowel." As a rule, the air is expelled by the bowel; in some neurasthenic women it collects in the intestine, seemingly unable to escape, and distends the whole belly as a balloon, and finally is belched forth by the mouth.

The involuntary aerophagia is suffering from a

true pathological condition, which M. Bouveret, in 1891, made the subject of special study. The affection ordinarily proceeds from hysteria. It suddenly follows on some trivial disturbance, and a series of attacks of greater or less severity follow. There are always two well-marked phenomena present, which very quickly follow one on the other. There is first the swallowing of many mouthfuls of air, which is accompanied with a pharyngeal noise. This noise is caused, M. Bouveret says, by "a clonic spasm of the pharynx," and is followed from time to time by a noisy eructation. These eructations are much less frequent than the deglutitions, and each one of them expels a larger amount of air than any one of the deglutitions.

This air-swallowing, when incessant, produces tympany, which causes gastric troubles and at times seriously impedes the function of digestion. Sometimes the disease abruptly commences after some mental trouble, or an injury of the gastric region may begin the attack. Women are more liable to the disease than men. We are, withal, able to recall three cases of the disease as occurring in men. The gastric troubles are, in a few cases, slight, but in chronic cases they increase and become serious. Gastric distention seriously interferes with digestion. The walls of the stomach are weak and contract badly on its contents. The tympanic note, on percussion of the stomach, is considerably extended; sometimes also the distention extends to the intestines, and the characteristic fluid clap is easily obtained. As a rule, the palpation of the belly gives pain and causes a return of the pharyngeal spasms. In one of our patients, a weaver of Croix-Rouse, the mere palpation of the belly brought on a true crisis, which continued for fifteen minutes. Occasionally, as occurred in a female, on making the autopsy the right kidney was found displaced in the epigastrium.

The principal troubles, however, are those of digestion, caused by insufficient muscular action of the stomach to insure chymification, and delaying of the emptying of the stomach. The patient complains of a sensation of weight and of fulness in the epigastric region. The local trouble is supplemented by a heaviness of the head, redness of the face, an unwillingness to walk, and a drowsy sensation. When the eructations are violent the patient usually doubles his efforts to swallow the air. Obstinate constipation, followed by mucomembranous enteritis, usually occurs. The appetite is diminished, vomiting sometimes occurs, and sleep is not infrequently broken. Frequently, indeed constantly in some cases, there are nervous troubles, headache, vertigo, asthenia, neuromyalgia. Occasionally very severe forms are found, in which nutrition has been seriously interfered with; the patients become pale, thin, lose their physical strength, become cachectic, and now and then suffer from neoplasms.

This list of symptoms gives the principal ones of this form of nervous dyspepsia. It resembles that state which M. Bouveret has described under the name of atonic gastro-intestinal neurasthenia. It is reasonable to ask whether the gastric troubles are consecutive to the air-swallowing, or is the air-swallowing concomitant with the other symptoms? This objection was made by Dr. Vauthey, which, we think, is answered by the sequence of the symptoms; in the majority of cases the dyspeptic troubles do

not appear until long after the access of the eructations, and in cases in which the dyspeptic troubles existed prior to the onset of the eructations they were in every case considerably aggravated by them.

The attack of air-swallowing presents well-marked characters—pathognomonic symptoms. It seems as if its diagnosis was imposed as a duty; nevertheless, it is sometimes mistaken.

The majority of the patients we have examined have been treated either for flatulent dyspepsia, gastric atony, or dilatation of the stomach. Of the patients so treated the greater number were thought to be suffering from flatulent dyspepsia, and the pharyngeal spasms were mistaken for the passing of wind from the stomach to the gullet. Both diseases have many symptoms in common, and the presence of flatulence is often present with deglutition of air. When the disease is associated with atony of the stomach the stomach is often the seat of active fermentations, which produce foetid eructations. Some of the patients swallow air so silently as to escape observation unless the movements of deglutition and the ascent and descent of the larynx are closely observed.

The diagnosis may be made by a careful examination of the patient. In flatulent dyspepsia the gas arises from the stomach, from which it is belched out. Sometimes it is foetid, at other times free from odor. There are none of the movements of deglutition so characteristic of air-swallowing, accompanied by little pharyngeal sounds, which quickly follow an eructation of odorless air.

In the case of the aerophagia the access of eructations follows the awakening of the patient in the morning, before any food has been eaten. It is just the contrary in cases of flatulent dyspepsia. We think it is easy, in the presence of digestive troubles, such as those mentioned, to leave them to their true cause. It is sufficient to have attention drawn to the question.

The aerophagia has all the peculiarities of hysteria, all the characteristics of that neurosis. Its course is essentially irregular; its duration is most irregular, and it is impossible to assign any limit to its continuance. The disease is sometimes cured by the most simple of remedies (bread pills, water colored with methyl blue, a mechanical filling of the palate, as in one of M. Bouchard's cases). At other times it is possessed of desperate tenacity. Frequently we have found that a remedy which at one time benefits the patient will at another time produce a relapse. Gastric troubles in these cases carry with them a good prognosis; they are, as a rule, very transient and disappear with the spasmodic deglutition. There are, however, grave cases, in which the patient is so ill as to give rise to the suspicion of cancer. These cases are exceptional, and turn out unfavorably.

For the treatment of the aerophagia and its attendant troubles three indications present themselves:

- (a) Treat the hysteria.
- (b) Produce cessation of the pharyngeal spasms.
- (c) Treat the dyspeptic troubles.

The treatment of the hysteria is the first indication to be fulfilled. The therapeutics of this is too well known to require telling. Change of surroundings and a firm moral attitude toward the patient are necessary. Isolation from all causes of excitement,

and the use of baths. If the patient is anæmic, iron and arsenic may be prescribed, and quinine and the phosphates are sometimes useful.

For the clonic pharyngeal spasms it is well to first try some simple local remedy, such as prolonged gaping, painting the pharynx with cocaine, a small blister to the larynx; lastly, the cravat of Piorry. This method consists in compressing the larynx with a cravat moderately tight, "which, applied to the thyroid cartilage of the larynx and to the vertebral columns stays the deglutition of air."

Anti-spasmodics give the best results. The bromides (bromide of potassium, bromide of camphor) give the best results. Valerian, belladonna, and opium have also given good results. Lastly, suggestion, which in these cases sometimes produces astonishing results.

Treatment of the digestive troubles that are associated with aerophagia is more difficult. It is well in these cases to avoid digestive powders, alkalines, antiseptics, and absorbent powders, and all drugs of this class; occasionally a wet pack is used in this form of dyspepsia, but it does no good. The same may be said of mineral waters, which not infrequently increase the dyspeptic troubles. Lavage of the stomach is even less useful; it is of no value in such cases when the parietes of the stomach are not acting. Salicylic acid and the salicylates may be useful in those cases in which abnormal fermentation occurs in the stomach.

The principal indication is to increase the tonicity and contractility of the muscular coat of the viscus. Of drugs the most useful are nux vomica and strychnine. Ergot of rye is also useful. The action of these drugs is to be supplemented by massage. If the secretion of hydrochloric acid is arrested some dilute acid should be prescribed. Constipation is to be treated by mild laxatives; sometimes the beet of Glénard produces excellent results.

Lastly, the dietetic treatment should be carefully regulated. Nourishing viands of little bulk should be chosen, and the drinking of liquids avoided as much as possible.

Spring Finger.—Noble Smith (*Clinical Journal*, May 1st) says that "spring finger" (*doigt à ressort*; *schnellender Finger*) consists in a partial obstruction to free flexion or extension (or both) of a thumb or finger, occurring at one particular joint, the difficulty being presently overcome, and the flexion or extension completed with a snap. The obstruction generally occurs at a metacarpo-phalangeal articulation, and is sometimes so persistent that the patient is induced to help the completion of flexion or extension by pressing upon the digit with his other hand.

Causes. In the majority of the recorded cases, rheumatism is said to have been present, in others gout. The affection has also been attributed to injury, such as hyper-extension. *Pathological condition.* The fact that the obstruction occurs at one exact point, both in flexion and extension, indicates the existence of a fixed lesion, and contraindicates the presence of a loose or pendulous body in the joint. In many of the recorded cases a nodule has been felt, apparently a thickening of the tendon at one point. Nélaton, Notta, Menzel, and Hyrtl, all held the view that such thickening existed, and

caused the obstruction which met with resistance in passing through the tendinous sheath, and Hyrtl and also Berger thought that this sheath might be narrowed. Carlier records two cases in which a node could be apparently detected by the finger of the surgeon, while upon dissection no thickening of the tendon was found; but "Leisering, of Hamburg, actually exposed a nodosity in the profundus tendon at the level of the point at which it entered the canal of the flexor sublimis, excised it, and cured the disease." In another case a fringe-like tumor was discovered "springing from the synovial covering of the flexor sublimis" (Anderson). An alteration in the shape of the articular surface of the joint has also been suggested as a cause, and this seems to be the case in a similar condition occurring in the mid-phalangeal joint of the great toe in a young lady, a patient of the author's, who was also suffering from contraction of the plantar fascia. I relieved the contracted fascia by subcutaneous section, but does not expect this to do any good to the "spring toe." This condition in the toes has been noted before, especially in association with hammer toe, and is supposed to be due to a transverse ridge upon the surface of the proximal phalanx. Osseous excrescences, the result or not of rheumatoid arthritis, and spasm of muscles, have also been referred to by Carlier as causes. Roser and Lisfranc have suggested that some change in the tendon, involving a roughening or thickening, is the cause of the affection; and Schoenborn states that Bruns, Leisrink, Weisinger, Carlier, and Lick have actually found circumscribed thickening of the tendon.

Reeves thinks that a thickening of the tendinous sheaths may be the cause, and points out that in the case of the thumb, the affection "seems due to a circum-articular inflammation of the tendinous sheaths, and especially at the region of the metacarpo-phalangeal joint. The groove in which the flexor longus pollicis runs is at this spot limited by the sesamoid bones, and bridged over by a firm fibrous structure, converting it into a canal, and it seems, anatomically, highly probable that the slightest thickening of the tendon in its synovial sheath would, at this spot, lead to obstruction in its motions." In the other digits, in which similar firm osteo-fibrous canals are strengthened by the transverse and crucial bands, he suggests that it is probable that the obstruction may be due, either to thickening of the tendons, or to narrowing of the canal alone.

Steinthal found contraction of the lateral ligaments. In Schoenborn's case a strand of connective tissue crossed the tendons of the two flexors, and division of this strand gave relief.

It seems probable, says Noble Smith, that each of these different causes may exist in particular cases, but in the following instance the obstruction seems to have been due alone to constriction of the sheath.

Miss S—, aet. eighteen years, was brought to him on October 4, 1899. She had suffered from spring finger from the previous January. At that time she had been practising with a mandoline for three months, and suddenly, while dressing her hair, the ring finger of her left hand became affected at the metacarpo-phalangeal joint, and had so continued ever since whenever she flexed or extended the finger. Her mother had been troubled with the

same condition in a slight degree for many years, the middle finger of the right hand being affected. The author could feel nothing abnormal in the tendon or its neighborhood. Upon cutting down upon the tendon, no enlargement could be detected at any point, but upon passing a probe beneath the tendon sheath, the passage was found to be very restricted, so that it was with difficulty that the probe could be made to pass. He inserted a blunt hook within the constricted sheath, and stretched it forcibly. The wound healed by first intention, and the affection was perfectly cured. Once only, about three weeks later, was there a slight jerk in flexion, but since then the movement of the digit has remained perfectly normal. In January, 1901, the finger was reported cured except for slight stiffness in the early morning, which goes off after an hour or so.

Cardiac Drugs: The Rationale of their Use.—

Professor Gottlieb, of Heidelberg (*Medical Press and Circular*, July 24th), says that since circulatory disturbances determine an unequal distribution of blood in the organism, the object of cardiac and vasomotor treatment must be to restore the equilibrium thus destroyed.

Paralysis of the blood vessels, due to the insufficient central innervation of the vasomotor centres, causes the blood to flow into the abdominal vessels, while the peripheral vessels and those of the skin and brain are depleted; the pulse is feeble and the heart only receives an inadequate supply of blood during diastole. This variety of circulatory inadequacy occurs in cases of intoxication resulting from the use of narcotics and during attacks of infectious disease. In such cases the exhibition of cardiac drugs generally is without effect, since it is not the strength of the heart that is lacking, but the quantity of blood that it receives is insufficient. But the blood withdrawn from the action of the heart and accumulated in the dilated vessels of the abdomen, can be brought back into the general circulation by the use of drugs acting upon the vasomotor system, through which they give rise to contraction of the vessels in the splanchnic area. To obtain this result, strychnine, camphor, and caffeine are prescribed. Much the same result may be obtained by irritating the skin, or by cold applications.

Cardiac drugs are used to restore the energy of the heart. They increase the systole, and in this manner tend to remedy the defective distribution of the blood in the organism, which is the usual consequence of most complaints of the heart accompanied by a diminution in the energy of this organ, an accumulation of blood in the venous system and anæmia of the arteries being the inevitable result of incomplete systole and of insufficient ventricular diastolic aspiration.

Digitalis acts chiefly by strengthening the energy of the heart; its vasomotor effect is of secondary importance. From experiments made on the heart of a frog, it was long ago observed that the cardiac systole increased and that the energy of the ventricular contraction was strengthened under the influence of digitalis. Recently we have succeeded in making the same experiment on warm-blooded animals in whom the heart is protected from the variable resistance of the general circulation. We are, therefore, no longer compelled to base our con-

clusions on experiments made upon frogs. By isolating the cardio-pulmonary circulation, following the method of François-Franck and of E. Hering and Bock, we are enabled to study the action of digitalis on the heart, independently of its effect on the vessels; we can also make use of a separated heart, in which the functions are maintained by an artificial circulation through the coronary vessels. Gottlieb has been able to afford direct proof by this latter method that an increase in the systole takes place, and by the aid of a special arrangement he has satisfied himself that after a dose of digitoxin the energy of the ventricle is trebled or quadrupled.

The increase in the systole is caused more particularly by a more complete contraction of the cardiac muscle; the ventricle emptying itself with greater facility. This action is the more important in connection with an ailing heart since a failing ventricle becomes less and less capable of getting rid of its contents. Moreover, the slight diminution in the frequency of the pulse, due to the stimulation of the pneumogastric which occurs, in addition to the more strictly cardiac effect, under the influence of digitalis, has a beneficial influence on the cardiac function. The diastolic aspiration of the blood of the veins into the cardiac cavity is also favorably influenced by this slowing of the pulse. Consequently the efficacy of digitalis becomes very evident, in proportion as this slowing effect is manifested. The maximum effect of this treatment corresponds to complete expansion of the ventricles during diastole, plus a maximum contraction during systole. The heart in this way pumps a greater quantity of the blood which is contained in the over-filled veins, and propels it into the bloodless arteries.

All drugs acting in a manner analogous to digitalis have, in addition to the action on the heart, a vaso-constricting effect. But this vasomotor action is accessory, from a therapeutical point of view; the important factor in combatting venous stasis is an improvement in the cardiac function. The vascular contraction may be of some utility in the sense that the blood is thereby driven out of the congested portal system into other parts of the vascular system, for, in the first instance, it is principally on the portal vein that the vascular action of digitalis is produced; but, if this contraction exceeds certain limits, its beneficial effect is transformed into one very inimical to the organism, since, in consequence of the rise of arterial resistance, the work of the heart is needlessly increased.

Camphor not only acts on the heart indirectly through the vasomotors, but also directly increases the irritability of the cardiac muscle. Its action on the normal heart is little marked; on the other hand, Gottlieb has been able to convince himself in the case of the rabbit, that under certain pathological conditions, when the heart ceases to beat, it is possible by the application of camphor to combat this momentary stoppage and to save the rabbit's life.

Caffeine has a direct effect on the heart, but one quite different from that of digitalis, nor can it be considered as a substitute for the latter. As a matter of fact it does not increase the functional energy of the healthy heart in cases where the blood tension is normal, but it strengthens the action of the cardiac muscle in the presence of a pathologically high arterial resistance; it may also be useful in car-

diac complaints accompanied by a high aortic tension.

Alcohol has not a direct influence over the heart; it acts indirectly on this organ by diminishing the peripheral resistance, when in consequence of an exaggerated aortic tension, the left ventricle can no longer completely empty itself. In this case it causes the vessels to dilate and the resistance to diminish, and, as a result thereof, the heart carries on its work under more favorable conditions, and is enabled to furnish a greater amount of work.

The various cardiac drugs, it will be seen, act on the circulation in quite a different manner to those which act on the vasomotor system. In spite of the difficulties that present themselves in the study of so complicated a mechanism, we may hope that by associating clinical observation with experimental pharmacology we may succeed, little by little, in gaining a deeper insight into the nature of the circulatory troubles which present themselves to our notice, and in choosing with more discernment the treatments capable of combatting these troubles and of restoring the equilibrium.

The Identity of Celsus.—Horace, twice in his Epistles, refers to "Celsus." In the third epistle of the first book, addressed to Julius Florus, he asks "*Quid mihi Celsus agit?*" and goes on to give the person referred to some good-natured banter on his literary methods. The eighth epistle of the first book is inscribed to "Celsus Albinovanus," who, as is known from other sources, was equerry to Tiberius Cæsar, and a friend of Ovid, the poet. From this fact, most commentators refer to the first mention of Celsus to the same Celsus Albinovanus, and the supposition, common among medical men, that the genial Roman poet, beloved of cultured men in all ages and countries, referred to our great *confrère* the physician, and that in terms of friendship, has been deemed a common error, and many of us have hitherto felt obliged regretfully to acquiesce in that view. Dr. Eugene F. Cordell, in a scholarly paper, in the *Bulletin of the Johns Hopkins Hospital* for August, on The Medicine and Doctors of Horace, gives a masterly critical review of the facts known concerning these two individuals, to show that, in all probability, they were one and the same. Any knowledge of the great masters of our art in all times is such delightful reading to the cultivated physician, that we cannot forbear from quoting Dr. Cordell's commentary on this subject, *in extenso*. He says:

"The name Celsus occurs twice in the writings of Horace—Epist. I, 3 and Epist. I, 8. The first is addressed to Julius Florus, who has gone to Asia Minor, 20 B. C., A. U. C. 733, as companion of Claudius Tiberius Nero, Augustus' stepson and successor in the imperial chair. Tiberius, who was himself but twenty-two, was accompanied on this occasion (his Armenian expedition) by a number of young Romans of taste and genius—the '*studiosa cohors*,' as Horace calls them—among whom were philosophers, historians, orators, poets, and doubtless a physician or two. 'What works is the studious train pursuing?' asks the poet. Among others, he refers to one named Celsus, and in the following words: 'What is my dear Celsus about? already advised he shall be advised again and again, to collect

treasures of his own, and to let alone writings, which are stored in [the library of] the Palatine Apollo, lest, if it should chance that the flock of birds should hereafter come to claim their feathers, he, like the jackdaw, should be stripped of his stolen colors and become the subject of ridicule.' The reference is to the well-known fable of Æsop. The library here referred to was one which had been founded by the Emperor Augustus in his palace on the Palatine Hill, next to the temple of the god. It was designed for the use and encouragement of literary men and is several times referred to by Horace (Sat. I, 4, 22; Sat. II, 10, 38; Epist. II, 1, 216; Epist. II, 2, 94). Here was collected the literature of the world, all the writings which were judged worthy of 'cedar and immortality.' Hither gathered scholars of every kind to consult the literary treasures, and it is said that the physicians here gave instruction to their pupils. The question naturally arises—may not the great medical writer Celsus have here prepared those compilations of philosophy and medicine, of which the eight books *De Medicina*, written in most elegant Latin, alone survive to this day? May not the young Celsus mentioned by Horace have been the great author himself?

"Epist. I, 8 was addressed to *Celsus Albinovanus*, whom Horace describes as the attendant and secretary of Tiberius Claudius Nero, the general in the Armenian campaign already referred to. The use of medical terms in this epistle is somewhat significant: 'I will hear nothing, learn nothing that may alleviate my sickness; I am displeased with my faithful physicians, I am angry with my friends who are striving earnestly to rouse me from my fatal lethargy.' The whole tenor of these letters shows that the greatest intimacy must have existed between the writer and young Celsus, and that the former entertained for the latter an interest which was both fatherly and disinterested, for the language, as has been remarked by Orelli and others, was not intended in any offensive sense.

"Now we know almost nothing about the medical writer Celsus. The date and place of his birth, residence, and death, are alike unknown. Even his name is in doubt, some maintaining that the first initial 'A' stood for Aulus, others that it meant Aurelius. That he was a member of the Cornelian family, to which so many illustrious men belonged, indicates a patrician rank. It is uncertain whether he was a practising physician, with the probabilities much in favor of the negative; yet his minute and accurate descriptions of diseases, instruments, and operations, his profound and independent judgment and his frequent references to his personal experience, show a practical knowledge of the subject which could only have come from prolonged observation and actual participation.

"What we do know of him is that he compiled a great encyclopædic work on various branches of learning, of which his eight books on medicine alone survive to this day. The extent of this work, and the versatility of its author, are shown by its embracing elaborate treatises on rhetoric, philosophy, military science, agriculture (including a section on veterinary science) and medicine. According to Gurlt, this compilation occupied some fifty or more years of the author's life, the part on rhetoric having been written in the last decennium before Christ

and that on medicine at the beginning of the fifth decennium after Christ under the Emperor Claudius. The treatise on medicine was the first medical work written in the Latin language and the most important one of antiquity after Hippocrates. To it we owe almost all that we know of the previous 400 years, and of the great Alexandrian School of anatomists and surgeons. Our high estimate of it is not invalidated by the fact that it was written for laymen, or by the neglect which it met at the hands of Celsus' contemporaries and successors for many centuries, in fact until the revival of learning in the fifteenth century. Its purity of style and literary excellence render it a worthy companion of the great non-medical classics of the Augustan age and have caused Celsus to be termed the '*Cicero Medicorum*.' That it was not appreciated by the profession of Rome is probably to be attributed to two circumstances: (1) That it was addressed to laymen; (2) that the profession of Rome was made up almost entirely of Greek physicians.

"Is it possible to identify the Celsus of Horace with the Celsus of medicine? It would have been nothing unusual, if the young courtier, who had been honored by Tiberius with the appointment of secretary, were well acquainted with medical science, for it constituted, no less than philosophy, a part of the education of all high-born Romans, who often found in the '*ampla valetudinaria*,' upon their large country estates, abundant opportunities for the practical exercise of such knowledge. Again, to write such a work as that of A. Cornelius Celsus, required access to a very large collection of books, such as he would have found no where in Italy except in Rome. He must therefore have resided in Rome, if not already a resident of the metropolis, in order to carry on his researches, and if this be granted, where would he have found such opportunities for work as in the great collection of Augustus—the public library on the Palatine Hill? Here, then, we find two men of the name of Celsus, simultaneously engaged in transcribing and compiling, not once, but habitually, and evidently for publication. What is the inevitable inference? That they are one and the same person.

"The name, *Albinovanus*, seems at first sight to offer an insurmountable obstacle to this theory. Let us consider, briefly, the nomenclature of Roman proper names. Every free-born Roman of the higher class had three names: I. an individual name, or prænomen, as Aulus, Caius, Marcus, Publius, Quintus, etc. The number of these was limited. They were considered titles of honor and as such were highly prized, as Horace says: '*gaudent prænominē molles auriculæ*' (Sat. II, 5, 32). II. The gens name, or nomen, as Claudius, Cornelius, Julius, Tullius, Virgilius. III. The individual family name, or cognomen, as Crispus, Maro, Naso, Plautus, Seneca. The cognomen was sometimes assumed, *optivum cognomen*,; often it was conferred by the public:

'frequentia Mercuiale
Imposuere mihi cognomen compita,'

(Sat. II, 3, 25) 'the crowded streets gave me the surname Mercurial.' I imagine that such cognomina as canis, pinguis, Asina and Asellus, were rather in the nature of nicknames; they would hard-

ly have been adopted voluntarily by their holders. An additional cognomen was often added to a name to indicate some circumstance of life or character. In later times this was called 'agnomen.' Such were Africanus, Asiaticus, Numantinus, Capitolinus, Torquatus, Germanicus, Justus, Felix, Declamator. Thus are Publius Cornelius Scipio Africanus, Lucius Cornelius Scipio Asiaticus, Publius Aemilianus Scipio Numantinus, Lucius Annaeus Seneca Declamator, Lucius Calpurnius Piso Frugi, Decius Junius Brutus Scaeva and Albinus, Quintus Fabius Maximus Cunctator, Spurius Postumius Albinus Magnus and Regillensis, and many others. Sometimes in the case of very distinguished men there was more than one of these additional cognomina or titles, and it was no unusual thing for names to undergo change in course of time, old titles being dropped and new ones assumed. Among friends, the mode of address was usually by the gens nomen or the cognomen, the prænomen being reserved for formal or polite address, something like Mr., Rev., Dr., Sir. In eight of the epistles of Horace, omitting doubtful ones, his correspondents are addressed by their cognomina; in six the gens name is used and in one both; not once is the prænomen used. The same rule prevails throughout the entire work, the prænomen never being employed. The poet refers to himself most often as Horatius, once only as Flaccus, and once as Quintus. Of Latin authors who mention him, according to Horace Delphini, eight speak of him as Horatius and five as Flaccus. From all this, we may conclude that in '*Celsus Albinovanus*' the poet has omitted part of the name of his friend, quite certainly the prænomen and most probably the gens name also, especially as we never find 'Celsus' used in this sense. 'Celsus,' then being the cognomen or third name, what shall we say of 'Albinovanus.' Its position here, as well as in the names Marcus Tullius Albinovanus, Caius Pedo Albinovanus, and Publius Tullius Albinovanus, also mentioned in the literature, show that it was a cognomen and not a family or gens name, one therefore least important and most liable to change. It may have been an accidental name, by which he was known to his intimate friends or in early life, but dropped later when he achieved reputation and literary renown, the other three containing all that a Roman patrician required.

"I have examined a great many editions, lives, translations, etc., of Horace with reference to this theory, and have found it mentioned but once and then with disapproval. It seems to have been first brought forward and championed by Bianconi, an Italian author, in 1779 (Bianconi, *Lettere sopra A. Cornel. Celso*, Rom, 1779, 8°, deutsch von S. Ch. Krause, Leipzig, 1781). I have not been able to find Bianconi's work in the libraries here and have therefore not been able to avail myself of his arguments. Targa, the author of the best text of Celsus, and Sprengel in his great History of Medicine, both agree with him.

"Finally, a possible explanation of 'Albinovanus' is found in a German translation of the Epistles of Horace, by Carl Passow, Leipzig, 1833. He translates Celsus Albinovanus, '*C. of Albinova*,' thus implying that this term indicated the place of his birth or residence. This would assimilate it still closer to the accidental cognomina, to which I have re-

ferred. I have met with this explanation nowhere else, and I have not been able to find any such place as Albinova in any of the geographical dictionaries, but it appears both plausible and reasonable. The termination 'anus' would correspond with Romanus, Trojanus, Albanus, etc., and the name Albinovanus certainly suggests place, 'albi' or 'albia nova.' There were several towns of the name albi or albia, and there was an Alba Longa, an Albamarla, an Albamala, an Albamana, and many similar combinations. The termination 'anus' indicates a double word since the adjective termination of polysyllables was not 'anus' but 'ensis.'

"It is pleasant, thus, to contemplate Horace as the friend of our Roman Hippocrates, and I feel sure that the works of the genial poet will afford us increased delight from the contemplation of this tie between our profession and him."

Dr. Cordell's whole article is so full of interesting information about Roman medicine, that we commend all physicians interested in the subject to this intellectual feast.

Statutes of the Barbers of Tours Ordained by Charles VI in 1408.—The *Revue médicale de Normandie* for July 25th reproduces the following curious selections, written, of course, in archaic French, from the ordinances of Charles VI:

1. Our chief barber and *valet de chambre* is and shall be the master of the said craft, and all members shall obey him.

2. No barber shall in future hold office as a barber in the said city of Tours who has not been approved of by the said master.

3. No barber shall exercise the said craft if he is of notoriously evil repute as a keeper of brothels and bawdy houses; and, moreover, all his houses shall be seized and confiscated as also his chairs, basins, razors, and other things.

* * * * *

5. They shall not exercise on forbidden days any portion of their said occupation save bleeding and (pigner) under pain of a fine of five sous.

6. No barber shall exercise his occupation on the feasts of Our Lady, of St. Cosmus and St. Damian, or on Sundays and solemn feast days, under penalty of a fine of five sous.

* * * * *

14. All the barbers of Tours who shall bleed persons before dinner shall dispose of the blood of those who have been bled, within an hour after midday, and if any, by the necessity of their sickness shall be bled after midday, they shall dispose of the said blood within two hours after the bleeding, under penalty of a fine of five sous.

Carbon Disulphide Poisoning.—Dr. Mendel (*Arte Medica*, July 14th) exhibited at a recent meeting of the Medical Society of Berlin two operatives from a hard-rubber factory affected with "vulcanization." There was atrophic degeneration of the interossei of the hands and feet and of the thenars and hypothenars and debility of the arms and thighs; sensibility was intact, save for a small analgetic area in the affected parts. The reflexes were normal. The cases were regarded as poliomyelitis. Of the nine operatives of this factory, the greater part was similarly affected.

Original Communications.

THE LANE LECTURES ON THE SOCIAL ASPECTS OF DERMATOLOGY.

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LECTURE II.

Delivered in San Francisco, September 3, 1901.

Local Inoculable Diseases; Animal Parasites; History of the Discovery of the Itch Mite; How Truth is Missed; Scabies; An Historic Case; Napoleon's "Periods"; The Superstition as to "Driving In" of Eruptions; Lice; Pediculosis and Piety; "Morbus Pedicularis"; Progress in Personal Cleanliness; A Danger of the Flesh Brush; Bugs, Fleas, etc.

In spite of the splendid pioneering done during the last hundred years, dermatology still remains a mighty maze, to a great extent without a plan. A considerable part of the primæval forest has, however, been cleared, and our natural course will be to start from the territory which has been won for science, and feel our way along the tracks made by previous explorers, here and there perhaps venturing to strike out a path for ourselves or peering through the mysterious aisles of the vast cathedral of Nature, if haply we may catch in the dim distance a ray from the lamp of the sanctuary of truth. In plain prose, we will proceed from the known to the unknown, and therefore we will consider the affections of the skin that concern us here in the order of the certainty of our knowledge of their ætiology.

Local Inoculable Diseases.—I will therefore begin with the group of diseases which have in common the feature that they are engendered by the inoculation from without of a specific agent, the presence of which in the tissues of the integument gives rise to local lesions, but not to systemic infection. This fact constitutes a vital difference between these local inoculable affections and those caused by the inoculation of a specific agent which is disseminated by the blood throughout the body and thus produces a general constitutional infection. The specific agents are in each case parasitic; and of such parasites, some, such as the itch mite, the pediculus, and others, belong to the animal; others, such as the microspores and trichophytes, to the vegetable kingdom; and yet others—and by far the most important—which, though strictly of a vegetable nature, are most conveniently classed by themselves as bacteria. All the diseases belonging to the local inoculable group are contagious or infective; none of them with a few exceptions is dangerous to

life. Though troublesome, they do not make life a burden to the patient by actual suffering, but on the other hand they cause disfigurement or what in effect amounts to the same thing, disgust and avoidance of contact. In this way they may make life almost intolerable to a sensitive person, for they tend to banish him from the society of his fellows and thereby to deprive him of the pleasures and even of the means of existence.

History of the Discovery of the Itch Mite.—Of diseases caused by animal parasites, the most interesting and one of the most common is scabies. It is interesting in its history, which well illustrates the way in which a truth may be discovered and afterward lost; how it may be known to the vulgar and scoffed at by the learned; and, lastly, how slowly and with what difficulty it may ultimately gain general acceptance. Scabies, as it could hardly fail to be, was known as a special disease to the Greeks and Romans, and the Arabian physicians Haly Abbas and Avicenna describe the characteristic small itching lesions between the fingers. In the twelfth century Avenzoar mentions the parasites which he calls tiny (*pediculi parvunculi*), apparently, however, without recognizing the connection between them and the eruptive disease which must have been familiar to him as it is to us. In the fourteenth century Henri de Mondeville, surgeon to Philippe le Bel and, as we may gather from his great work on surgery, a man of enlightened mind and a keen observer, devotes a chapter to animal parasites (*Des poux, lentes et cirons ou scarabées, morpions, puces et punaises*), in which under the name of *cirons* he describes "very small animals which make excavations and sores (*cavernes et corrosions*) between the skin and the flesh, especially in the hands of persons who do not work." He, too, failed to note the connection between the parasite and the affection which in a separate chapter he describes under the name of scabies as being due remotely to bad diet and especially to sweet, thick, muddy wine and approximately to "salt, bitter, burnt-up humors." Nature, he says, sends those humors to the outer limbs to nourish them, but, as they are not suitable for that purpose, the external parts thrust them back again and drive them to the subcutaneous parts. If they are thick, they remain near the skin and cause scabies; if subtle and dry, they penetrate the thick part of the skin and get between it and the outer layer, which is thin and superficial, and cause pruritus. In each of the two affections the *materies morbi* is salt, pungent, and impure; the difference is that in scabies it is thick, fixed, and abundant, while in pruritus it is subtle, mobile, and scanty.

How Truth is Missed.—I have thought it worth while to quote this opinion of a mediæval writer,

because it is so striking an illustration of the truth of the Hippocratic maxim: "Experience is fallacious and judgment difficult." That a man trained in the learning of the schools and, as every line of his writings shows, one who could see things with his own eyes and think for himself—one of the shrewdest of men, not only full of saws of books but of ripe experience—with a disease of the simplest possible character before him, and its cause, relatively, "gross as a mountain, open, palpable," staring him in the face, could miss the truth which lay under his hand, is surely a proof that the study of disease presents greater inherent difficulties than any other province of research. The doctor, if not, like Falstaff, witty in himself, is, more than the members of any other craft or mystery, the cause that wit is in other men. The brain of this foolish-compounded clay, man, is always inventing something that tends to laughter about the ignorance of the physician and the futility of his art. When some one asked Northcote, the painter, what he mixed his colors with, he replied "with brains." Surely we may say with as much truth that we mix our pills and potions with brains. Some of the greatest intellects given to men have spent themselves on the elucidation of the problems of disease; yet I think it must be admitted that the practical result has not been commensurate with the amount of brain power expended in the same degree as has been the case in other branches of knowledge. The explanation is that art is long—and difficult beyond others, while life is short; and much of what a man gathers before the night comes, when he can no longer work, dies with him. This happens constantly now in these days of light, with all our apparatus of books and journals and illustrations, societies, and congresses; what wonder is it, then, that when none of these helps were available medicine should have come virtually to a standstill?

Returning to scabies, we find Rabelais, who was a doctor of medicine of the famous old University of Montpellier, speaking of a *ciron*, or *acarus*, between two fingers; it is clear that he knew the disease and its relation to the parasite. The *Sarcoptes scabiei* was also in the seventeenth century distinctly indicated as being the cause of itch by Bonomo and Cestoni. It was afterward rediscovered more than once, but the doctrine of the parasitic origin of scabies, though it has been a part of folk lore in Corsica and probably elsewhere for ages, was not generally accepted by the medical profession till the middle of the nineteenth century. As late as 1857 we find a French dermatologist of the first rank vehemently asserting that the *acarus* was a morbid product of the itch as the louse was a morbid product of pediculous prurigo! If this happens in the case of a disease whose characters are written so

plain that he who runs may read, what can be expected when the only visible expression of a disordered state is in hieroglyphs which we can decipher only by conjecture?

Scabies as an Illustration of Medical Progress.—Scabies is also interesting in itself as being the best example we have of a medical problem successfully worked out from the recognition of its cause to the discovery of the means of curing it with certainty and dispatch. Scabies, as Dr. Pye-Smith has said, "illustrates the whole progress of scientific medicine—the ancient method which still survives of inventing explanations instead of investigating circumstances, the fallacy of ascribing results to dyscrasie of which the existence has never been proved, the survival of dictrines in pathology which have long been exploded in physiology, the value of apparently useless knowledge, the bearing of pure sciences like zoology upon practical therapeutics, the nature of inflammation and the relations between an irritant and an irritable tissue, the radiation of sensations, the pathology of pruritus, and the importance of a patient's nails in the production of cutaneous lesions. Finally, scabies is the typical example of a disease which is now as fully known as we can perhaps know any disease, for we know its pathology and cause, we can explain its symptoms, we can diagnose it with certainty, and, although the hypothetical *vis medicatrix naturæ* is utterly powerless, we can cure it by definite and rational means, quickly, safely and completely."

Dr. Pye-Smith has omitted that which is perhaps the most important fact in the pathology of the skin illustrated by scabies; that is, the part played by micro-organisms in the production of secondary lesions. The scratches inflicted by the patient's nails make breaches through which pus cocci enter, and under the influence of these additional agents of mischief the skin responds to the irritation through its whole gamut, if I may so speak, of lesions, from simple vesicles through pustules and bullæ to scabs and open sores. The secondary eruption, as you know, resembles eczema in the general character of the lesions, but these are not grouped, but scattered about in most admired disorder and mingled with the marks of scratching and with the burrows which are the distinctive feature of the primary disease. In some cases, indeed, the lesions of scabies may be completely overshadowed by those caused by the supervening coccal eruption, as in a palimpsest the original manuscript is hidden by that written over it by a later hand.

Nor is our knowledge of the disease quite so full and, as De Quincey would say, "orbicular" as Dr. Pye-Smith appears to believe. There are still one or two points which one would be glad to have explained. In cases where only two or three acari are

to be found, there may be an amount of sympathetic irritation in distant parts out of all proportion to the visible cause. I once made an experimental inoculation on one of my arms, and, though the irritation at the seat of operation was but trifling, after a time intense itching came on at the back of the shoulder. Sometimes an eruption appears about the site of the sympathetic itching. These effects are doubtless reflex in character, but they seem to suggest that the acarus in burrowing her way under the skin may sometimes deposit therein some irritant substance.

Scabies is a trifling affection nowadays, when it can generally be radically cured in a day or two. But it is worth noting that in former times it appears occasionally to have amounted to what might almost be called a scourge. It may be a calumny invented by the "Southron" that the inhabitants of Glasgow were in the eighteenth century moved to ask the blessing of God on the Duke of Argyll, who had set up in the middle of their historic city a monument against which the itch-ridden natives could conveniently rub themselves. But it is certain that scabies was once almost a national complaint in Scotland, and Sydney Smith's description of the Scot fleeing from religious persecution with a Bible in one hand while with the other he allayed cutaneous irritation is only a picturesque expression of a fact.

An Historic Case.—I have already mentioned that the great Napoleon was the victim of itch. He seems to have got the disease at the siege of Toulon in 1793, from serving a gun immediately after a soldier suffering from scabies, who was killed. It is related that when he went to take command of the army of Italy, in 1796, he found the men in rags, half-starved, and infested with itch. A fellow-feeling seems to have made him kind beyond his wont, and we find him repeatedly expressing solicitude on this subject. On June 14, 1797, he sent instructions to General Berthier to order all generals of divisions to see that the men with scabies were properly treated and to establish hospitals for their treatment in every district. So notorious throughout the army was the fact that the conqueror had fallen a prey to the acarus that the soldiers jestingly attributed their contagion to him. They made epigrams on the subject, one of which I may be permitted to quote here:

Le petit caporal s'est occupé de moi,
En générosité nul autre ne l'égale;
Il m'a serré la main, m'a promis un emploi.
Sur-le-champ, j'attrapai la gale!

I am indebted for the facts above stated to a series of interesting papers on the health of Napoleon by M. Georges Barral, which appeared in the *Chronique médicale* in the course of 1900. There

are several versions of the epigram quoted in the text. The following is, in my opinion, the best of them; from the use of the title "Emperor" it must be of much later date than the other:

Par une faveur sans égale
L'Empereur me gardant la main,
Dit "De moi vous aurez quelque chose demain"
Et le lendemain j'eus la gale!

Napoleon's "Periods."—In the *Memoirs* of Dr. Antommarchi there is the following strange story relative to the Emperor's itch. Under date of October 31, 1819, the physician writes: "The Emperor was agitated, restless. I advised him to make use of certain sedatives which I indicated. 'Thanks, doctor, I have something better than your drugs. The moment draws near; I feel that Nature is coming to the rescue.' At the same time he let himself slide down upon a couch, seized his left thigh and tore it with a kind of voluptuous pleasure. The cicatrices were opened, the blood gushed forth. 'I am relieved; I told you I have my crises, my periods. As soon as they come on, I am all right.' The kind of lymph (*sic*), which at first flowed abundantly, soon ceased; the wound closed and healed of itself. 'You see,' said Napoleon, 'Nature takes it all on herself; as soon as there is engorgement, she depletes and equilibrium is restored.'"

"This singular phenomenon," continues the worthy doctor, "excited my curiosity; I investigated all the circumstances and I learned that it was periodic, regular, and that it dated from the siege of Toulon. The Emperor, who was then only a major in the artillery, was directing the fire of a battery. A gunner fell at his side. He seized the rammer, loaded, fired, sweated, and inhaled (*aspira*) the scabies with which the dead man was covered. He underwent some treatment; but the impatience of youth, the bustle of the service, and a bayonet wound above the knee, soon made him discontinue it. The eruption disappeared, the humor escaped through the wound. This neglect came near proving fatal to him. The virus developed during the campaign of Egypt and Italy. The chest became painful, cough was continual, breathing labored. The First Consul was thin, pale, and seemed to be approaching the end of his mortal career."

Desgenettes was called in, but was so prosy and prescribed so many remedies that he was dismissed. Corvisart, who was next sent for, bluntly declared that there was nothing the matter and that the whole trouble was due to the "striking in" of the eruption. He "drew it out" again with blisters and then treated the scabies with frictions of a mixture of powdered Cevadilla,¹ olive oil, and alcohol. The treat-

¹The dried ripe seeds of the *Schænocaulon officinale*, from which the alkaloid veratrine is prepared. Cevadilla used to be employed for the destruction of vermin.

ment was successful, and Napoleon had no other serious illness till he was at St. Helena.

Napoleon went on to say that, although he recovered his health and energy, "the irritation and itching went on as before." He tore his skin with his nails and thus gave periodical issue to the "humor." When it ceased to flow the scratches healed, and the general health was excellent.

The "Driving In" of Eruptions.—This curious clinical history is interesting in several ways. In the first place, it illustrates the belief which used to be universally held that a skin eruption "driven in" may set up serious disturbance in the internal organs. Even at the present day it is not completely exploded. For instance, Dr. Brocq, of Paris, one of the first of living dermatologists and a man of ripe experience and great judgment, holds that the too energetic treatment of eczema in elderly people or in persons who are the subjects of gout, rheumatism, asthma, and other chronic diseases may "determine the onset of congestion of the lung or brain of the most serious kind." Another French dermatologist, M. Gaucher, regards an eczematous eruption as a kind of natural "issue" for the elimination of toxic principles which, if allowed to accumulate in the internal organs, cause grievous harm to the economy. So high is my opinion of Dr. Brocq that it is with great diffidence I venture to differ with him. From what I have seen, however, in the course of more than twenty years of dermatological practice, the conviction has been forced on me that the danger of "driving in" eruptions of the skin is a mere bogey—one of the ghosts of the humoral doctrine which held men's minds in thrall till Virchow laid the foundation of scientific pathology in the cell. I think I may take it that, whatever may have been the cause of Napoleon's chest complaint, it certainly was not a migration of the itch mite from the surface to the bronchial tubes.

Cutaneous Nerve Storms and Wars of Aggression.—The most interesting point to me in Antommarchi's narrative is that which to many of you will have doubtless have appeared the most fantastic. The cutaneous nerve storms which made Napoleon tear his skin until a kind of orgasm was produced which found its satisfaction in the escape of blood or serum I look upon as an example of a condition as to which I shall have something to say in a subsequent lecture. The nervous irritability may possibly have been a legacy left by the long persistent itch. Napoleon was evidently neurotic. In saying this I do not mean to express my adhesion to the old theory, which has been polished up to look like new by Lombroso, that genius is, in its very nature, a neurosis. But men of genius are at least as liable to neuroses as men of commoner clay, and Napoleon, even if the story of his epileptic attacks be re-

jected, had the characters of the nervous temperament writ large upon him. Hence an affection of the skin which to an ordinary person would have been only a discomfort was to him a veritable thorn in the flesh. For many years he suffered from hæmorrhoids which caused intense irritation; it is related that at a critical stage of the battle of Waterloo he had to retire in order to apply a cooling and soothing lotion he was in the habit of using. The anal irritation, together with the intense itching in the thigh that has been described, doubtless tended to produce a condition of erethism which must have found vent not only in self-laceration, but often in impulsive acts of overbearing violence and apparently wanton destructiveness. In a private person the same cause would have led to bad language and perhaps smashing of furniture; in a despot with a vast army at his beck it may be conjectured that it led to wars of aggression and much useless bloodshed.

It is an interesting coincidence that Catherine de Medicis was also a sufferer from "gales," which may mean scabies, but more probably chronic eczema with periodical acute exacerbations.

Lice.—Of other animal parasites infesting the human skin, the most common is that which, according to Evans, in *The Merry Wives of Windsor*, is a familiar beast to man. The remark that "louses do become an old coat well" would appear to show that Shakespeare knew that one variety of this loathsome parasite haunted the clothes rather than the body they covered. In the case of pediculosis, too, there are one or two small problems not yet definitively solved. The irritation caused by the bites of swarming pediculi sometimes causes pyrexia; in a case recorded by my friend, Dr. Allan Jamieson, of Edinburgh, the temperature rose on two occasions above 106° F. Dr. Jamieson thinks the pyrexia is due to reflex disturbance, but I am rather inclined to agree to the opinion of Dr. Frank Payne that some mildly toxic substance is injected into the blood by the insect as it feeds. It would also be interesting to know what guides the pediculus in selecting its pasture ground. That there is some principle of selection is proved by common experience, which shows that individuals differ considerably in their liability to become the prey of the vermin. Crocker relates an interesting experiment on the subject. Half a dozen students stood around a table on the middle of which was placed a hungry pediculus; in whatever direction the insect was headed, it always promptly made for one of the students. There was no appreciable difference between the young men in point of cleanliness of person or clothing, but the parasite evidently knew where it would find the happiest hunting grounds.

In connection with this matter it may be stated

that, at least in England, even the highest social position must not by any means be taken as in itself negating the supposition of pediculi. The possibility of their presence must always be borne in mind, whether the patient be a pauper or a prince. Of course, dirt is their natural element, and on a cleanly person they do not increase and multiply with the astonishing rapidity they do on more congenial soil. But let a man's vital power fall to a low ebb, and if but one or two find a footing on him, soon countless hungry generations will tread him down. Or let the dandy to whom cleanliness is more than godliness be but a short time amid the alarms and excursions of war, when the toilet has to be reduced to its simplest expression and a clean shirt is an unattainable luxury, and even if food runs short, he will soon be like Polonius "at supper, not where he eats, but where he is eaten." This is one of the inevitable hardships of war, and our army in South Africa has had its full share thereof. I have read somewhere that in the War of the Revolution both the Americans and the British suffered severely from a plague of lice.

Pediculi may invade schools and cause some interference with the education of children. Some years ago there was an epidemic of this kind in the public schools of Boston.² The affected children were excluded from school, and there was a good deal of trouble with parents in consequence. Some instructive incidents are related by Dr. Greene in connection with this matter. In several cases children were sent back to school on the strength of a certificate signed by a medical practitioner that no lice or nits were present. One determined mother, to make her case more sure, sent her child to school armed with certificates from four physicians, some of whom were connected with the best hospitals and dispensaries in Boston. On examination by Dr. Greene, however, she was found still to have nits. The moral of this is that doctors should not give certificates of freedom from parasites without making a careful inspection.

Pediculosis and Piety.—Robert Burns describes the louse as

Detested, shunn'd by saunt an' sinner.

But there is something of poetic license in this. There is a variety of the pediculus which finds its elective affinity in sinners of a certain kind; and not a few saints, so far from shunning the parasite, have by way of mortification offered their bodies as a prey to it. The hair shirt worn by St. Thomas of Canterbury, who in his youth had been the most elegant of courtiers, was found after his death swarm-

ing with vermin. St. Benedict Joseph Labre, who lived in the eighteenth century and was canonized in 1860, made of his whole person a strict preserve of parasites. His love of God's creatures made him shrink from shedding their blood; so careful, indeed, was he of their well-being that, if perchance he found any straying in barren places, he would tenderly carry them to the rich pastures of his skin. In these days we hear much of the rights of animals and of the duty of loving kindness to them. No man ever acted more in the spirit of modern phylzoic teaching than the man who counted his own comfort—and that of his neighbors—as nothing compared with that of the most despised of animals. If the Antivivisectionists want a patron saint, they could not find one more appropriate from their own point of view than Benedict Joseph Labre.

"Morbus Pedicularis."—That holy man was probably the nearest approach to an actual example of the so-called "morbus pedicularis" ever seen. There are legends accepted by serious historians of persons of note having died not eaten of worms as Herod was, but eaten of lice. Gibbon says of the Emperor Galerius, father-in-law of Constantine, that "his death was caused by a very painful and lingering disorder. His body, swelled by an intemperate course of life to an unwieldly corpulence, was covered with ulcers and devoured by immense swarms of those insects who have given their name to this most loathsome disease." It is clear, however, that the surgeons who had charge of Galerius knew nothing of antiseptics, and allowed maggots to breed in their patients' sores. Philip the Second of Spain and other historical personages are said to have died of the "morbus pedicularis." All such statements, together with the stories that may be collected by the curious from medical journals even of the first half of the nineteenth century as to pediculi breeding under the skin may be dismissed as fables.

Progress in Personal Cleanliness.—Here perhaps I may be allowed a slight digression as to the change of ideas which has taken place even within the last hundred years on the subject of personal cleanliness. We know that in England even persons of quality went unwashed to a degree almost inconceivable to us. Lady Mary Wortley Montagu was a beauty as well as a wit, and had lived in the East, where the bath is a religious institution. Yet it is told by her that, on some one venturing to hint that her hands were not quite up to the not very high standard of cleanliness required by society in those days, she exclaimed: "Do you call that dirty? What would you say if you saw my feet?" Johnson declared that he had no passion for clean linen, and his friend Topham Beauclerk, the glass of fashion and the mould of form, is described in his later days as having

²Dr. E. M. Greene, Boston. *Medical and Surgical Journal*, January, 20, 1898.

"grown lousy" by a friend who mentions the fact without any apparent disgust. In an interesting article on London life in 1800, published in the *British Medical Journal* of December 29, 1900, Dr. George Fielding Blandford says: "Probably at this date there was not such a thing as a bath-room in the whole of London, and, as a witness remarked before the Health Commission toward the middle of the nineteenth century, the only two occasions on which one of the laboring classes was washed all over were after he was born and after he had died. Appliances for washing did not go beyond the foot-bath, and folks used but little water, for the good reason that they had not much to use." Walker, the author of *The Original*, a well-known book published in the early part of the nineteenth century, declared that a healthy skin needed no artificial cleansing, as it could perform the operation perfectly for itself.

A Danger of the Flesh Brush.—At the present day it is possible that we carry the cult of the tub a little too far. There is no doubt that overscrubbing, especially with rough flesh brushes, in people with sensitive skins produces an irritable condition, and may even strip off the protective coating of the horny layer, leaving the denuded surface open to the invasion of microbes. It has been abundantly shown that a varied flora of the latter kind flourishes constantly even on the cleanest skins. But I do not recommend the maxim attributed to a German professor that "dirt is a natural protection to the skin" as a precept of cutaneous hygiene.

Bugs, Fleas, etc.—I must dismiss very briefly the other animal parasites which seek for a livelihood on the human skin. The common bed-bug lies under some suspicion of being a conveyer of tuberculosis to man; a few cases in which the evidence seems to point that way have been published by Dr. Jonathan Hutchinson and by a French observer (?). The flea lies under a somewhat similar suspicion in regard to the transmission of plague, but the problem has not yet been completely worked out whether the flea gets the infection from the rat and conveys it to man, or whether it gives the infection to the rat, which in turn passes it on to man by poisoning his food with its tainted carcass or in some other way. The mosquito has recently risen to such importance as a vehicle for the dissemination of malaria, yellow fever, and perhaps other diseases that it must be looked upon as having escaped from the narrow sphere of dermatology into the ampler one of general medicine.

Of animal parasites which attack the skin in tropical countries something will be said later.

THE CLINICAL DIAGNOSIS OF CARCINOMA OF THE ŒSOPHAGUS, AND THE TECHNICS OF GASTROSTOMY*

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(Concluded from page 497.)

To these two vascular lesions I may add two more which are very much less frequent. In the first place, we have an extension of the process to the pericardium and the heart, which gives rise to dyspnoea, palpitation, friction sounds, and a souffle during the first and second impulse of the heart beat; in a word, all the ordinary signs of pericarditis and endocarditis.

It is easy to explain the formation of these heart lesions. The carcinomatous granulations extend to the pericardium and render its surface rough, first giving rise to a dry pericarditis, and then to one with exudation. After this, carcinomatous nodules arise in the cardiac muscle, and thence follow degeneration of the valves and an obliteration of their orifices, due perhaps to a carcinomatous vegetation. These cardiac lesions have not been the cause of death in many cases, but there is no question that this complication will kill the patient if he should survive long enough.

There has been a case reported of carcinoma of the œsophagus where the patient died from pneumonia and where at the autopsy a recent pericarditis coinciding with a chronic inflammation of the aorta was found, these lesions being attributed by the author recording this case to a neuritis of the cardiac plexus; but I should be more inclined to give this case the same explanation as those where there is pneumonia due to an involvement of the pneumogastric nerve, and put it down like the others as one of infection.

I could mention a large number of other types of carcinoma of the œsophagus, but they are too exceptional to be considered as types of special forms. Such, for example, is a dilated and ulcerated artery of the œsophagus putting the aorta in communication with the gullet. The same may be said of cases where the thyroid gland or the vertebral column has become involved in the process, as well as of those cases of transverse myelitis and metastatic abscesses following carcinoma of the œsophagus, which are simply instances of infection and pyæmia.

It is not my intention to consider in this paper all the means of diagnosis of carcinoma of the œsophagus, and in what I have already said I think I have sufficiently delineated the subjective phenomena, so that I only desire to speak of those means by which the clinician will be able to demonstrate the presence

and the site of the neoplasm, as well as the degree of stricture and the presence or absence of the various complications.

A few words are here necessary relating to two symptoms of carcinoma of the œsophagus to which I have not as yet referred, namely, laryngotracheal pulsations, first described by Castellino, and unequal pupils, observed by Hitzig. The Italian physician reported two cases of carcinoma seated at the upper extremity of the œsophagus giving rise to a laryngotracheal pulsation which was not changed by deep inspiration. This pulsation was explained by the fact that the neoplasm pushed the trachea forward and lay directly over the aorta. This symptom, when it is present, is evidently a most important diagnostic sign, and would lead the surgeon to immediately conclude that there was a neoplasm situated between the trachea and the aorta. An aneurysm of the aorta will give rise to the same pulsation, but besides this a more or less pronounced soufflé will be found by auscultation. It must be added, however, that these pulsations have only occurred in a very limited number of cases of carcinoma of the œsophagus, because the anatomical conditions necessary for this diagnostic sign rarely occur.

The cases described by Hitzig are hardly more numerous, and the symptom that he describes, namely, unequal pupils, is met with in seventeen per cent. of cases of mediastinal growths, and in carcinoma of the œsophagus particularly, where he observed it four times out of nine cases. This phenomenon has been attributed to a change taking place either in the trunk of the great sympathetic or in the first dorsal branch, as both contain oculopupillary fibres.

The clinical value of this symptom is small, because it may be met with in many other diseases besides neoplasms of the œsophagus, but it would be well to ascertain if it exists, although its absence or presence could only give us very indefinite conclusions as to the nature of the lesion.

We now come to two means of investigation which are of ancient date, and, although they cannot give us any clue as to the nature of the lesion, they nevertheless indicate the presence of a stricture and its site. I wish here to speak of auscultation and catheterism of the œsophagus.

Dupuytren employed both auscultation and catheterism of the œsophagus in the research for foreign bodies lodged in the tube. Hamburger employed auscultation for the diagnosis of stricture of the œsophagus. He was able to define various changes in the sound heard on auscultation, depending upon a swelling of the mucous membrane of the canal, a contracted portion of its lumen, or a stricture. In the latter instance a regurgitation can be heard, but these sounds are always very vague, and much time

is required to train the ear sufficiently to be able to distinguish them. It would appear to me that Hamburger has exaggerated the importance of this diagnostic method, which is rather more a method of control than a real means of diagnosis.

Catheterism gives more certain and more precise results. But the instrument should always be used with great precaution, and if a stricture is found, the end of the instrument will always be arrested at the point of the stricture. By using smaller-sized olives, the stricture may be passed through, and thus its diameter may be approximately ascertained. To measure the distance of the stricture from the mouth, the length of the part of the whalebone introduced should be measured from the teeth to the olive, and thus the site of the stricture will be given. Fifteen centimetres are usually allotted as the distance from the dental arch to the beginning of the œsophagus.

Catheterism has still a better use; it allows one to make a diagnosis between a spasm and stricture of the œsophagus. A spasm of the canal will usually give way to a prolonged pressure, as I have been able to demonstrate in several cases of this affection. When the sound reaches the point where a spasmodic stricture exists, a slight amount of force kept up for about two minutes will usually overcome the obstruction, and if after this time the resistance to the passage to the bougie still continues, we are dealing with an organic stricture.

The question will then arise as to whether the stricture is caused by a cicatrix or by a neoplasm, and to ascertain this we may advantageously resort to œsophagoscopy. For the details of the technics I would refer to the writings of Kirstein, Rosenheim, von Hacker, Ebstein, Mickulicz, Stoerk, and others.

Œsophagoscopy allows one to inspect the mucous membrane of the canal, and in carcinoma the different periods of the affection may be studied. At the beginning the mucous membrane is swollen and the lumen of the canal at the point of obstruction forms an irregular opening; the movements caused by respiration are absent in the infiltrated part. Later the growth often takes on the shape of a rounded mass projecting into the lumen of the œsophagus; it is covered by a smooth mucous membrane which is of a pale yellow or bluish hue, and usually a characteristic ulcerative process may be found.

From the description of the exploration given by this instrument it would seem that the diagnosis is as distinct and precise as possible, but, nevertheless, we are far from the ideal, because the instrument is very difficult to handle and exposes the patient to the unfortunate occurrence of false passages, which it can produce, when unadroitly handled, more easily than the bougie, and, still more, its use is con-

tra indicated in many cases, especially when the mucous membrane is inflamed or when the lesion has progressed too far and there is ulceration or a threatened perforation. Its use, however, should be resorted to whenever possible, and will give excellent results.

The use of the Röntgen ray has the same indication and about the same success in the diagnosis of carcinoma of the œsophagus as it has in other forms of neoplasm. Direct radiographic examination will certainly be of use in the diagnosis of neoplasms arising in the mediastinum, and in particular those of the œsophagus, but as yet few cases have been recorded.

Very often gastrostomy is an emergency operation; the patients have been living on a liquid diet for some time and consequently are reduced in strength. In these cases we are consequently dealing with subjects who have arrived at the last degree of cachexia. They readily succumb during the operation or shortly afterward if the operative shock is at all severe, and for this reason it is well to order a subcutaneous injection of artificial serum the night before and on the morning of the operation, as well as several nutritive enemata.

Ether should be employed as sparingly as possible for the narcosis, and if the patient is too feeble, it is better to resort to local anæsthesia with cocaine or eucaïne.

The instruments required are few in number; a knife, a pair of scissors, a few artery clips, a stout curved Reverdin needle, and suture material are all that are necessary. The operation of gastrostomy is performed in three steps. The first is the incision of the abdominal wall, the second is the search for the stomach and its fixation to the abdominal wound, while the third is the incision into the stomach.

The incision of the abdominal wall should be vertical and situated in the left lateral part of the epigastric region. It should be about five or six centimetres long, and its lower end should reach the same horizontal line that will pass through the anterior extremity of the cartilage of the ninth rib. This anatomical landmark is easy to find on account of the small cartilaginous bridge which unites the ninth and tenth costal cartilages, and which gives the mobility to both these cartilages. The lower end of the incision is situated at about an equal distance from the median line and the anterior extremity of the cartilage of the ninth rib. The upper end of the incision is much nearer this cartilage, on account of the oblique direction of the border of the ribs, and is about two centimetres and a half distant from it and six or seven centimetres from the xiphoid appendix. If the liver is enlarged, a condition which may be easily demonstrated by palpa-

tion and percussion, the incision may be made slightly lower down.

The skin, cellular tissue, and upper layer of the sheath of the rectus are rapidly incised, and then the fibres of the muscle are split apart and the posterior layer of the sheath, lined by a few muscular fibres coming from the transverse muscle, is brought into view. It should then be carefully incised, and the peritonæum is caught up with rat-tooth forceps and incised the full length of the wound. Before opening the peritonæum, a perfect hæmostasis should be obtained, and as a general rule the vascular supply is not very abundant, only a few small vessels needing attention.

After the peritonæum has been opened, the lower edge of the liver will be seen, and below this the grayish-white surface of the stomach. The stomach will usually be found as here described in those cases where the organ has retained its normal size, or nearly so, but it should be borne in mind that in many cases the stomach is considerably diminished in size in patients who have had long-standing stenosis of the œsophagus or of the cardia. Under these circumstances the organ takes a cylindrical shape, and is so greatly reduced in size that it shrinks up and disappears under the lower border of the liver, so that when the peritonæum is opened it cannot be seen, and the omentum and often the transverse colon occupy its place in the abdomen. The transverse colon is easily recognized, and by pushing it down two fingers may be introduced into the wound to find the stomach, which is under the left lobe of the liver; the organ is easily recognized by the touch, on account of its smooth surface and firm consistence. The organ should then be seized with the fingers and drawn up into the wound, when its identity can be demonstrated by the vascular arborizations which come from its borders.

An attempt should then be made to bring that part of the anterior aspect of the stomach which is nearest to the cardia up into the wound, but in doing this the organ should be manipulated carefully, so as to avoid lacerating the tunics of its wall. The stomach will then form a kind of cone projecting into the centre of the abdominal wound, and then with a Reverdin's needle a medium-sized silk should be passed through the serous and muscular layers of the organ. This is simply inserted so as to suspend the organ, and should be confided to the care of an assistant who should draw it up and hold the stomachal cone in the wound. The height of this cone should about equal the thickness of the abdominal wall, and its apex should be on a level with the surface of the skin.

The next thing to do is to suture the portion of the stomach that is drawn into the wound to the abdominal wall. In most of the procedures the

stomach is united to the borders of the wound by interrupted sutures, two layers often being employed. The first layer of sutures unites the visceral and parietal peritonæum, while the second, which is concentric with the first, unites the stomach, peritonæum, and abdominal wall together.

The manner of suturing the stomach to the abdominal wall as devised by Routier, of Paris, is much more simple, and I have employed it with much satisfaction on several occasions. In the other methods some twenty sutures are passed; the method that I am about to describe requires only four. Routier employs silkworm gut for his sutures, but personally I have found celluloid thread more satisfactory. The four sutures are successfully inserted in such a manner as to surround the

untied until they are all inserted, each one being caught by a pair of artery clips.

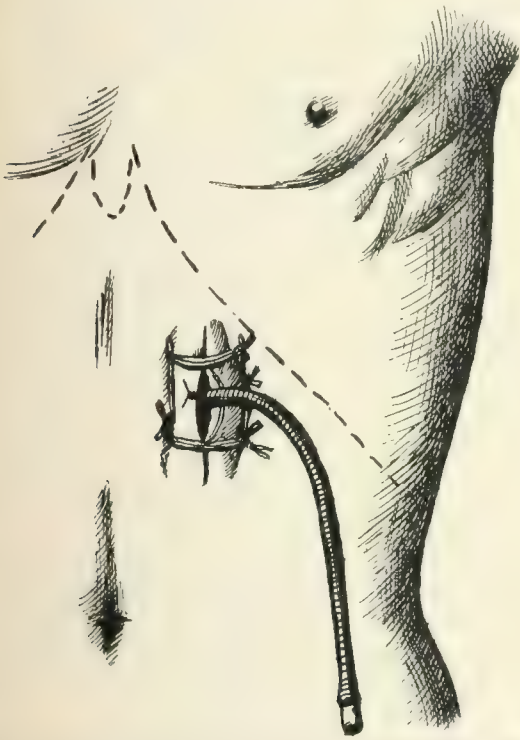
Two sutures, one above and one below, are inserted perpendicularly to the incision, and serve to unite the ends of the latter, from which they are distant about a centimetre and a half. Two of the sutures are then placed on each side and parallel to the incision, being about a centimetre from the border of the wound. These last two sutures are simple, while the first two, which bring the borders of the wound into apposition, would be stronger, and for this reason I use a No. 1 celluloid thread for the former and a No. 2 thread for the latter.

It makes very little difference in what order these sutures are passed, but it seems to me quicker work to insert the lower transverse one first and then go round the wound. Nothing remains now but to tie the four sutures, when the stomach will be found solidly held in place, and the wound is closed above and below, thus being reduced to a size just sufficient for the formation of a fistula. The four sutures form a rectangle on the skin, as seen in the accompanying figure.

A point to be remembered is that the sutures are not passed in the same needle holes, but should be in close proximity. When the operation is finished, the apex of the stomachal cone projects slightly in the centre of the most resistant part of the abdominal wound.

The third step in the operation which I have now to consider is the one which oftentimes gives rise to some little difficulty. The difficulty occurs from the fact that the gastric mucosa is very movable over the other structures of the stomach wall, and it may happen that in opening the stomach the mucosa of the organ slips away, and attention must be paid to this point. It may also happen that the mucous membrane is incised at once with the rest, but the orifice made into it is not easy to find. On the other hand, great care should be taken to make an opening as small as possible, of a calibre just sufficient to allow of the introduction of a catheter. No matter how small the opening into the mucosa may be, so long as it is large enough to allow of the passage of the catheter, the instrument will easily dilate it and can afterward be introduced without difficulty. If the opening is too large, the liquid from the stomach will escape through it, and this incontinence of the fistula must be avoided at any cost.

To properly open the stomach, the assistant should pull upon the silk suture which has been passed through the walls of the organ, so as to draw them upward, and then the surgeon, seizing this portion, makes a fold and makes an opening in this fold with a pair of scissors. The serous and muscular layers are more freely divided than the mucous membrane, which should only be nicked, and this is



The gastrostomy, by Routier's method, completed, showing the manner of placing the sutures. (Morin.)

stomachal cone; each one is passed as follows: A curved Reverdin's needle is passed through the entire thickness of the abdominal wall from without inward, is made to transfix the serous and muscular layers of the stomach to the extent of about a centimetre and a half, and is then made to again traverse the abdominal wall, but this time from below upward, and is brought out on the cutaneous surface. The eye of the needle is then opened and another suture is placed in the instrument and it is withdrawn rapidly.

There is one point on which I would insist, and that is that the needle used should be a strong one, because a large amount of tissue is put upon it. Another point is that each suture should be left

easily done if, while cutting, the fold is kept tense. The stomach can be opened with the knife, in which case the blade should be made to enter the wall of the stomach perpendicularly, while the assistant keeps the tissues well on the stretch. After the opening has been made, a good-sized rubber catheter, about a No. 16 or 20 French, is inserted. It is usually easily introduced, but care must be taken when inserting the beak of the catheter that it passes the mucous membrane of the stomach easily, because otherwise it might get caught on the mucous membrane and peel it off from the muscular layer. The catheter should be pushed toward the lower part of the stomach to about the extent of six or seven centimetres, and then be fastened to the abdominal wall by a suture. It is a good plan to leave the silk suspension suture in place for a few days, because it will facilitate matters when the catheter is changed.

In an ordinary case the procedure that I have here described should not take much over ten minutes, but during the operation there are certain difficulties which may arise which will naturally prolong it. These I desire to rapidly mention. It may happen that the stomach has become invaded by the neoplasm extending downward from the œsophagus, and the organ may be found firmly adherent to the structures in the neighborhood of the cardia; for this reason it is impossible to suture the stomach to the abdominal wall at the point I have described, and it will be necessary to make it so low down that it would be undesirable, but fortunately these conditions are not frequently met with.

When the stomach is incised, the wound has been considerably reduced in dimensions, and if great care is not taken, the instrument may cut one of the gastrostomy sutures. If this should occur, it is very unfortunate, because it is extremely difficult to reinsert the suture without removing the three others, and consequently the whole process of stitching the stomach to the abdominal wall must be repeated. After the walls of the stomach have been incised, a slight hæmorrhage may arise, but it is easily stopped by the compression made on the borders of the incision by the catheter and by a little gauze plugging.

A gastrostomy may be effected under two different conditions, which will determine the future conduct of the surgeon in the after-care of the case. In the first class gastrostomy is performed at an early date in the course of the disease, while the patient is still able to take nourishment by the mouth, and when this is the case the general rules of feeding after any operation may be carried out. Food by the mouth or directly through the gastric opening should only be given the day following the operation, progressively increasing the quantity at each feeding. In the second class of cases, and it is this

one that I have particularly in view, gastrostomy for some reason or other has been put off until late in the progress of the disease. In these cases the patients have not been able to swallow any food for a number of hours, and even liquids, which could previously be taken, are rejected. The necessity for feeding is here an urgent indication.

It has been said that the introduction of fluids into a retracted stomach which has become unaccustomed to the contact of food will produce vomiting which will tire the patient and expel the liquid nourishment and the gastric juice through the gastric fistula, and it has also been said that the efforts made by the patient while vomiting might break the sutures. On account of these considerations, some operators wait until the day following the operation before introducing food into the stomach through the fistula, keeping the patient's strength up by the use of injections of salt solution and nutritive enemata. Other operators begin to feed their patients as soon as the operation has been completed, and this is the practice that I have always followed. In this practice I have been led by the advice of Rou-tier, Marwedel, and Czerny, and have injected about three ounces of peptonized milk into the stomach through the fistula as soon as the operation has been completed in cases where the patients were exceedingly feeble. In the evening, if no vomiting has occurred, two hundred cubic centimetres of milk are injected, and it is very infrequent that patients cannot stand this early feeding by the stomach. On the next day the amount of milk given is increased, and to the milk may be added the yolk of an egg and a little brandy, if necessary; by the third day about a quart of milk, two eggs, and peptone may be given, while on the fourth soup and powdered meat may be added to the diet list. In this way, according to the stomach tolerance, two or three quarts of milk, with three eggs and several spoonfuls of powdered meat, may be taken by the patient, and it is better to divide the feedings into three a day, and during the interval of the feedings a glass of milk may be given every two or three hours.

If food should be badly tolerated, smaller quantities must then be given, and I think a very small amount of milk to which peptone has been added can be well taken and retained if given every two hours. The amount of food which may be given through the fistula will be found after a few days to be quite sufficient for the nourishment of the patient, because the functions of the stomach will have then returned if they were wanting or insufficient before the operation was done. Until the stomach is perfectly tolerant to the amount of food necessary for the maintenance of the patient the use of artificial serum is indicated. If the stricture in the œsophagus is still somewhat patent, it is a good plan to

allow the patient to take liquid food by the mouth, and it is a well-known fact that after a gastric fistula has been made the patients have noticed a decrease in the dysphagia and can take a fairly large quantity of food by the mouth.

The dressings should be changed on the fourth day, or sooner if necessary, and if the sutures have cut the tissues a little or if the contour of the fistula shows any signs of redness, the parts should be freely irrigated with sterile salt solution, dried carefully, and then covered with a thin layer of bismuth subgallate. The sutures may be removed on the tenth day, and at the same time the suspension suture should be removed as well.

The catheter should be removed on the eleventh or twelfth day after the operation, and from this time on the use of a permanent catheter in the fistula is no longer necessary. After each meal the fistula must be carefully washed, and the catheter should be boiled before and after. The wound should be kept covered by a light antiseptic dressing held in place by a narrow binder.

The fistula obtained by this method is usually very satisfactory, and incontinence is not to be feared if the directions are closely followed. If this operation is done sufficiently early, the patient may be given a fairly long lease of life, and when it is done in a case of simple stricture of the œsophagus, the excellent local and general conditions will continue, while if the lesion of the œsophagus may be done away with, the gastric fistula will close of itself without difficulty.

871 BEACON STREET.

A STUDY OF THE TEMPERATURE, PULSE, AND RESPIRATION IN THE DIAGNOSIS AND PROGNOSIS OF CERTAIN DIS- EASES OF THE BRAIN.

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(Continued from page 452.)

Apoplexy due to hæmorrhage is attended with greater disturbance of the temperature of the body soon after the occurrence of the stroke than is the case when the apoplexy is due to embolus or thrombus. Dr. Charles L. Dana, of New York, in 1894, reported a number of cases of apoplexy in which he had carefully studied the temperature in both axillæ and in the rectum.⁸ He rarely saw his cases early enough to detect the initial fall of temperature,

but he observed a greater increase of the bodily heat and a greater difference between the temperature of the two axillæ soon after the occurrence of the hæmorrhage than he found in apoplexy of thrombotic origin during this period. The observations of Weber, of Boston, and those of others to which he refers in his article on Hæmorrhage of the Brain (Pepper's *System of Medicine*, Vol. v, 1883) show a greater disturbance of temperature in apoplexy from hæmorrhage early in the disease than occurs during this period in apoplexy due to thrombus or embolus.

I have studied the temperature in sixty cases of apoplexy, twenty-six of which were due to hæmorrhage, twenty-two to thrombi, and twelve to emboli. In a number of these the temperatures were taken within an hour or at most a few hours after the occurrence of the apoplectic stroke, or before reaction had taken place.

I have found that apoplexy caused by a large hæmorrhage into the brain substance is usually attended by a temperature that is often more or less characteristic of the lesion, especially during the early days of the disease. Within an hour (sometimes less) there is a fall of temperature, varying from half a degree to two degrees (in one case three degrees), depending upon the size of the hæmorrhage and the shock caused by it. The initial fall of temperature lasts in the vast majority of cases only a few hours (from six to twelve), or until reaction begins. Large hæmorrhages into the lateral ventricles, in my experience, have caused the greatest depression of temperature. It was in a case of this character that I saw within an hour after the occurrence of the hæmorrhage that the thermometer registered only 95.2°. Hæmorrhages attended by hemiplegia give rise to a greater initial fall of temperature than those in which no unilateral motor disturbance occurs. I have never found an initial fall of temperature in cases of hæmorrhage into the pons or medulla. In these cases the temperature apparently begins to rise soon after the occurrence of the hæmorrhage, and continues to do so until death, sometimes reaching 105° or 107°. In the case of a woman about sixty years old, stricken down in the Arapahoe County Court House, whom I saw a few minutes after the occurrence of the hæmorrhage, the temperature was 101° when I first saw her. She was immediately removed to the Arapahoe County Hospital and her case carefully studied under my supervision. Her temperature continued to rise and reached 107.2° before death, which occurred six hours after she was first taken sick. In the severest cases of intraventricular hæmorrhages there is apparently no attempt at reaction, and death occurs within a few hours. In the lighter cases of this character, the initial fall of temperature is about

⁸Dr. Charles L. Dana, *Apoplexy in its Relation to the Temperature of the Body*, *American Journal of the Medical Sciences*, June, 1894.

one degree, and as soon as reaction takes place (usually in from eight to sixteen hours), the temperature reaches normal. By the end of the first twenty-four hours the temperature will be 100° or 101° , and as soon as the lungs begin to fill up it rapidly rises, reaching 103° to 105° before death, which usually occurs during the second or third day. The high temperature in these cases has seemed to me to be due to pulmonary complication. It will be seen that in intraventricular hæmorrhages an initial fall of temperature, amounting to 2° , a failure to react, or a high temperature after reaction occurs denotes great gravity and speedy death.

In several cases of hæmorrhagic apoplexy, causing complete hemiplegia, in which the blood has not found its way into the ventricles, or the bleeding occurred in the pons or medulla, the initial fall of temperature will vary from one half to one degree. Immediately after reaction has occurred the temperature will be normal. During the first two or three days following the hæmorrhage the temperature may vary from 2° to 3° above normal. The greater the initial depression of bodily heat, the slower the reaction, and the higher the temperature after reaction takes place, the graver the prognosis. On the other hand, the slighter the initial depression of the bodily heat, the more speedily reaction occurs, the less elevated the temperature subsequently, and the sooner it becomes normal, the better the prognosis. In the lighter cases I have not been able to discover any initial fall of temperature, although I am inclined to believe that it is almost a universal occurrence in cases of hæmorrhage into the brain substance attended by sufficient shock to render the patient unconscious. It is only occasionally that cases of apoplexy are seen early enough to detect the initial fall of temperature.

In cases of hæmorrhage into the brain substance unattended by hemiplegia, but in which the shock has been sufficient to cause loss of consciousness, there may be, and probably is, an initial depression of the bodily heat, but I have not seen any such cases sufficiently early to study the temperature during the first few hours after the occurrence of the hæmorrhage. In cases of ingravescent apoplexy I have found the temperature slightly elevated, although I have seen two such cases within two hours after the patient first began to complain. Exceedingly high temperatures have been observed in hæmorrhagic and other lesions of the lenticular nucleus.⁸

In nearly all cases of hæmorrhage into the brain substance in which death does not occur before reaction takes place, and in which the shock has been sufficiently severe to cause loss of consciousness, the

temperature immediately after the shock is recovered from is practically normal or slightly elevated (cases of hæmorrhage into the pons, medulla, cortex of the brain, gray matter of the great ganglia at the base of the brain, and ingravescent apoplexy excepted). By the end of the first day or the beginning of the second the temperature in the axilla will register one to three degrees above normal. After this time the temperature will begin to decline if the case is not exceedingly bad and likely to prove fatal. In the lightest cases of hæmorrhage into the brain substance there is only slight variation of the temperature from the normal. If it rises at all, it will reach 99° to 99.5° by the end of the first day, and return to normal by the end of the third day. The temperature in hæmorrhagic apoplexy during the first few days shows a marked contrast to the temperature in apoplexy from thrombus or embolus, in which the temperature is normal the first day and frequently rises half to one degree by the end of the second. I believe that Dana is correct in attributing the early rise of temperature in hæmorrhagic apoplexy to the character of the lesion rather than to its location.⁹

We must make an exception to this statement in lesions of the pons and medulla, in which the temperature is usually considerably elevated regardless of the character of a suddenly inflicted injury.

As the study of the early temperature in cases of apoplexy due to hæmorrhage is important for diagnostic purposes, so is a study of the entire course of the temperature of immense value in guiding the physician in his prognosis. The higher the early temperature, the greater the brain lesion and the more unfavorable the immediate prognosis. The longer the temperature remains above normal, the more unfavorable the ultimate prognosis. In the lighter cases, that are attended by a slight rise of temperature, the bodily heat begins to decline by the second day and reaches normal a day or two later. No patient can be considered out of immediate danger so long as the temperature remains 2° or 3° above normal. Cases in which the temperature keeps only slightly elevated above the normal several weeks after the occurrence of the apoplectic stroke are attended by brain irritation or inflammation, and have a grave prognosis.

Apoplexy from a thrombus or an embolus is attended by only a slight variation of the temperature from the normal during the first two days. Exceptions are found in lesions of the pons and medulla. There is no perceptible initial lowering of the temperature; at least, I have been unable to detect any. In the severest cases there may be a slight rise of temperature by the second day. In the vast major-

⁸Gowers, *J. Mental Dis.*, 1891, vol. 16, p. 398.

⁹Dr. Charles L. Dana, *Apoplexy in its Relation to the Temperature of the Body*, *American Journal of the Medical Sciences*, June, 1894.

ity of severe cases there will be a rise of temperature from the third to the fourth day. A rise of temperature at this time denotes softening. The lighter cases have no rise of temperature at any time, and the prognosis is favorable so far as life is concerned and, to a greater or less extent, for complete recovery. An elevation of 2° or 3° above normal denotes extensive softening and renders the prognosis most grave. Cases in which the temperature remains above normal for weeks or months, although the temperature may not go above 99° , will probably end in death from extensive softening.

Bilateral Axillary Temperatures in Apoplexy.—For bilateral axillary temperatures to have any special significance, the temperature must invariably be higher on the same side and the observations should be made by the same persons. In cases in which the axillary temperature appears higher first on one side and then on the other, the difference is usually due to the carelessness of the person who takes the temperatures. An axillary temperature that remains continuously higher on the same side has considerable importance, although the difference between the heat of the two axillæ is only half a degree.

Apoplexy from Hæmorrhage into the Brain Substance.—Soon after the occurrence of the hæmorrhage, before reaction has taken place, the axillary temperature is slightly lower, from a half to one degree, on the paralyzed side than on the normal side. The more complete the hemiplegia and the more profound the shock, the greater the initial disparity of temperature. In these cases the temperature in each axilla is below normal. In cases of intracranial hæmorrhage, unattended with hemiplegic symptoms, I have found no perceptible difference of temperature between the axillæ. In cases of cortical or meningeal hæmorrhage, affecting the motor region, I have found from the first the temperature higher on the side of affected motility. As soon as reaction takes place in intracranial hæmorrhage causing hemiplegia, the axillary temperature is higher on the side of affected motility. So soon as the temperature becomes normal. In those cases in which the evening temperature occasionally runs up to one or two degrees above normal, weeks after the occurrence of the stroke, the temperature is usually slightly higher in the axilla on the paralyzed side. In cases in which the hemiplegia remains complete after the temperature has been normal one, two, or three weeks, the temperature may be, especially in the worst cases, about half a degree lower in the axilla on the paralyzed side.

In apoplexy from an embolus or thrombus attended by hemiplegia there is no perceptible difference between the axillary temperatures until softening occurs, usually on the third or fourth day. In the lighter cases of embolic or thrombotic apoplexy

there is no temperature disturbance at any time. In the severer cases with complete hemiplegia, in which necrotic softening becomes extensive, the axillary temperature on the paralyzed side will be higher than on the unaffected side from the third or fourth day until all intracerebral irritation ceases. In four fatal cases of this kind, death occurring in one at the end of two weeks, in two at the end of two months, and in the fourth at the end of four months, I had the bilateral axillary temperatures taken twice or three times daily. The temperature in each was from half to one degree higher in the axilla on the paralyzed side until death. At the autopsies extensive softening was found in the affected hemispheres. In two, more than one half of one hemisphere in each case was broken down, and false cyst-like membranes were found. In cases of apoplexy due to thrombi or emboli in which death does not occur, but in which hemiplegia remains, the axillary temperature is about half a degree lower on the paralyzed side after the second or third week. If the temperature does not become slightly lower on the paralyzed side after the second or third week, and the patient remains completely hemiplegic, there are usually occasional rises of temperature in the evening. During these periods of febrile disturbance the temperature is almost invariably higher in the axilla on the paralyzed side. When a cortical vessel becomes occluded, giving rise to focal or unilateral convulsions and later to paralysis, there is usually a slight rise of temperature from the first in the axilla on the side of the affected muscles over that of the normal side. Unless extensive softening takes place, the temperature is soon normal and the same in each axilla. If a recurrence of the trouble takes place, or softening should become sufficient to prove fatal, the temperature becomes higher on the paralyzed side and remains so until a short time before death, when the temperature is found to be the same in each axilla.

It will be seen that carefully observed bilateral axillary temperatures are important in aiding the physician in making an early diagnosis between apoplexy due to hæmorrhage and apoplexy caused by the occlusion of a vessel. A difference between the temperatures of the axillæ during the first two days is in favor of hæmorrhage. A difference between the axillary temperatures that does not occur before the third or fourth day is in favor of an occluded vessel.

Bilateral axillary temperatures aid in prognosis. The greater the difference between the axillary temperatures in unilateral disturbance of motility from any cause, the more unfavorable the prognosis. If the axillary temperature remains higher on the paralyzed side weeks or months after the occurrence of

the hemiplegia, the ultimate prognosis is extremely unfavorable.

The Pulse in Apoplexy.—In hæmorrhagic apoplexy the pulse is often slower than normal at first. In cases with a profuse hæmorrhage into the brain substance, especially when it finds its way into the lateral ventricles, the pulse is rapid from the first and continues so until death. The pulse may be nearly normal in cases with moderate-sized intracranial hæmorrhages. The slower the pulse the first day or two after the occurrence of the apoplexy, the greater the probability of hæmorrhage being the cause. An irregular pulse sometimes develops early in apoplexy and is a cause for anxiety. A rapid and irregular pulse always lends gravity to the prognosis.

The Respiration in Apoplexy.—It is often nearly normal throughout the course of the disease in favorable cases. It nearly always becomes rapid before death. Any deviation from the normal in the character of the respiration is unfavorable. An intermittent, followed by an "ascending and descending," respiration lends great gravity to the prognosis. The development of Cheyne-Stokes respiration in a case almost invariably indicates a speedy and fatal termination. Hughlings Jackson has laid considerable stress on the gravity of cases of hæmorrhagic apoplexy in which abdominal breathing develops.

Alcoholism.—I have not had time to look over the records of more than forty cases of alcoholism. These were the cases of persons with acute alcoholism, suffering from delirium tremens or in a state of "dead-drunk" from a prolonged spree in which delirium subsequently developed. Most, if not all, of them were, in addition, suffering from the effects of chronic alcoholism. Not the brain alone, but the entire nervous system and other organs of the body, were diseased from the prolonged abuse of alcohol. It is convenient to place this group of cases among the diseases of the brain under consideration, because the results of a careful study of the temperature, pulse, and respiration in acute alcoholism, are essential aids in the prognosis, and guide the physician in the treatment.

The temperature in acute alcoholism may vary from normal or even subnormal to 102° to 103° , and in some cases to 105° . Not infrequently, when persons are brought into the hospital in a condition of "dead-drunk," the temperature will be found subnormal, probably from exposure, although we know that over-doses of alcohol are depressing and will lower the temperature. It is in these cases that we have to fear a subsequent high temperature, pneumonic complications, and death. So long as the temperature does not exceed 100° to 101° during the progress of the treatment, there is no occasion

for alarm. On the other hand, a temperature of 103° , if maintained for a few days, adds greatly to the gravity of the prognosis. A temperature of 104° to 105° , maintained for a day or more, makes the case exceedingly grave, although I have seen patients recover after the temperature had reached 105° . Only in a few rapidly fatal cases have I observed a temperature of 106° or 107° .

The pulse in acute alcoholism is nearly always increased in frequency, and in severe cases may be 120 a minute for days. A pulse that is intermittent in character and irregular in volume denotes a grave case. The more rapid and irregular the pulse, the more unfavorable the prognosis.

The respiration is rarely very frequent unless complications develop, such as pneumonia. I have seen a few fatal cases of delirium tremens in which the respiration has been slightly increased in rapidity, then become intermittent and ascending and descending in type, and, finally, the Cheyne-Stokes variety preceded death. In all of these the post-mortem has revealed an intensely congested brain with some serous effusion. In such cases there is a high temperature (frequently 105° or 106°), and the pulse ranges from 120 to 160. When the respirations vary from 36 to 50 a minute comparatively early in the course of the disease, the chances are that pneumonic complications have developed.

Acute and Fatal Cases of Insanity.—I have had time to look up the histories of only twelve of these in which the records were kept with sufficient care to be of service in this connection. These twelve cases may be divided into three groups: Violent mania, four; agitated melancholia, six; stuporous melancholia, two.

In the four violent maniacs the temperature was nearly always slightly elevated above normal, and sometimes the thermometer registered in the axilla 103° . In two, pneumonia developed and the temperature went up to 104° and reached 105° before death. The two others died from exhaustion. At first the temperature ranged from 99° to 100° in the morning, and from 99.5° to 101.5° in the evening. Later the temperature descended to normal or slightly below on a few occasions, but before death it registered 103° . I have the records of more than 100 cases of acute mania that did not end fatally, at least before the patients passed from under my care to enter an asylum, and in most of these the temperature was nearly normal, except during periods of excitement, when it became slightly elevated. The pulse and respiration do not require a detailed study here. The more rapid the pulse and respiration, the greater the excitation and the subsequent exhaustion.

In melancholia a careful study of the temperature is of considerable importance. In the majority of

these cases the temperature is normal or slightly below. In the agitated melancholiacs the temperature frequently rises to 101° or 102° . A temperature two or three degrees above normal maintained in melancholia is of the gravest omen. I have seen three cases in which the temperature ranged from 102° to 104° . They all proved rapidly fatal, only one running a course of four weeks. In all, the autopsies revealed nothing beyond an intensely anæmic brain. The pulse in cases of agitated melancholia was increased in frequency and the respiration varied little from the normal.

In the two fatal cases of stuporous melancholia in which I have had the opportunity to make careful and prolonged observations, the temperature has been low, at times registering 97° , and on several occasions 96.5° . The pulse, nearly normal in frequency at first, has become rapid as exhaustion increased. The respiration has been slower than normal early in the disease, and not till near the end has it shown much increased frequency.

Tumor of the brain in the vast majority of cases is unattended by any variations of temperature worthy of record, except in the last stages, in which a high temperature, with other grave symptoms, points to approaching dissolution. There are, however, a few cases in which occur, at regular or irregular intervals, a sudden rise of temperature that might be mistaken in supposed malarial subjects, by a careless observer, for cases of profound malarial poisoning. Such mistakes have been made, but they may be easily avoided, if one is on his guard and examines the optic discs. Such sudden rises of temperature in cases of tumor of the brain with other symptoms, such as stupor, rapid pulse, and rapid respiration, suggesting, by their apparent periodic recurrence, a possible malarial origin, are probably due to pressure at the base of the brain in such a manner as to interfere with the circulation in the veins of Galen. According to my experience, all such cases due to tumor present double choked discs.

I have had the bilateral axillary temperatures taken in numerous cases of tumor of the brain, but I have been unable to obtain any constant and reliable difference between the temperatures of the axillæ, even in cases of tumors involving the motor region and giving rise to hemiplegia. I have thought that a difference might be found to exist between the temperature of the two axillæ in cases in which the growth began in the cortex of the motor region, provided the observations were made sufficiently early.

The pulse and respiration require no description in tumor of the brain. They are both practically normal until near the end of the disease, except in cases with sufficient trouble at the base of the brain (especially in the posterior fossa) to interfere with the normal action of the cardiac and respiratory cen-

tres. Anything that causes effusion into the ventricles will disturb the pulse and respiration.

Abscess of the brain presents three stages in which the temperature in each is different from that of either of the other stages. The first stage is the initial, or irritative; the second, the depressive; the third, the terminal, or explosive. In the first, or irritative, stage the temperature ranges from 101° to 103° ; in the second, or depressive, stage, indicating the formation of an abscess, the temperature drops to normal or subnormal, and only occasionally rises to 99° or a little above for a few hours; in the last, or explosive, stage, the temperature rises to 104° , 105° , or 106° , and indicates the near approach of death.

The pulse and respiration are modified nearly alike in the different stages of abscess of the brain. In the early, or irritative, stage, during which there is usually some febrile reaction, the pulse and temperature are moderately increased in frequency; in the stage of depression from the influence of pus within the cranium, the pulse and respiration become greatly lessened in frequency. The pulse may be 60 or less, the respiration 16, 12, and in one case reported by Bramwell 4 to the minute. During the explosive, or terminal, stage the pulse and respiration may become very frequent, especially just before death occurs.

(To be continued.)

CONJUNCTIVITIS FROM X-RAYS; INCIPIENT RETINITIS APPARENTLY DUE TO THE SAME CAUSE; REPORT OF A CASE.

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As this condition is not described in the textbooks and system of diseases of the eye at the present time, this case is reported tentatively in the hope of eliciting contributions on this subject. It is the case of a brother practitioner who had been daily exposed to the action of x-rays for three years and a half. I have watched this case with unusual interest and concern for nine months, during which time I have been aided by a cordial cooperation and intelligence not found in the ordinary patient.

The patient consulted me for a slight conjunctivitis on October 11, 1900, with the following history: Age, twenty-nine years. About six months previously the eyes began to be slightly sensitive to sunlight, although quite comfortable within doors. This slowly increased. For several months the eyes had become unduly fatigued with near work, especially by artificial light. This, too, was at first slight and increased gradually.

Aside from the photophobia and eye-fatigue, no

symptoms were experienced until a slight conjunctivitis of a mild catarrhal type appeared, at which time he first consulted me.

The inflammation was limited to the area of the inferior blepharal plates. There were simply hyperæmia and congestion, increased capillarity of the tissues, and increased secretion.

O. D. V. = 6/6. O. S. V. = 6/6. Accommodation, normal for age of patient. Pupils 3 m.m. in diameter. Normal pupillary reaction for light, accommodation, convergence, and consensual tests. Tension normal. Visual field and field of fixation normal. Muscle tests: divergence, 14° ; convergence, 9° ; exophoria, 6° at 6 metres distance, and 7° at 1 metre. Tests for astigmatism, negative.

Ophthalmoscopically, a slightly oval disk was found in each eye, with slight blurring of the disk edges and some increased redness of the fundus. For the conjunctivitis, a one-per-cent. solution of silver nitrate and a compound lotion of boric acid, antipyrine, camphor water, and distilled water, were advised. Prism exercises and refraction were also recommended.

The patient was next seen on November 10th. The mild attack of conjunctivitis had yielded to treatment, to revive again later. A desquamative dermatitis had appeared over the exposed parts of the face, accompanied by the tanning or bronzing which is characteristic of this condition when produced by x-rays or the actinic (ultra-violet) rays of light.

There was almost complete defluvium of the eyebrows and the eye lashes. Both lower lids were thickened, the left more so than the right. In the left lid there were two nodules resembling small chalazia but more diffuse, over which the conjunctiva was exfoliating.

The conjunctivitis was limited to the lower lids, the upper being protected by the brow when the eye was open and exposed to the x-rays. The sharp angle of the inner edge of the lid was blunt and round, and touched the eye-ball with an uneven line. O. D. V. = 6/8. O. S. V. = 6/8. The fundi were now much more congested and reddened. The disk-edges were very much blurred. Otherwise, the findings were as before. Under homatropine cycloplegia the following was found: O. D.—25 cyl. 105° . O. S.—50 cyl. 75° . This was prescribed in full with a $1\frac{1}{2}^{\circ}$ prism, base in, for each eye and prism exercise advised. Antiseptic and astringent applications were made to the lids regularly. The eyes were shielded from the x-rays by working through a steel plate with a plate-glass window.

Twice, inspissated meibomian secretion was expressed from the affected lids, proving the involvement of the glandular epithelium. The dermatitis lasted one month. The conjunctivitis yielded slowly, the eyes soon becoming comfortable, but the inflammation lasting about a month. The retinal condition followed about the same course.

On November 26th the convergence had risen to 15° and the exophoria had declined to 3° . Now, nine months later, the fundi are normal, the photophobia and eye-fatigue have disappeared, the eyebrows and cilia have put forth a new growth, and there remains but a trace of redness of the conjunctiva.

In this connection, it will be interesting to note that of three cases treated by this gentleman with the x-ray for carcinoma of the ocular region, only one showed symptoms of irritation of the eye. Each received about seventy-five treatments.

In a fourth case, in which there were thirty severe treatments, there was ulceration of the cornea. There are available no ophthalmoscopic reports of these cases. All these were treated daily for from five to ten minutes with the focus tube eight inches from the tissues, with a current of large volume and of such strength that the hand could be seen with the fluoroscope twelve feet away.

The irritative symptoms followed the use of low vacuum tubes only. Dr. King, of Toronto, in the *Canadian Practitioner*, has reported a case of conjunctivitis from x-rays. It comprised œdema of the lids, double conjunctivitis, and defluvium of the eyebrows and cilia, together with desquamative dermatitis and exfoliation of the hair and nails where exposed to the action of the x-ray.

The following cases have some significance in relation to the condition I am considering. The x-ray was the ætiological factor: A case of osteoplastic periostitis (Gilchrist). A case of diffuse desquamative dermatitis (Marcuse, *British Medical Journal*). Erythema of the skin followed by loss of hair (Reid). Two cases of deep tissue traumatism reported by Walsh; in the first there were symptoms suggestive of sunstroke following frequent and prolonged exposure to the x-ray at short range. From time to time the patient had attacks of dermatitis, and finally there were headache, vertigo, vomiting, marked reduction of vision, and great prostration. Recovery on removal. The second was that of a worker with the x-ray, whose abdomen was daily exposed to its action. The symptoms developed were abdominal tenderness, flatulency, pain, and diarrhœa. They subsided with removal from the malign influence.

Evidently the intestinal mucous membrane was attacked. It appears that sometimes the superficial epithelium is assailed, and sometimes the deep. This may be determined partly by the high or low vacuum of the tube used, and partly by individual idiosyncrasy.

I believe we may justly conclude that the archiblastic tissues are more susceptible to the influence, whatever it be, than the parablastic. From a study of all the available material, I am led to think that it is the more delicate epithelium, which is more freely bathed in the nutrient fluids, that is more liable to be attacked.

In the skin, the palisade layer of columnar cells, between the prickle cells and the corium, is very susceptible, together with the pilary shafts. In the eye, the retina, which contains much specialized epi-

thelium, seems vulnerable. Specially susceptible would appear to be a retina the capillary circulation of which is congested by the circulatory disturbance consequent upon ametropia, as in the case above related.

The deeper epithelium is bathed in alkaline fluids, and is, therefore, more succulent and tender, and may, perhaps, be, on this account, less capable of resisting an agent which permeates the tissues freely, as the x-ray does.

I think it a form of vibration comparable to that of light with definite wave-length and period of oscillation, and one which, when too violent, may be injurious, somewhat as is gross shock in concussion of the brain or the din which causes boiler-maker's deafness.

Further, a predisposing cause is often necessary. To explain: Walsh reports the case of a man who remained immune during many months' exposure, but, on injuring his hand with developing fluid, suffered a dermatitis on further exposure to the x-rays.

Three other cases are reported (*loc. cit.*) of persons previously immune, who became susceptible under altered conditions. Is it not possible that in my case the fundal changes were induced by the ametropia and x-ray combined, the former predisposing to the latter?

We know that a flannel-red fundus may result from ametropia. The presence of an abundance of fluid seems to precipitate the action of the x-ray on the tissues. The congestion of the fundus would supply the excessive amount of blood. The effect of both causes would naturally be greater than either alone. To illustrate: Morphine and atropine combined unite at certain points of the circle of their therapeutic action, whereby the analgetic power of both is greater than the same in either alone, notwithstanding that they are physiological antagonists and antidotal to each other throughout most of the sphere of their action.

Ætiologically, I believe my case will be found to lie nearer solar retinitis than elsewhere, due allowance being made for certain differences. X-rays are invisible to the human eye, open or closed. X-rays cannot be refracted or focussed as light rays can be.

In ocular disturbances produced by excessive light the symptoms differ accordingly as the dazzling results from prolonged excess of light, as in snow blindness, sun gazing, and the arc light, or from a sudden flash, as from lightning, etc. Oliver has reported two cases of double macular chorioretinitis from lightning and the flash of burning lycopodium. The results are often violent and painful.

From the dazzling of snow and the arc light has resulted acute conjunctivitis with much pain, swell-

ing, and redness and œdema of the lids. This condition usually lasts a few days only (Jackson). From the arc light, also, have resulted erosions and opacities of the cornea. These have been attributed by Widmark to the action of the ultra-violet, chemically active, light rays.

Gazing at the sun or arc light causes the dioptric media to act somewhat like the burning lens with which fire may be kindled by focussing the sun's rays. The resulting condition of solar retinitis (de Schweinitz) exhibits ophthalmoscopically the appearances of a macular retinitis or chorioretinitis.

The changes are limited to the macular region where the image has been cast (Fuchs). There may be a distinct line of demarcation (silvery band, Oliver) separating these from the normal fundus. This area is swollen, discolored, reddened, or marmoon colored. It may present black pigment deposits, faint yellowish white dots, or may even glisten like jelly with a central gray spot.

The patient may complain of a bright after-image, photophobia, lacrymation, and pain. Later, there may be a dark spot in the centre of the field of vision (positive scotoma). Objects may appear distorted. The pupil is generally contracted.

In the before-described case, the irritation was general, the rays not being focussed upon a given area. The swelling and redness were slight and appeared gradually, the irritation being of low grade and long continued. As, in all pathological conditions, the prognosis varies with the anatomical changes, so in this case complete recovery was to be expected. In a grave case of blindness from lightning (Oliver) there was almost normal vision eighteen months later.

410 ALTMAN BUILDING.



Stamping Out Yellow Fever in Cuba.—Full reports of the efforts to stamp out yellow fever in Cuba and remove the causes of the disease have been received at the Insular Bureau of the War Department. The result of nearly two years of American rule has been to make Santiago, to all outward appearance, as clean as any American city. Every house where yellow fever occurred in 1899 was disinfected three times. The result of this work is that there has been no yellow fever in Santiago since December 27, 1899. The condition of the city of Havana so far as yellow fever is concerned is particularly gratifying. During the month of June there was not a single death nor a new case in Havana. The records show that since 1761 no previous June has passed with absolute freedom from this disease. There has never been a year that approached the present in its freedom from the yellow fever, the last death having occurred on March 17th. It is believed that by pursuing the present methods the island can be rid of yellow fever, and its spread prevented even when introduced from the outside.

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the subsequent questions are as follows:

V.—How do you treat habitual constipation? *Proprietary preparations must not be mentioned. (Answers due not later than October 10, 1901.)*

VI.—How do you use quinine for the prevention and cure of malarial disease, and what other treatment do you employ? *(Answers due not later than November, 11, 1901.)*

VII.—What is your method of preventing laceration of the perineum in labor? *(Answers due not later than December 9, 1901.)*

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested that the answers be short, no one answer to contain more than six hundred words. We shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers as original communications.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted this month has been awarded to Dr. John B. Weston, of Duluth, Minn., whose paper appears below.

PRIZE ESSAY NO. IV.

WHICH FORM OF VACCINE DO YOU PREFER, DRIED LYMPH OR "GLYCERINATED" LYMPH?

By JOHN B. WESTON, M. D.,

DULUTH, MINN.

The reason I prefer points to glycerinated virus is because they are more apt to take, they protect more thoroughly, they modify the disease if already contracted, and what they do they do quickly. In the presence of an epidemic, time is of exceeding great value, and the advantage of using a point, which takes in four days, instead of a preparation that takes in from seven to nine, needs no argument. It is admitted that the weakness of the glycerinated virus is its extreme attenuation in the process of freeing it from objectionable elements. There is such a thing as being colorless in the effort not to offend, and it seems to me that the only way to use glycerinated virus is on a patient who will submit to repeated vaccinations, one after another, until the effect of them all equals that of one good, vigorous point.

The difference in the degree of danger in using the two kinds of vaccine is so slight as to be inappreciable, at least that is my experience in vaccinating

hundreds of school children, lumber jacks, inmates of lodging-houses, and prisoners in the county jail. In the few cases of infection that occurred I could trace it directly to dirty cloths used as the limb became sore, often a dirty handkerchief being used as a bandage, or to the shield, which was worn for weeks, although directions were explicit to take it off in a few hours. I had more fear lest the slow-drying glycerinated virus might absorb some germs than the quickly drying matter from a point, but in no case could I trace the trouble to the actual time of vaccinating.

On account of an active antivaccination fight, I was very anxious not to have any trouble from enforced vaccination. When one or two cases of small-pox arose in a school, it was imperative to check the outbreak at once. At first I used the glycerinated virus, but, having had to do my work over again in the course of ten days or so, and feeling that in the meantime hundreds of children had been unprotected, I decided to use points exclusively, ignoring any theoretical dangers for the more real one of an impending epidemic. I have no reason to regret my action. The experience of my professional acquaintances bore me out in this. One man, at the head of our largest hospital, who had been extreme in his advocacy of the glycerinated virus, changed his ground after five of the nurses had contracted small-pox, some of them having been vaccinated four times with the glycerinated virus. After using points, vaccination seemed absolutely protective, and the disease in the hospital was quickly stamped out.

I had charge of some four hundred small-pox patients and took particular pains to inquire of all who said they had been vaccinated what sort of virus was used and the character of the sore, and, while my field of observation was not so wide as some men had, it was large enough to enable me to draw a practical working conclusion.

I do not maintain that the points are as mild in their action, or that they make the same pleasing impression on the patient, who likes to feel that he is getting a lot of attention and fuss for a small fee, but I think it is better to use something sure than to allow the person who may be exposed to have an unwarranted sense of security.

FOUR ADVANTAGES OF "GLYCERINATED" LYMPH.

Dr. Harold Duncan Cochrane, of Albany, N. Y., writes:

Experience leads me unequivocally to favor glycerinated lymph in glass tubes in preference to all other forms of vaccine, and I base my preference upon the following reasons:

1. *Purity.*—Glycerinated lymph, if properly pre-

pared, is free from streptococci, staphylococci, and other pathogenic bacteria, and, being packed in sealed glass tubes, is not exposed to the air or other contaminating influences from the time it leaves the laboratory till it is administered to the patient. On the other hand, after an equal degree of care in preparation, deleterious organisms are invariably found in dried vaccine on points or quills. (Copeman, Crookshank, Pfeiffer, Reed, U. S. A.)

2. *Efficacy.*—In 100 consecutive cases of primary vaccination with glycerinated lymph, I would report 96 "takes." In 10,000 cases of vaccination by the same product in Baltimore, Dr. A. C. Barnes reports that not one patient contracted small-pox. In 100 consecutive cases of primary vaccination with points (prior to my experience with the glycerinated form of lymph), I had 74 "takes."

3. *Character of Vaccination.*—The typical papule, vesicle, pustule, crust, and pit is the rule after the use of the glycerinated lymph. Only one case in the successful ninety-six showed an excessive degree of inflammation (caused by an injury prematurely removing the scab, thus permitting of infection). From the use of points and quills the danger of extensive inflammation of the vaccinated area, even going on as far as cellulitis and lymphadenitis, is a real one. Streptococci and staphylococci infection, though differing from true vaccination, often lead to a false sense of security.

4. *Convenience of Administration.*—It must freely be admitted that the point or quill is the more convenient method of exhibiting the lymph; yet this advantage is by no means sufficient to compensate for its many disadvantages. In hot climates glycerinated lymph, in glass tubes, is really the only practical form in which to use vaccine virus (Dr. G. G. Groff, U. S. A.). This form of lymph retains its strength longer than any other, even in our temperate climate. It also permits of subcutaneous vaccination by means of hypodermic puncture, as suggested by Dr. J. J. Kinyoun, U. S. M. H. S. (very valuable, by the way).

5. *Opinion of Others.*—While our own observations and experiences are to each of us the most valuable, yet the opinions of others cannot fail to influence a candid mind. It is worthy of note, in this connection, that glycerinated lymph is the officially recognized form of vaccine virus in the United States, Great Britain, France, Russia, and Belgium.

To recapitulate, I would, for the following reasons, make an earnest plea for the universal use of glycerinated lymph: Its purity, its efficacy, its mildness of action, its resistance to tropical climates, its ability to retain its strength longer than other forms, its adaptability to hypodermic use, and its official recognition by the leading scientists of the day.

FOUR ADVANTAGES OF "GLYCERINATED" LYMPH: OBJECTIONS TO THE SHIELD.

Dr. John C. Shoudy, of Syracuse, N. Y., writes.

I prefer the glycerinated lymph because, having used both forms, the glycerinated, in my experience, has given greater satisfaction and produced better results.

This spring, during a small-pox scare in our city, I vaccinated about twelve hundred persons. Of these, about 150 (group No. 1) were vaccinated with the dried lymph on ivory points, while the remainder, 1,050 (group No. 2), were vaccinated with the glycerinated lymph on ivory points, each point being sealed in a protection cap.

There was no great difference in the two groups as to sex, age, occupation, personal care, or environment. Possibly group No. 1 had a slightly greater percentage of females. As to age, they were equal, all being adults and their occupation was the same, factory work. In personal care and environment group No. 2, having a greater percentage of foreigners, was not so good as group No. 1.

As to primary and secondary vaccinations, the groups were about the same, about five per cent. being primary.

The method of vaccinating was also practically the same. Each person had his arm well washed with soap and warm water. Those vaccinated with the dried lymph had the arm scarified with a scarifier and the ivory point dipped into sterile water rubbed on to the scarified surface. Several scarifiers were used and were placed in constantly boiling water, so that each one was boiled from five to seven minutes before being used.

Those vaccinated with the glycerinated lymph were vaccinated with the ivory point itself, nothing else coming in contact with the arm.

The following results were obtained in favor of the glycerinated lymph:

1. *Rapidity of Doing the Work.*—Using the point itself as a scarifier, no time was consumed in changing from instrument to point, and, the vaccine being liquid, no moistening of the point was required. While there was no idea of hurrying, yet thirty-five were vaccinated by one person in twenty minutes.

2. *Less Danger of Infection.*—The glycerinated points, each being separately sealed, would necessarily be sterile when used, if they were sterile when sealed at the factory, since the seal was only broken at the moment of using. The dried-lymph points, coming in containers of ten each, were more or less exposed to contamination from the time the container was opened until the tenth point was used.

3. *Greater Percentage of Successes*, about 95 per cent. and 90 per cent. respectively. Among those successfully vaccinated were three who were well

pitted from genuine small-pox. There were also many foreigners who, having served in the continental armies, had been vaccinated time and time again. Arms with from five to ten scars were common, and one man showed twenty typical scars of vaccination.

From these cases it would seem that for complete small-pox protection vaccination should be performed at least every five years.

4. *There were fewer cases of protracted healing and the protracted cases in group No. 2 were of shorter duration than in group No. 1.*

From these observations I have based my answer to the introductory question.

Perhaps my experience with the vaccine shield would be permissible.

It being unadvisable to vaccinate all the men in large works on the same day, a certain number were ordered to report each day. Those vaccinated the first days were furnished with a shield and told to return on the fifth or sixth day for examination. When they returned, it was invariably found that the arms of those who had retained the shield were much swollen and inflamed, the shield filled with evil-smelling pus, the wound red and angry, and the surrounding area of skin oedematous and macerated. While those who had removed the shields had only the usual appearance following vaccination. Thereafter the men were ordered to remove the shields at the end of twenty-four hours, they serving for protection only until the serum was well dried. I had experience with shields of all sorts and kinds, but obtained the best results from simply keeping the surface as clean and dry as possible.

THE IMPORTANCE OF A GOOD METHOD OF VACCINATING.

Dr. Charles R. Grandy, of Norfolk, Va., writes

If vaccination is successful, we get a sore arm. But it does not follow that every sore arm produced by vaccination is a "true take." Indeed, the sore arms may not be protective at all, for various things besides the vaccine virus may cause a local inflammation. The pus-producing bacteria are the most usual causes of these "false takes," which are exceedingly dangerous, as they give a feeling of security without any real protection against small-pox. To be certain of protection, we should be able to introduce active vaccine virus into the system as nearly as possible without an admixture of foreign bacteria.

Dry vaccine is prepared by dipping the points into the fresh vaccine matter obtained from calves and allowing it to dry. This dry vaccine often contains pyogenic bacteria, which were either already in the lymph or were later picked up in handling it. Glycerinated lymph is made by macerating the tis-

sue from vaccine pustules in glycerin, which destroys the bacteria already present without hurting the virus. It is protected from outside bacteria by being sealed in capillary tubes. Consequently there is much more danger of a pyogenic infection, a "false take," from the dry points than from glycerinated lymph.

Though the foregoing is true theoretically, it is also true that the practical results obtained from vaccinating vary greatly. One physician can only get "true takes" with the points, while another speaks just as positively in favor of the glycerinated lymph. Why is this? The difference is due, in my opinion, not to the vaccine matter, but to the way in which it is used. Indeed, much of the lack of success in vaccination comes from carelessness on the part of the physician, who, especially when he is employed by the municipality, often considers that he has performed his duty when he has scarified the arm and put a drop of glycerinated lymph on it. Now, the greatest objection to the glycerinated lymph is that it takes quite a long time to be absorbed. At first it appears to take up moisture from the body instead of being absorbed by it. If the sleeve is pulled down immediately, the lymph is wiped off before the body has a chance to absorb it. Naturally such a vaccination does not protect. The lymph should not only be put on the arm, but should be rubbed into the scarified area, as must always be done with the dry vaccine, and the sleeve should be kept up at least fifteen minutes. The reason why some men get better results with the points is that they *must* rub the dry lymph into the scarification in order to get it off the points, and they do not consider it necessary to rub in the glycerinated lymph. The glycerinated lymph, when properly applied, certainly gives as large a number of "true takes" as the dry vaccine, and the danger of "false takes" is greatly lessened.

There are other reasons why the glycerinated lymph may not take, but these apply equally to the dry vaccine. In the first place, to be successful the vaccine must be good. We can only see to this by getting tubes manufactured by a thoroughly responsible firm. Then, like all other serums, it deteriorates with age. We should always look on the package to see if it has not already passed its age of usefulness, the date being stamped on it. We should always inquire as to whether it has been kept on ice, as it loses its strength rapidly in warm weather. And after we have bought a package, we should not expect it to be as good as new when we have carried it in our waistcoat pocket for several weeks. Strong antiseptics must not be used on the arm before scarification, as antiseptics destroy the vaccine virus as well as bacteria.

I have got a large percentage of "true takes" from

the glycerinated lymph by using the following procedure: I first wash the skin with absorbent cotton saturated with alcohol, which, after cleansing the skin, dries quickly, leaving no residue of antiseptic to destroy the vaccine. I then ignite a bit of the cotton and sterilize my needle in the alcohol flame. Then, the arm having dried thoroughly, I scarify a small area with the needle, being careful not to draw blood. After squeezing a drop of the glycerinated lymph on the abraded surface, I rub it in well with the needle, which I have been careful not to contaminate in the mean time. The sleeve should be kept up fifteen minutes to allow the body to absorb the glycerinated lymph. In vaccinating negroes, I watch them to see that they do not purposely wipe off the lymph—a thing which they repeatedly do, to prevent the vaccination from taking. Finally, I pin a piece of sterilized gauze over the place and tell the person to keep it on for twenty-four hours.

Glycerinated lymph may be used in other ways. The hypodermic syringe certainly offers attractions when many people are to be vaccinated, especially when these people belong to a class who protest against vaccination and do all they can to prevent its taking. I have not had practical experience with this method, but consider that the danger in it would be that of transferring disease from one person to another by means of the hypodermic needle. This objection, of course, could be removed by careful sterilization of the needle by heat before each vaccination. There would, however, be great temptation not to do this, if many persons were to be vaccinated. If the glycerinated points are well sealed, they likewise may be as good as the tubes, though they offer no advantages to me. The choice between the two seems to be merely a matter of personal preference.

AN UNPLEASANT EXPERIENCE THAT LED TO A PREFERENCE FOR GLYCERINATED LYMPH.

Dr. J. P. McQuillin, of Brooklyn, writes:

If the question under discussion had been asked of me five years ago, my answer would have been different from what it is at this time. At that time I was vaccinating large numbers of people daily and using the dried lymph and getting favorable results in the majority of cases, and I should have been loath to change to a new form of vaccine of which I was practically ignorant. An accident which happened to me about that time changed my view of the harmlessness of the dried lymph and set me to thinking. A child I had vaccinated in the hospital was taken home by his parents, the arm became infected in some manner not satisfactorily explained, the child died, and the mother immediately talked of suing me. I began to think that I had better look up the matter of glycerinated lymph, and

that if I could satisfy myself of its superiority over the dried form of lymph, I should be very glad to use it, both for the benefit of the patient and for my own protection.

From the researches I have made I believe that the glycerinated lymph is the only form that we are justified in using at the present time.

In stating my reasons for my preference for one form over another it should not be necessary to lay up against the dried lymph (which is usually put on ivory points) the danger of infecting the patient with syphilis, erysipelas, tuberculosis, or any other equally remote danger when we have the ever-present staphylococcus pyogenes aureus and the staphylococcus albus, with which every point is liable to be infected, and these in combination with other colonies of microbes which settle on the lymph and multiply are the cause of all the disagreeable results following vaccination with the dried lymph.

With the dried lymph no preservative is used; in the glycerinated form the pulp is mixed with glycerin, which acts as an antiseptic solution, preventing the growth of microbes, while it has no harmful effect on the pulp itself. A lot of glycerinated pulp, when freshly prepared, shows many colonies of microbes, but as time elapses they die off, so that at the end of fifty or sixty days it is absolutely sterile and will remain so for over a year if kept at a low temperature. It goes without saying that the glycerinated lymph must be kept in a sterile and air-tight receptacle, or it will be no better than the other form of lymph.

Given an absolutely sterile lymph and faulty methods of application, and the results will not be good; but if the skin surface is rendered clean and clean instruments are used, every case should take and there should be no complications. Personally I prepare the arm by washing the surface selected for the site of the vaccination with soap and water, followed by alcohol or ether; then I take a needle from a package which I keep for vaccinating, and pass it through the flame of an alcohol lamp and now scarify the arm, denuding a small area of the epithelium, and then apply the glycerinated lymph and allow it to dry. At this point comes the only objection to the glycerinated lymph; it takes so much longer to dry than the dried lymph, but its many advantages outweigh this slight objection. After the lymph has become dried, I apply a sterile pad over the part vaccinated and bandage the arm. I do not approve of the shield, because, if the scab becomes broken or if there is much swelling, it retains the secretions and causes much irritation. A vaccination conducted in this manner will go through its regular course with very little local redness and no adverse complications.

THE LESSENER DANGER OF CONTAMINATION OF
"GLYCERINIZED" LYMPH.

Dr. Edgar D. Smith, of Chicago, writes:

In answering the question there are three main questions to be considered, viz., 1. Which is most effective in its action? 2. Which is most liable to be contaminated by disease or other germs, that is, which is most apt to be free from foreign matter? 3. Which remains active for the longer time and is most convenient to handle?

Provided equal care is used in their preparation, they should be equally effective when they leave the laboratory. Both should be alike in both their clinical and protective action, and both should leave typical scars. Owing to the manner in which they are put up, the "glycerinized" lymph is more apt to be effective, as it is less subject to change, both owing to the preservative action of the glycerin and to the absolute exclusion of air from the sealed glass tubes. Personally, I have found this to be true clinically.

Theoretically, when they leave the laboratory, each should alike be free from contamination. Practically the ivory points holding the "dried" lymph, or the other holders, are much more difficult to thoroughly disinfect than the glass tubes and are consequently less liable to contamination both in handling in the laboratory and outside. The glass tubes can be completely disinfected by heat and are heated to expel the air in order to fill them. One end is closed before the lymph is drawn in, and the open end is fused soon after, thus entirely excluding the outside air and other possible infection. The dried lymph-holders cannot be so thoroughly disinfected and are exposed to the air. In applying the lymph to the scarified surface the same argument holds good, and the "glycerinized" lymph need not be touched by the operator, while the "dried" lymph-holder must be handled. When the container is opened in the case of the "glycerinized" lymph, the holders are exposed to the air, but the lymph, being in sealed glass tubes, is not exposed to the air or other source of contamination. When the "dried" lymph container is opened, the remaining holders, as well as the lymph, are exposed to the air and other possible sources of contamination.

As to which remains active for the longer time and is more convenient to handle, the answer must be in favor of the "glycerinized" lymph. 1. Because the lymph is in an air-tight container which excludes the air and other sources of contamination. 2. Because the glass is a poor conductor of heat, and the lymph is not subject to such sudden changes of temperature. 3. Because the glycerin is a preservative. These advantages do not hold for the dried lymph.

Convenience of handling has no place where the

welfare of the patient is concerned. Then my voice is for "glycerinized" lymph.

THE LATE PRESIDENT'S CASE.
A CONSECUTIVE ACCOUNT OF THE SHOOTING
OF PRESIDENT MCKINLEY AND OF THE
MEDICAL AND SURGICAL FEAT-
URES OF THE CASE.

(By our Special Correspondent.)

THE CONCLUDING NARRATIVE.

BUFFALO, N. Y., September 14, 1901.

When my account of the President's case closed, just as the *Journal* was going to press, the record had been brought forward to Thursday morning, September 12th. In order that a complete and consecutive account written by one and the same pen may be printed in the *Journal*, I now add a record of the events that transpired during the next two days.

During the whole of Thursday until darkness set in, there was the buoyancy of hope pervading the President's environment inspired by the belief that he had reached the stage of convalescence—a hope apparently fully justified by the statements of Dr. Charles McBurney, as well as those of other physicians and immediate personal friends of the President who came and went at the Milburn house.

The official bulletins of Thursday read as follows:

6.00 a. m.—The President has passed a very comfortable night. Pulse, 120; temperature, 100.2°; respiration, 26.

9.00 a. m.—The President rested comfortably during the night. Decided benefit has followed the dressing of the wound made last night. His stomach tolerates the beef juice well, and it is taken with great satisfaction. His condition this morning is excellent. Pulse, 116; temperature, 100.2°.

3.30 p. m.—The President continues to gain and the wound is becoming more healthy. The nourishment taken into the stomach is being gradually increased. Pulse, 120; temperature, 100.2°.

These are reproduced to show the basis of opinion as to gradual improvement. On Tuesday a small area of the incision was discovered to be ununited. A few stitches were therefore cut, some small foreign particles were removed, and the wound was dressed in a surgical manner. The bulletin of 9 A. M. refers to that fact.

THE PERIOD OF ANXIETY BEGINS.

Soon after the bulletin of 3.30 was issued the President began to complain of fatigue, and during

the evening considerable alarm among his physicians was manifested. It was feared that his nourishment had disagreed with him. Dr. McBurney had left for the East at 1 o'clock (Thursday) feeling confident that all was going well. In the evening Dr. Charles G. Stockton, professor of medicine at the University of Buffalo, was invited to consult with the surgical staff. At 10 o'clock the following bulletin was issued:

The President's condition this evening is not quite so good. His food has not agreed with him and has been stopped. Excretion has not yet been properly established. The kidneys are acting well. His pulse is not satisfactory, but has improved in the last two hours. The wound is doing well. He is resting quietly. Temperature, 100.2°; pulse, 128.

P. M. RIXEY,
M. D. MANN,
ROSWELL PARK,
HERMAN MYNTER,
EUGENE WASDIN,
CHARLES G. STOCKTON.

GEORGE B. CORTELYOU,
Secretary to the President.

Anxiety now began to displace hope in the minds of the comparatively few who heard this news at a late hour, and discussed it in the clubs, corridors, and drawing rooms, while most of the Western world was sleeping.

Friday, September 13th.—Dr. Stockton had remained on duty with the President during the previous night as the associate of Dr. Rixey and Dr. Wasdin. A cathartic action or two of the bowels had been obtained, and by midnight the President was easier and resting quietly. The symptoms of intestinal toxæmia appeared to be relieved and the tension of anxiety was correspondingly lessened, as indicated by the following bulletin given out about 1 A. M.:

All unfavorable symptoms in the President's condition have improved since the last bulletin. Pulse, 120; temperature, 100.2°.

P. M. RIXEY,
EUGENE WASDIN,
CHARLES G. STOCKTON.

GEORGE B. CORTELYOU,
Secretary to the President.

THE PERIOD OF DESPAIR.

It was soon discovered, however, that the President's strength was ebbing, and during the early morning hours those friends and officials who had departed the day before were summoned to return.

An urgent message was sent to the Vice-President, who had gone to the Adirondacks to take his family home to Oyster Bay. Members of the cabinet, Senator Hanna, and other officials were telegraphed for, and all the quiet and hope of Thursday were now changed to gloom and despair, while special trains were hastening hither, at the highest speed to bring relatives, friends, and officials to the bedside of the dying President.

Among others, Dr. E. G. Janeway, of New York, and Dr. W. W. Johnston, of Washington, were summoned in hot haste to augment the medical staff and lend their skill and judgment in what almost seemed a forlorn hope to rescue the President from the jaws of death. They arrived at a late hour Friday night, alas! too late for their services to avail. All day long the dread and gloom increased, but the sad work of the faithful physicians was continued with unrelenting activity and resourceful skill. An oxygen apparatus had been provided in advance, and late in the afternoon and evening it was brought into use. Intravenous saline solutions were also employed at appropriate intervals. In spite of all, however, the great life was slowly but certainly ebbing. The sad story of the bulletins is the history of the day.

Secretary Cortelyou at 3.30 o'clock issued the following bulletin, which was dated 2.50 a. m.:

The President's condition is very serious and gives rise to the gravest apprehension. His bowels have moved well, but his heart does not respond properly to stimulation. He is conscious. The skin is warm, and the pulse small, regular, easily compressible, and 126. Respiration, 30; temperature, 100°.

P. M. RIXEY,
M. D. MANN,
ROSWELL PARK,
HERMAN MYNTER,
EUGENE WASDIN,
C. G. STOCKTON.

GEORGE B. CORTELYOU,
Secretary to the President.

9 a. m.—The President's condition has somewhat improved during the last few hours. There is a better response to stimulation. He is conscious and free from pain. Pulse, 128; temperature, 99.8°.

P. M. RIXEY,
M. D. MANN,
ROSWELL PARK,
HERMAN MYNTER,
EUGENE WASDIN,
C. G. STOCKTON.

GEORGE B. CORTELYOU,
Secretary to the President.

12.30 p. m. — The President's physicians report that his condition is practically unchanged since the 9 o'clock bulletin.

He is sleeping quietly.

GEORGE B. CORTELYOU,
Secretary to the President.

2.30 p. m. — The President has more than held his own since morning, and his condition justifies the expectation of further improvement. Pulse, 123; temperature, 100.4.

P. M. RIXEY,
M. D. MANN,
HERMAN MYNTER,
EUGENE WASDIN,
CHARLES G. STOCKTON.

GEORGE B. CORTELYOU,
Secretary to the President.

4 p. m. — The President's physicians report that he is only slightly improved since the last bulletin. The pulse and temperature remain the same as at that hour.

GEORGE B. CORTELYOU,
Secretary to the President.

5.15 p. m. — The President's physicians report that his condition is grave at this hour. He is suffering from extreme prostration. Oxygen is being given. He responds to stimulation but poorly. Pulse, 125; respiration, 40°.

GEORGE B. CORTELYOU,
Secretary to the President.

6.30 p. m. — The President's physicians report that his condition is most serious in spite of vigorous stimulants. The depression continues and is profound. Unless it can be relieved, the end is only a question of time.

GEORGE B. CORTELYOU,
Secretary to the President.

THE FINAL COLLAPSE.

From this time on until the end there were no more official bulletins. Word was brought, however, to the reporters' camp at short intervals by authorized persons telling a tale of steady decline, and these were conveyed on chained lightning to a breathlessly waiting world.

Soon after 11 o'clock the President lapsed into a state of unconsciousness. He had previously taken leave of his loving wife and his last words were "It is God's way; His will be done, not ours," and in another moment he murmured "Good-by, all; good-by."

Medical treatment was finally discontinued, though he continued to breathe, with slowly fading pulse beats, until Saturday, September 14th, at 2.15 o'clock A. M., when life struck her colors in his cheeks, her signal lights went out in his eyes, and his great saddened heart fainted and grew still.

THE AUTOPSY.

At noon of Saturday an autopsy was made by Dr. H. R. Gaylord and Dr. H. G. Matzinger, of the State laboratory attached to the University of Buffalo, in the presence of the medical staff, all being present except Dr. McBurney, who had been summoned away. The examination was concluded about 2.30 P. M. These were also present: Mr. Penny, district attorney of Erie county, in his official capacity, who was accompanied by his stenographer. Late in the afternoon the following report was given out:

The bullet which struck over the breast-bone did not pass through the skin and did little harm.

The other bullet passed through both walls of the stomach near its lower border. Both holes were found to be perfectly closed by the stitches, but the tissue around each hole had become gangrenous. After passing through the stomach the bullet passed into the back walls of the abdomen, hitting and tearing the upper end of the kidney. This portion of the bullet track was also gangrenous, the gangrene involving the pancreas.

The bullet has not yet been found. There were no signs of peritonitis or disease of other organs. The heart walls were very thin. There was no evidence of an attempt at repair on the part of Nature and death resulted from the gangrene, which affected the stomach around the bullet wounds, as well as the tissues around the further course of the bullet.

Death was unavoidable by any surgical or medical treatment, and was the direct result of the bullet wound.

(Signed) HARVEY D. GAYLORD,
HERMAN G. METZINGER, M. D.;
P. M. RIXEY, M. D.;
MATTHEW D. MANN, M. D.;
HERMAN MYNTER, M. D.;
ROSWELL PARK, M. D.;
EUGENE WASDIN, M. D.;
CHARLES G. STOCKTON, M. D.;
EDWARD G. JANEWAY, M. D.;
W. W. JOHNSTON, M. D.;
W. P. KENDALL.

Surgeon, U. S. Army;
CHARLES CARY, M. D.;
EDWARD L. MUNSON,
Assistant Surgeon, U. S. Army;
HERMANUS L. BAER, M. D.

Thus, the last official act in so far as the science and art of medicine are concerned was done. It may truthfully be said that everything known to medicine and surgery at all applicable to the case had been employed, and, though defeat came, it was without dishonor and is not embittered by disgrace.

POSTSCRIPT.

Monday, September 16th.—That portion of my account which appeared in the *Journal* for September 14th was perhaps as nearly perfect information as could be obtained in the face of confusion and differences of opinion on practically immaterial points, but a few errors of statement crept in. Under the heading "At the Hospital," page 499, for "E. C. Hall" read *E. C. Mann*; for "P. Fellis" read *T. F. Ellis*. Dr. Mann arrived a few minutes after 5 o'clock, instead of "after 4." In an hour and thirteen minutes after the shooting the President was on the table and the administration of ether was begun. It had been preceded by a hypodermic injection of a thirtieth of a grain of *strychnine*. The abdominal wound was situated *five inches and a half* below the left nipple, not "four inches." The first bullet struck on the *middle* portion of the breast bone, instead of on the "upper" portion.

◆◆◆

Therapeutical Notes.

For Erysipelas.—The *Gazzetta degli ospedali e delle cliniche* for May 21st ascribes the following local application to Desesquelle, who says that its use is followed by a diminution of temperature and rapid amelioration:

R Camphorated oil. 450 minims;
Crystallized guaiacol. 15 grains;
Menthol. 15 "

M.

Pills for Use in Heart Troubles with Hepatic Congestion.—The *Gazette hebdomadaire de médecine et de chirurgie* for August 15th gives the following:

R Powdered digitalis, }
Powdered squill, } of each, $\frac{3}{4}$ of a grain;
Scammony resin, }
Calomel. $\frac{1.5}{100}$ of a grain;
Excipient, enough to make 1 pill.

M.

Five may be taken daily after meals for three days.

Or this:

R Powdered digitalis, }
Powdered squill, } of each, $\frac{3}{4}$ of a grain;
Calomel, }
Watery extract of ergot of rye, 1½ grain;
Excipient. enough to make one pill

M.

Five may be taken daily for three days, after meals. The gums must be carefully watched for mercurial stomatitis during the administration of these pills, and for some days afterward.

Pills for Rheumatic and Facial Neuralgias.—Dr. Foustanos (*Ευρωπαϊκή Τροσδοκή*, December, 1900) gives the following:

R Quinine hydrochloride. . . 18 grains;
Morphine hydrochloride. $\frac{9}{10}$ ths of a grain;
Extract of aconite. 3¾ grains.

M. Make eighteen pills. One pill to be taken every two hours. These pills are said to be very effective.

An Ointment for Psoriasis.—Morgenstern (*Therapie der Gegenwart*, 1901, No. 6; *Fortschritte der Medizin*, August 15th) recommends this formula:

R Salicylic acid. 2 parts;
Precipitated sulphur. 10 "
Zinc oxide, } of each. 19 "
Starch, }
Vaseline. 50 "

M.

For Antisepsis of the Nasobuccopharyngeal Cavity in Scarlet Fever.—Aviragnet (*Bulletin médical*, 1901, No. 1; *Progrès médical belge*, July 15th) gives the following formulæ:

For antisepsis of the nose—

R Vaseline. 450 grains;
Boric acid, finely powdered. . . 60 "
Menthol. from 3 to 4½ "

M.

Or,

R Vaseline. 450 grains;
Resorcin. 4½ "

M.

For local application.

The author also recommends equally injections of mentholated oil, 1 in 50, or, as being less painful, the following:

R Olive oil, sterilized. 300 minims;
Resorcin. 15 grains;
Oil of peppermint. 11 drops.

M.

Eight drops to be instilled into each nostril morning and evening.

Antisepsis of the mouth may be attained by washing with boiled water to which a borated, naphtholized, carbolized, or thymolized solution has been added; while the tonsils and pharynx should be painted with borated, salicylated, or resorcinized colutories.

Cocaine for the Pain of Gastric Cancer.—Dr. Dieulafoy (*Lyon médical; Revue médicale*, July 17th) recommends:

R Cocaine hydrochloride. $\frac{4.5}{100}$ of a grain;
Morphine hydrochloride. $\frac{1.5}{100}$ " "
Lime water. 1,500 minims.

M.

Every hour a coffeespoonful in a tablespoonful of iced milk. An ice-bag may be placed at the epigastrium. The quantity of milk may occasionally be increased.

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NEW YORK, SATURDAY, SEPT. 21, 1901.

THE CASE OF PRESIDENT MCKINLEY.

At the very moment of our going to press last week, which had been delayed in order that we might give our readers as complete an account as possible of the late President's case, we were able to prefix to our special correspondent's narrative a brief dispatch from Buffalo announcing the onset of alarming symptoms and closing with the statement: "The situation is most grave." It was impossible, however, to change the hopeful tone of our editorial article on the case, a tone that was based on the bulletins issued by those of our professional brethren who were in attendance. They were perfectly frank in their statements, and it is evident that they were unanimous as to the prognosis; otherwise they would not all have signed the bulletins and, above all, they would not have allowed Colonel Roosevelt to leave Buffalo. So far as the facts in the case were then known to them, they were, we think, warranted in expecting the recovery of their illustrious patient; the deplorable outcome of the case reflects not in the least upon their skill or judgment, but serves only as a sad illustration of the limitations of our knowledge. Medicine and surgery have made wonderful advances within recent years, but they have not yet reached mathematical precision. It is a melancholy consolation to know that the fatal termination of President McKinley's case was not in the slightest degree due to any omission to give him the full benefit of all the present resources of our art; and there is nothing humiliating in the fact that the favorable prognosis which for five or six days seemed justified should have finally proved fallacious.

It is expected that an "official" report of the case will be given to the profession in the course of a

short time. Pending the issue of the report, let us briefly review the case. At the time of his assassination, President McKinley was probably in better physical condition than most men of his age, fifty-eight years, who lead a sedentary life. So far as is known, he was free from all organic disease, though his vitality may have been somewhat impaired by the fearful mental strain to which the duties of his office and its responsibilities and anxieties had long subjected him. He was suddenly cut down by a cruel wound, but he bore it bravely and there was little of the condition known as shock. This freedom from shock was correctly interpreted as showing that no considerable internal hæmorrhage was going on. Without delay he was taken to a well-equipped hospital and attended by surgeons of world-wide reputation and vast experience. The operation itself was performed by an exceedingly capable gynecologist, who was assisted by equally capable general surgeons. It is perfectly certain that there was no technical fault in the operation, and it may be said with equal positiveness that it would have verged on madness to prolong the search for the bullet after it had been ascertained that it had not inflicted any very grave injury beyond that of the stomach—ascertained, that is to say, within the limitations of warrantable efforts. The amount of time consumed in a major operation, especially one dealing with the abdominal organs, is of vast importance as affecting the patient's chances of recovery; other things being equal, a short operation promises much better results than a prolonged one, for every minute of exposure of the viscera to the air and of their subjection to manipulation detracts from the probability of the patient's ultimate recovery.

The operation having been finished without seriously taxing the distinguished patient's vital powers, there followed at least five days of freedom from serious symptoms. This we say with full appreciation of the fact that the record of the pulse and respiration seemed ominous, for the high rate might have been due to any one of a number of conditions not in themselves of grave import. The hopeful view was taken, and quite naturally, that it could be so explained. It is easy to be wise after the event, and to say that in this respect the surgeons were in error; err they certainly did, as the result shows, but to err in such a way argues no in-

capacity or avoidable lack of judgment—it simply, we repeat, illustrates the fact that the medical man is not a perfect being.

The newspapers have taken great pains to give accurate reports of the progress of the case, and it is a source of very great satisfaction to us to be able to say that, even since the fatal termination, their comments have in remarkably few instances been reproachful. Still, the accounts given to the public this week rather tend to create the impression that there is essential disagreement among the surgeons as to the real cause of the sad ending of the case. We do not think that any such disagreement really exists. With every desire to report a medical man correctly, the interviewer may innocently fall into misrepresentation. For instance, one of the surgeons has been represented as expressing the belief that the bullet was “poisoned.” Now, whatever that gentleman may have said, we do not believe that he intended to convey the idea that a gross poison had been smeared over it or incorporated in its substance. It is not at all improbable that there were pathogenic bacteria on the surface of the missile, but so there often are on every ordinary material used by man. We know of no “poison,” in the ordinary acceptance of the word, that in only such minute amount as could be smeared on a bullet—or in any amount, for that matter—could, when driven into the body, set up gangrene after at least five days of inoffensiveness.

Then, too, another of the surgeons is reported as attributing the gangrene to the baleful effect of the pancreatic “juices,” he affirming that the pancreas was wounded, whereas Dr. Mann, who performed the operation, says distinctly that that organ was not wounded. By contiguity to a mass of gangrenous tissue an organ may well take on a gangrenous condition without having itself been originally injured, even by contusion, and the “juices” which it might then pour forth to inoculate other structures would be the ichorous discharge from its necrotic surface rather than its physiological secretion, although we can well understand that the pancreatic secretion itself is not innocuous. The idea of intestinal toxæmia, which appears to have been entertained for a time as accounting for the earlier of the unfavorable symptoms, was natural, but such a condition could hardly have given rise to grave alarm, for toxæmia of enteric origin is rarely the cause of

more serious results than transitory functional disturbances.

Gangrene was probably established two or three days before the fatal issue followed, but it could hardly have occurred very early without giving rise to more disquieting phenomena than augmentation of the pulse and respiration rates, which, as we have said before, might well have been due to some comparatively unimportant disturbance. To the wound of the kidney we attribute little importance further than arises from the fact that it made one more traumatic surface to become gangrenous. There is said to have been a trifling degree of hæmaturia of brief duration, but not enough to indicate a very serious renal lesion.

The case of the profoundly lamented President may be set down as unique in some of its features, not so much perhaps as regards the actual traumatism inflicted by the assassin's bullet as with regard to the deferred appearance of the gangrenous process that blotted out his fair prospects of recovery. The profession eagerly awaits the appearance of the authoritative statement which, it is understood, his surgeons are soon to issue, but undue haste should not be allowed to interfere with the thoroughness of the document.

“GLYCERINATED” VACCINE LYMPH *VERSUS* DRIED LYMPH.

In the fourth series of Our Subscribers' Discussions, published in this issue of the *Journal*, in regard to the relative value of these two forms of vaccine it will be noticed that only one of the participants prefers the dried lymph, namely, Dr. Weston, of Duluth, to whom the prize is awarded. We have received more answers to our question than we have been able to publish, and all the writers whose answers we do not print prefer the “glycerinated” lymph. Nevertheless, the pages of some of our contemporaries during recent months have shown evidence of considerable dissatisfaction with that form of vaccine, and we are far from being convinced that it has a single point of superiority over dried lymph. Leaving the main question for further consideration, however, we may be allowed to point out the fallacy of one of the statements on which a preference for “glycerinated” lymph is based.

It is a great mistake to suppose that there is any considerable difficulty in preserving dried lymph for transportation unimpaired to any part of the world. But, in the language of the comic opera, "it depends on the way it is done." It must be really dried, chemically desiccated, and then it must be kept excluded from the air. It need not be kept in a refrigerator, and, if it is properly prepared, no ordinary temperature injures it in the least. To the best of our information, the prime importance of the thorough desiccation of vaccine lymph was first suggested some twenty years ago, by the late Dr. Jerome H. Kidder, who was then in the medical corps of the navy and on duty in the Naval Laboratory in Brooklyn. Dr. Kidder's theory was exhaustively tested at the time and absolutely demonstrated to be correct. We remember that the following was one of the tests employed: Ordinary dried vaccine slips were subjected to several days' additional desiccation by exposure in hermetically sealed receptacles to the presence of strong sulphuric acid or anhydrous calcium chloride, sometimes the one and sometimes the other being used, according to methods well known to all chemists. They were then sealed in a piece of rubber tubing and kept constantly at a temperature of 98° F. for a month. At the end of that time they were found to be quite equal in potency to fresh lymph. Slips thus prepared were sent to England by mail, brought back to New York by mail, and then used successfully. They were even sent as far as to Japan and found to be unimpaired on their return. Such tests were applied over and over again. There is no difficulty, then, in transporting dried lymph without lessening its efficiency.

The trouble was that in the days when these tests were applied the profession had not learned that vaccine could be kept for long periods without impairment. They demanded that it should be "fresh," that is, not more than four or five days old; consequently they often received from conscientious purveyors material that would never have been issued if there had been time to test it. In a long series of transmissions of vaccinia from calf to calf, some of the animals yield lymph of standard potency, while others furnish a decidedly weak product, perhaps almost if not quite inert, and there is every grade between the two. Generally there is no obvious reason for the difference or any apparent in-

dication that would lead one to expect it. Physiological testing of the product is the only means of distinguishing between the good and the bad; if time is given for that, there need be no dearth of dried vaccine having all the efficiency desired.

It has been demonstrated again and again that the unpleasant local effects that sometimes follow vaccination are seldom the result of any original contamination of the virus, and they never will be if the most ordinary precautions are taken; hence the addition of a germicide is not at all necessary, especially that of a feeble one like glycerin, which, whatever else it may do to vaccine, certainly dilutes it and so, one would suppose, diminishes its potency. Given a vaccine free from noxious contamination—and dried lymph should always be that—what is wanted is one that will act promptly and produce typical pocks. Such, we believe, is dried lymph properly prepared, properly transplanted, and properly used.

SYPHILIS AS A REMOTE CAUSE OF PRESSURE PARALYSIS.

It is difficult to imagine that syphilitic infection of only five weeks' standing can so profoundly affect the nervous system as to play a noteworthy part in the ætiology of traumatic paralysis; yet Dr. A. Sarbo (*Ungarische medizinische Presse*, 1901, No. 8; *Deutsche Medizinisch-Zeitung*, July 8th) accords it a rôle in the production of paralysis of both brachial plexuses in a case in which, owing to the severity of the stage of excitement in chloroform anæsthetization, it was thought necessary to tie the patient's arms together. It would be interesting to know how long the restraint was continued.

SELF-INFLICTED CÆSAREAN SECTION

Dr. R. Löffler, of Zenica, in Bosnia (*Wiener medicinische Wochenschrift*, 1901, No. 10; *Centralblatt für Gynäkologie*, August 10th), relates the case of a woman who, being pregnant with her fifteenth child and at the same time suffering with advanced tuberculous pulmonary disease and osteomalacia, cut her own belly open, saw the foetus fall out, fainted, and, on regaining consciousness, woke her sleeping daughter and bade her sew up the wound. The girl, who was only thirteen years old, obeyed the behest, using a rusty needle and waxed hempen twine. Both the mother and the child, which was perfectly uninjured, survived, and the mother's osteomalacia was improved. "*Man sollte es kaum glauben!*" says the epitomizer, and not without reason, it seems to us.

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general, during the week ending September 14, 1901:

Smallpox United States.

California	San Francisco	Aug. 25-Sept. 1	2 cases.	
Massachusetts	Boston	Aug. 31-Sept. 7	13 cases.	
"	Medford	Aug. 31-Sept. 7	1 case.	
Minnesota	Minneapolis	Aug. 31-Sept. 7	2 cases.	
New Jersey	Newark	Aug. 31-Sept. 7	9 cases.	2 deaths.
New York	New York	Aug. 31-Sept. 7	6 cases.	1 death.
Pennsylvania	Philadelphia	Aug. 31-Sept. 7	12 cases.	4 deaths.
Utah	Salt Lake City	Aug. 24-Sept. 7	5 cases.	
Wisconsin	Green Bay	Sept. 1-8	1 case.	
"	Milwaukee	Aug. 31-Sept. 7	1 case.	

Smallpox Foreign.

Belgium	Antwerp	Aug. 17-24	1 case.	
Brazil	Pernambuco	July 17-31		44 deaths.
Br. Columbia	Vancouver	Aug. 1-31	1 suspect.	
Colombia	Panama	Aug. 26-Sept. 2	12 cases.	
Ecuador	Guayaquil	June 22-Aug. 7		1 death.
France	Paris	Aug. 17-24		9 deaths.
Gr. Britain	Leeds	Aug. 24-31	1 case.	
"	London	Aug. 17-24	41 cases.	
India	Calcutta	Aug. 3-10		2 deaths.
"	Madras	Aug. 3-9		7 deaths.
Italy	Messina	Aug. 16-24	8 cases.	
"	Naples	Aug. 17-24	115 cases.	22 deaths.
"	Palermo	Aug. 19-24		1 death.
Russia	Moscow	Aug. 10-17	2 cases.	
"	St. Petersburg	Aug. 4-11	12 cases.	
Uruguay	Montevideo	July 18-25	10 cases.	

Yellow Fever.

Costa Rica	Liberia	Aug. 25	Prevalent.	
"	Port Limon	Aug. 18-24	8 cases.	1 death.
Cuba	Havana	Aug. 24-31	7 cases.	2 deaths.
"	Inoculation Station	Aug. 24-31	1 case.	
Mexico	Merida	Aug. 16-24		2 deaths.
"	Vera Cruz	Aug. 24-31	3 cases.	2 deaths.

Cholera.

India	Bombay	Aug. 6-13		9 deaths.
"	Calcutta	Aug. 3-10		6 deaths.
"	Madras	Aug. 3-9		45 deaths.
Japan	Island of Shikoku	Aug. 6	3 cases.	
"	Yokohama	Aug. 3-10	1 case.	

Plague—Insular.

Philippines	Camp Stotenberg	July 13-20	2 cases.	
"	Manila	July 13-Aug. 3	26 cases.	21 deaths.

Plague—Foreign.

India	Bombay	Aug. 6-13		197 deaths.
"	Calcutta	Aug. 3-10		17 deaths.
"	Karachi	July 24-Aug. 11	17 cases.	13 deaths.
Japan	Formosa	Aug. 6		Epidemic.
Straits Settlements	Singapore	July 20-27		1 death.
China	Hongkong	July 27-Aug. 3	13 cases.	11 deaths.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending September 14, 1901:

DISEASES.	Week end'g Sept. 7		Week end'g Sept. 14	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	83	27	116	23
Scarlet fever	65	8	93	8
Cerebro-spinal meningitis	0	2	0	2
Measles	39	0	35	7
Diphtheria and croup	95	16	123	26
Small-pox	6	4	8	3
Tuberculosis	242	128	237	146

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Two Weeks ending September 14, 1901:

CARPENTER, D. N., Passed Assistant Surgeon. Detached from the Naval Hospital, Norfolk, Virginia, and or-

dered to duty in connection with fitting out the *Illinois*, and to duty on that vessel when put into commission.

COSTIGAN, G. D., Passed Assistant Surgeon. His resignation accepted, to take effect September 16th.

CRAWFORD, M. H., Surgeon. Detached from duty at the marine recruiting rendezvous, New York, and ordered to duty in connection with fitting out the *Illinois*, and to duty on that vessel when put into commission.

GRUNWELL, A. G., Assistant Surgeon. Detached from the *Brooklyn* and ordered home.

PERSONS, R. C., Medical Inspector. Ordered to duty at the marine recruiting rendezvous, New York, and to other special duty.

RIGGS, C. R., Passed Assistant Surgeon. Detached from the New York Navy Yard and ordered to the Port Royal Naval Station.

TAYLOR, W. E., Medical Inspector, retired. Ordered to the Honolulu Naval Station.

THOMPSON, J. C., Assistant Surgeon. Detached from the Port Royal Naval Station and ordered to the *Columbia*.

WELLS, H., Medical Inspector. Ordered to the Boston Navy Yard.

YOUNG, R. M., Assistant Surgeon. Detached from the Naval Hospital, New York, and ordered to the New York Navy Yard.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending September 14, 1901:

FORD, JOSEPH H., First Lieutenant and Assistant Surgeon, is granted leave of absence for two months.

GREENLEAF, CHARLES R., Colonel and Assistant Surgeon-General, is granted leave of absence for two months.

HAINES, ABRAM L., Major and Surgeon, United States Volunteers, will proceed to the Philippine Islands on the transport *Sheridan*, and upon his arrival at Manila he will report to the commanding general, Division of the Philippines, for duty.

KIRKPATRICK, T. J., Captain and Assistant Surgeon, is granted leave of absence for one month.

MILLHOFF, CLARENCE B., First Lieutenant and Assistant Surgeon, will remain on duty with and accompany the Third Squadron, Fourth Cavalry, to Jefferson Barracks, Missouri, and upon completion of this duty he will report to the adjutant-general of the Army for further instructions.

RICHARDSON, G. H., Contract Surgeon. The leave granted him is extended five days.

STRONG, RICHARD P., First Lieutenant and Assistant Surgeon, will report to the surgeon-general of the Army for temporary duty, and upon completion he will proceed to San Francisco for transportation to Manila for duty as director of the Government Biological Laboratory at Manila.

SWIFT, EUGENE L., Major and Surgeon, will proceed to Fort Leavenworth, Kansas, for duty.

Society Meetings for the Coming Week:

MONDAY, September 23d.—Medical Society of the County of New York; Lawrence, Massachusetts. Medical Club (private); Cambridge, Massachusetts. Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, September 24th.—New York Dermatological Society (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, September 25th.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; American Microscopical Society of the City of New York; Auburn, N. Y., City Medical Association; Berkshire, Massachusetts. District Medical Society (Pittsfield); Philadelphia County Medical Society.

THURSDAY, September 26th.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopædic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Massachusetts, Society for Medical Improvement (private); Pathological Society of Philadelphia (conversational).

FRIDAY, September 27th.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

Change of Address.—Dr. James Goldlust, to No. 153 East Ninetieth Street, New York.

Dr. Gustav G. Fischlowitz has been appointed assistant attending surgeon to the New York Maternity Hospital.

Dr. Walter M. Brickner has been placed in charge of the Röntgen-ray Department of the Mount Sinai Hospital, New York.

The Gulf Coast Medical and Surgical Association met at Bay St. Louis, Miss., on September 4th. Dr. Duke, of Pascagoula, presided, and Dr. Pope, of Moss Point, acted as secretary. A number of papers were read and a pleasant time passed. The next meeting will be held in Scranton.

A Suggestion to Use Hospital Roofs as Open-air Hospitals.—At a meeting of physicians at Trenton, N. J., a novel suggestion made by Dr. Adams was that the roofs of hospitals might be utilized for open-air hospitals for caring for diseases which, like phthisis, require such treatment.

The Workers in Leather Factories Warned Against Anthrax.—Dr. William B. Little, city physician of Lynn, Mass., warns employees of morocco factories against anthrax, to which disease they are exposed in their work unless they exercise the greatest care. Six cases have been treated at the Lynn Hospital in three years. Five of these proved fatal.

The Second International Congress of Physicians of Insurance Companies.—The State Department at Washington has received a note from the Netherlands Legation to the effect that the second international congress of physicians of insurance companies will be held in Amsterdam from September 23d to 25th. The United States is invited to send official delegates.

Malpractice Charged against a Christian Scientist.—A suit for \$6,000 damages in which malpractice is alleged, and in which the Rev. Irving C. Tomlinson, first reader in the Christian Science church at Concord, N. H., is the defendant, has been brought by Mrs. J. A. Spead, a widow, who alleges that she accepted treatment for appendicitis and that she did not receive common skill and care.

The Fiske Fund Prize Essay.—At the annual meeting of the Rhode Island Medical Society, held on June 7, 1901, the trustees of the Fiske Fund announced the following subject for the year 1902: Serum-therapy, in the Light of the

Most Recent Investigations. For the best essay on this subject worthy of a premium they offer the sum of two hundred dollars (\$200). The secretary of the board of trustees of the society is Dr. Halsey De Wolf, 212 Benefit Street, Providence, R. I.

Presentation to Dr. Jacob Fuhs, of Brooklyn.—Dr. Jacob Fuhs, attached to St. Catharine's Hospital, Brooklyn, for twenty-five years, was presented, on September 12th, with a beautiful silver loving cup on behalf of the visiting staff of that institution. The inscription on the loving cup is as follows: "Presented to Jacob Fuhs, M. D., for valuable services rendered during the last twenty-five years to St. Catharine's Hospital." Underneath is inscribed "1876—September 12, 1901," and on the opposite side is a picture of the hospital.

A Statement by President McKinley's Physicians.—Under date of September 18th, the following has been issued: "The undersigned surgeons and physicians who were in attendance on the late President McKinley have had their attention called to certain sensational statements recently published indicating dissensions and mutual recrimination among them. We desire to say to the press and public, once for all, that every such publication and all alleged interviews with any of us containing criticisms of one another or of any of our associates are false.

"We say again that there was never a serious disagreement among the professional attendants as to any of the symptoms or as to the treatment of the case or as to the bulletins which were issued. A very unusual harmony of opinion and action prevailed all through the case. The unfortunate result could not have been foreseen before the unfavorable symptoms declared themselves late on the sixth day, and could not have been prevented by any human agency.

"Pending the completion and publication of the official reports of the post-mortem examiners and attending staff we shall refuse to make any further statements for publication, and alleged interviews with any of us may be known to be fictitious.

"MATTHEW D. MANN.

"ROSWELL PARK.

"HERMAN MYNTER.

"EUGENE WASDIN.

"CHARLES G. STOCKTON.

Charter of New Jersey's Diploma Mill Will be Surrendered.—When the Central University of Medicine and Science, at 68 Montgomery Street, Jersey City, N. J., was closed recently on the charge that the manager, John W. Norton-Smith, had been selling medical diplomas to all comers at \$10 each, the case was submitted to Assistant Prosecutor George T. Vickers. He made an investigation, and found that the university was duly incorporated under the laws of New Jersey. Mr. Vickers advised that measures be taken to forfeit the charter Smith had secured from the State. This condition of affairs was placed before counsel for Smith, who

submitted a proposition that Smith should consent to a forfeiture of the charter in consideration that no further action be taken. This was agreed to, and Smith surrendered himself. He gave bail in \$200 to await the action of the Grand Jury. This is merely precautionary, however, in order that Smith may be held to his agreement.

Civil Service Examination for Medical Inspector of the New York City Health Department.—

The Municipal Civil Service Commission has announced the results of the competitive examination for the position of medical inspector in the New York City Health Department. The examinations were held on June 26th, 28th, and 30th. There were upward of eight hundred applicants, but not all were allowed to take the examination, priority of application being considered. The names of those who attained the highest averages and who therefore head the new eligible list are Dr. Walter B. Power, 117 West Seventy-first Street, 91.6 per cent.; Dr. George Alexander Saxe, 180 East Seventy-ninth Street, 89 per cent.; Dr. Hyman Finkelstone, 240 West One Hundred and Fourteenth Street, 88.2 per cent.; Dr. Abraham Goldwater, 66 East One Hundred and Twelfth Street, 87.2 per cent.; Dr. W. E. Jennings, 931 Jefferson Avenue, Brooklyn, 87.2 per cent., and Dr. Benjamin R. Tripper, 246 West Fifty-first Street, 87 per cent. The new eligible list includes 145 names of applicants who attained an average of over 75 per cent. The appointments to the positions of medical inspector will be made by the president of the board of health before the 1st of October. There are at present twenty-one vacancies on the School Inspection Service, and thirty-five names taken from the top of the eligible list have been sent to the appointing officers, from which list the latter will make his selections.

The number of applicants is explained by the fact that it is some time since an examination of this kind has been held in this city, the previous eligible list not having become exhausted until recently.

Caldas's Serum is Rejected.—Acting Governor General Scott of Cuba has received the report of the yellow fever board, presided over by Major Havard, chief surgeon in Cuba, which was appointed as a special commission to investigate the Caldas serum. The findings are: First, that Dr. Caldas has kept his alleged discovery from the study of other scientists. Second, that the claim made by Dr. Caldas that the pathogenic agent of yellow fever is found only in the intestinal tract is in direct opposition to the evidence furnished by the mosquito inoculations and direct blood inoculations made by the board presided over by Surgeon Major Reed. Third, that the attempt made by Dr. Caldas to immunize an individual against yellow fever by means of the vaccine prepared by him has failed. The commission, therefore, recommends that further experiments with the vaccine serum of Dr. Caldas be discontinued. Previous to this report being received Dr. P. Caldas landed in New York. He said the reports that patients he had treated in Havana with his serum and vaccine had died were untrue.

The only man the war department had permitted him to vaccinate had recovered. His name, he said, was Paulino Alonzo. The other three subjects who died from the treatment by infected insects, Dr. Caldas declared, he had never seen. He was not permitted to operate on these subjects with his serum and vaccine, and their deaths, in his opinion, were not due to yellow fever, but to blood poisoning, the result of the mosquito bites. Dr. Caldas said that he had practised medicine in Brazil for thirty years, and for nearly twenty years he had been successful in the use of his serum and vaccine in the treatment of yellow fever cases. Some years ago he imparted his secret to Dr. Belinzaghi, who used it successfully on many yellow fever patients in Havana. Learning of the way that Dr. Caldas had been treated by the war department officials in Cuba, and because a course of experiments had been previously arranged for this fall in Rio Janeiro, the Brazilian government, Dr. Caldas said, had asked him to return home. He sailed on September 5th.

Births, Marriages, and Deaths.

Married.

BOWMAN—POOLE.—In Madison, Wisconsin, on Tuesday, September 3d, Dr. Frank F. Bowman and Miss Louise Poole.

BOYD—SHANK.—In Washington, on Thursday, September 5th, Dr. Carl Bainbridge Boyd and Miss Ruth Ernestine Shank.

BROWN—LEE.—In Sound Beach, Connecticut, on Tuesday, September 10th, Dr. Richard Ewell Brown, of New York, and Miss Marion Lee.

DALE—KERN.—In Atlantic City, N. J., on Wednesday, September 4th, Dr. Frederick Allport Dale, United States Army, and Miss Caroline Maude Kern.

HATFIELD—SPEAR.—In Wallingford, Pennsylvania, on Saturday, September 14th, Dr. Charles J. Hatfield and Miss Louise M. Spear.

IRISH—MURPHY.—In Elberon, N. J., on Tuesday, September 17th, Dr. James Herbert Irish, of Syracuse, N. Y., and Miss Virginia Hulburt Murphy.

KITTREDGE—BURLINGAME.—In Matteawan, N. Y., on Wednesday, September 18th, Dr. Charles Albert Kittredge and Miss Laura Burlingame.

STONE—BIDDLE.—In Healdsburg, California, on Wednesday, September 11th, Dr. Mack Stone, United States Navy, and Miss Edna Biddle, daughter of Dr. Edwin Webber Biddle.

WINTERMUTE—CULVER.—In St. Louis, on Monday, September 9th, Dr. George Preston Wintermute, of San Francisco, and Miss Ida Culver.

Died.

BOUDE.—In Ocean City, N. J., on Sunday, September 8th, Dr. John Knox Boudé, of Washington, in the sixty-ninth year of his age.

KIDDER.—In Baltimore, on Tuesday, September 3d, Mrs. Mary R. Kidder, wife of Dr. B. H. Kidder, United States Navy.

McKINLEY.—In Polk, Pennsylvania, on Saturday, September 14th, Dr. William McKinley, in the forty-fourth year of his age.

RITCHIE.—In Georgetown, D. C., on Monday, September 9th, Dr. Louis Warfield Ritchie, in the fifty-eighth year of his age.

SMITH.—In Westfield, N. J., on Thursday, September 12th, Dr. Theodore Z. Smith, in the forty-ninth year of his age.

STALEY.—In Baltimore, on Monday, September 9th, Dr. George Lewis Staley, Jr., in the forty-fourth year of his age.

Pith of Current Literature.

Journal of the American Medical Association.
September 14, 1901.

The Nature of the Cancerous Process. By Dr. Roswell Park.—According to the author, the parasitic, or infectious, theory of cancer is the only one which satisfies the needs of both the pathologist and the clinician. He points out that bacteria are by no means the only possible parasites, as the history of malaria has proved, and, with cancer, it is a question of organisms of which, as yet, we know little—we do not even know that Koch's laws for the determination of the infectious disease are valid for these forms. However, these canons have been almost complied with in the Buffalo investigations. It cannot yet be said, though, that the disease is found wherever the organism is found. The cancer organism cannot yet be identified outside the human body. The organisms can be and have been cultivated and successfully inoculated. Drugs are known which destroy the protozoa that cause malaria, and the author hopes that something may yet be found which may have the same destructive effect upon the parasites which produce cancer, without being inimical to the animal cells of the human body.

Early Diagnosis in Carcinoma. By Dr. Charles A. Powers.

Some Phases of Malaria. By Dr. J. B. McElroy.—The author reports a case occurring in a negro, sixty years of age, illustrative of perniciousness in malarial disease and of gangrene in such disease. The author controverts the statement that the negro is relatively immune from malaria, and sometimes that he is absolutely so.

Medical Shock. By Dr. O. T. Osborne.—The author mentions the shock due to acute malignant infection, which may be largely profound acute anemia due to destruction of the red blood corpuscles. He believes that many deaths attributed to the acute disease present are really due to this condition of medical shock or heart failure.

The Spread of Tuberculosis by Coughing. By Dr. L. Napoleon Boston.

Treatment of Certain Forms of Cancer by the X Rays. By Dr. Francis H. Williams.—The advantages of this new method as put forth by the author are as follows: The treatment causes no pain; healing is produced without creating a burn; some cases improve after a certain number of sittings without renewal of the treatment; the treatment can be carried out without interfering with the work of the patient. The disadvantages are the principal morbid manifestations of the treatment and the great care necessary in its application.

The Relation of Unbalanced Physical Development to Pubertal Morbidity as Shown by Physical Measurements. By Dr. W. S. Christopher.—The author finds that there is an exaltation of the vital processes at the period of puberty which

finds its expression not only in an increased rate of growth, but also in the development of physical power. This exaltation is preceded by a period of relative quiescence. It comes earlier in girls and is more marked in them as regards weight and stature, but less in measurements involving physical power. Mortality is low and morbidity is high. Neuroses, psychoses, neurasthenias, cardiopathies, deformities, and anæmias are the principal morbid manifestations of the physical, intellectual, and emotional turmoil which characterizes puberty. The great range of the measurements at puberty expresses the condition which permits the existence in individual children of unusual lack of balance in physical measurements, or maladjustment of physical features.

Reduction of Dislocation of the Shoulder by Continuous Traction. By Dr. John Glendon Sheldon.

Babe with One Lung. By Dr. Ralph Hanson.

Boston Medical and Surgical Journal, September 12, 1901.

The Use of Gynæcology by the General Practitioner. By Dr. Edward Reynolds.—In this, the annual address before the Maine Medical Association, the author points out that, as gynæcology is not exclusively a surgical subject, a large part of the field must be of immediate concern to the general practitioner. The author regrets that our medical schools are spending so much time in attempting to impart skilled touch to a mass of medical students in from one to, at best, a few dozen examinations apiece, and in lecturing to them upon the refinements of operative technics without grounding them in a knowledge of symptomatology.

Some Cases of Cancer Treated by the X Rays. By Dr. Francis H. Williams.—The author believes that, though, from the surgical standpoint, an operation would probably be advised, we have now got far enough to justify the use of the x rays in the early stages also, and to teach the community that these growths may be healed by a harmless and painless method, so that few of them will be allowed to advance to serious dimensions through delay from fear of the knife. The first effects of the x rays are apparent within two or three weeks or in some cases within a few days.

General Anæsthesia in Operations upon the Nose and Throat—Nitrous Oxide, Chloroform, and Ether. By Dr. F. E. Hopkins.—The author refers to the method of rectal etherization as a method which, could it be safely and easily followed, would be a great convenience in operations about the face and throat.

Eosinophile Leucocytes and Nuclein Bases. By Dr. Edward T. Williams.—The presence of nuclein bases in eosinophilia proves that there is a decomposition of nuclein going on somewhere within the body. Where are these decomposing cells? Are they not the eosins themselves? In what other cells, fixed or free, do we find any evidence of decomposition, or even any evidence of change?

Discussion upon Climatic Treatment of Pulmonary Tuberculosis versus Home Sanatoria. By Dr. S. G. Bonney.

Philadelphia Medical Journal, September 14, 1901.

The Ætiology and Early Diagnosis of Pulmonary Tuberculosis. By Dr. D. Gilbert Gordon.—In a text-book article the author treats of the subjects indicated in the title. He attaches great importance to alcohol as an ætiological factor in tuberculosis. In his opinion the Röntgen ray is certainly valuable as a means of diagnosis, and especially so as eliciting a confirmatory sign. The tuberculin test, when used in suitable cases, is the most certain of all tests, but the discovery of the bacillus by the microscope is the one absolutely certain sign that we possess of the existence of tuberculosis. He believes, however, that a diagnosis of the disease can be made in most cases before the bacillus can be found.

Employment of the Recuperative Power of the Heart as an Estimate of its Functional Ability. By Dr. Martin Mendelsohn.—The greater the number of kilogrammes that a heart can master and then return to its normal number of beats, the greater is its functional power. The author finds that under an external work of about 300 kilogrammes recuperation takes place, in a normal heart, even during the work, and the second amount of work required for a transitory decrease in heart beats to result is 500 kilogrammes before the normal number is again reached. If we test the functional activity of the heart in our patients in this manner, we shall have, according to the author, a simple and accurate auxiliary method for observing and following up the conditions of their hearts; not the anatomical condition, which is of but little importance for therapeutical and prophylactic purposes, but the condition of the functional activity of the organ.

The Principles of Treatment of Tuberculous Laryngitis. By Dr. St. Clair Thomson.—Pathology and clinical experience show that in the majority of cases the focus of infection is near or in the crico-arytænoid joint. Many cases present themselves at a stage when there is no possibility of effecting a cure by local measures. In the light of our present knowledge and therapeutical resources, the most rational principle is to attempt to make a diagnosis of the disease while it is in the incipient stage. Any persistent or suspicious laryngeal catarrh should be treated seriously on even a presumptive diagnosis. Once the diagnosis has been made the patient should be treated on the principles laid down in the modern method of sanatorium treatment. Symptomatic treatment should be directed to any irritative, catarrhal, or obstructive condition of the air-passages. Silence should be enjoined.

The Treatment of Tuberculosis with Urea. By Arthur H. Buch, F. R. C. S.—The author is convinced that, in some cases at least, urea is of great benefit in tuberculosis. He states, however, that it is impossible at the present time to understand precisely why and how urea can act beneficially in tuberculosis, or exactly what

changes take place on its reentrance into the body.

Undiluted Milk in the Chronic Gastro-enteritis of Rhachitic Infants. By Dr. Maurice Ostheimer.

Unusual After-effects of a Snake Bite. By Dr. Lawrence E. Holmes.

American Medicine, September 14, 1901.

Wounds of the Thoracic Duct occurring in the Neck. Report of Two Cases. Résumé of Seventeen Cases. By Dr. Dudley P. Allen and Dr. C. E. Briggs.—Injuries of the thoracic duct may occur as the result of diseased processes or from serious traumatisms. They may also occur from accidental wounds of the neck and as the result of division of the duct during an operation. On account of the anatomical location of the thoracic duct these injuries are, of course, usually on the left side. The authors' two cases were seen in the surgical service at Lakeside Hospital, Cleveland. In the first case, it was not a simple leakage from an undiscoverable wound, but was a stream of good size, flowing up between five and six centimetres into the air. The wound was closed at once by a catgut suture, and no subsequent leakage took place, the wound healing by first intention. The fluid was translucent, was whitish-gray in color, and presented to the naked eye the physical characteristics of chyle. (*To be continued.*)

The Practical and Scientific Value of the Blood Examination to the Medical Man and Surgeon. By Dr. Robert N. Willson.—The author takes issue with Dr. John B. Deaver in regard to the latter's assertions in a recent paper. The title of the paper was The Examination of the Blood in Relation to Surgery of Scientific, but often of no Practical Value, and may Misguide the Surgeon. The author believes that the assertions of Dr. Deaver will appear unfair to many who are watching and endeavoring to stimulate the laboratory side of clinical medicine and surgery.

Condition of Epileptics in Pennsylvania. By Dr. Wharton Sinkler.—The benefit of a well-regulated life and constant outdoor employment to the physical health of the patients is very great, and in the two institutions referred to by the author a notable decrease has been observed in the number of fits which the patients have had. The bromides are given in very much smaller doses, and very little other medicine is required. A decided improvement is noted in the mental action and intelligence of the patients. These results accord with those obtained in the other colonies for epileptics, in Europe, as well as in this country.

Modern Experience versus Ancient Tradition Concerning Alcohol as a Beverage and Medicine. By Dr. H. D. Didama.—The author is opposed to the use of alcohol in any form, at any time, for any purpose. He points out that after the introduction of Behring's antitoxine in Europe the mortality of diphtheria was reduced to thirty per cent., this still enormously high rate continued in spite of, if not in consequence of, the persistent

employment of the accustomed alcohol, whereas in this country the early use of antitoxine *without* alcohol brought the mortality nearly to the vanishing point.

Atropia as an Efficient Aid in Relieving Acute Pulmonary Œdema. By Dr. Charles O'Donovan.—The author has seen relief so immediate and so complete as to seem like magic. If with the relief of the alarming respiratory symptoms the pulse regains its tone, a single dose may be sufficient to break the attack; but it may be that, while the lung symptoms are materially lessened, the pulse remains weak and arrhythmic, indicating a heart still unequal to its task. Such a case may be assisted further by the abstraction of blood or by an additional hypodermic dose of strychnine or by both measures.

A Note on Bacillus Coli Communis in a Possibly New Rôle as an Inhibitor of H Cl in the Stomach. By Dr. G. W. McCaskey.

The Eye Complications in a Case of Ankylostomiasis. By Dr. Howard F. Hansell.

Medical Record, September 14, 1901.

The Origin and Formation of Fibroid Tumors of the Uterus. By Dr. Mary A. Dixon Jones.—The author is clearly satisfied from her investigations that when there is a myofibroma, not only is the uterus diseased, but it is this disease of the uterus that produces the fibroid growths. Fibroid growths are diseased products, and the outcome of diseased conditions. The tissues of the uterus are first reduced to granular or medullary tissue, and from this granular or medullary tissue fibroid tumors are developed. As to the year, age, or period of life when fibroid growths appear, the author asserts that it is when there are infection and consequent inflammation. A uterus may from some source become infected, be reduced to medullary tissue, and from these life elements any abnormal growth may be developed.

Some Observations on Modern Cardiotherapy. By Dr. Homer Wakefield.—The author quotes Dr. J. Mortimer Granville as saying that "the best way to stimulate an organ is to incite it to perform its proper function by performing part of its work for it." The nature of this law is mechanical, but the therapeutical action in question is based on mechanical processes induced by massage, exercises, baths, medicines, etc. The author summarizes the combined effects of the Schott treatment by baths and exercises. The fact is developed that all act to one end, the rehabilitation of compensatory hypertrophy, not by increasing the demand on the organ, as we should do to induce hypertrophy of striped muscular fibre, or like that which produced the original cardiac hypertrophy, but by lightening its task, lengthening its periods of rest (diastole), slowing of the rate of contraction, and lessening capillary resistance and arterial tension, we obtain a more perfect contraction of the heart muscle, with diminished effort, increased output, and diminution of the residual blood.

The Function of the Tonsils, with a few Suggestions regarding the Differential Diagnosis of

Tonsillar Affections. By Dr. R. C. Matheny.—The author points out that the anatomical and histological structure of the tonsil proclaims it to be simply a mass of lymphoid tissue whose function is preeminently that of an absorbent. The circle of lymphoid tissue guarding the entrance to the respiratory and alimentary tracts is not there by accident, and the author pleads, therefore, for a more intelligent and conservative treatment of the tonsils and tonsillar affections. The author refers briefly to the following conditions which justify the excision of the tonsils: 1. Simple hypertrophy of the tonsils, preventing the entrance of sufficient air in breathing. 2. Cases in which the hypertrophied tonsils interfere with the function of the Eustachian tube. 3. Hypertrophied tonsils that are subject to recurring attacks of inflammation. 4. Tonsils which show considerable degeneration. 5. Tonsils whose crypts have become filled with offensive caseous matter. 6. Tonsils that are subject to lacunar ulcerations. 7. Cases in which a quinsy habit has developed. 8. Cases of lupus or tuberculosis of the tonsil.

A Unique Specimen of Vesical Calculi. By Dr. F. C. Larimore.—This case is interesting on account of the beauty, uniformity, and shape of the calculi—eight in number, uniform in size, tetrahedral in shape, hard, smooth, weighing a drachm each. When all the stones are matched together a complete hemisphere is formed.

Medical News, September 14, 1901.

A Case of Foreign Body in the Œsophagus. By Dr. Russell S. Fowler.—The foreign body (a coin) was located with the fluoroscope and extracted by means of a small whalebone-handled coin-catcher terminating in a small silver swinging basket. As it was withdrawn the coin could be seen (with the fluoroscope) to fall into one side of the basket and be carried up with it.

Infantile Atrophy. By Dr. John Lovett Morse.—The author recounts the well-known symptoms of this affection. The prognosis is grave. Most of the cases result fatally. If recovery takes place it is always slow and is usually interrupted by frequent relapses. When recovery occurs, however, it is complete and the future development is not interfered with. There is no known drug which has any specific action in infantile atrophy. Treatment necessarily consists largely of regulation of the diet with the object of providing some food which can be easily absorbed and utilized by the individual infant. Mother's milk, of course, is the best food. Although there are no data based on scientific experiments to suggest in what way cow's milk should be best modified for these cases, clinical experience has shown that, as a rule, the patients do best on milk that contains a low percentage of fat, a moderate percentage of sugar, and a moderate or somewhat high percentage of proteids. Treatment by large doses of cod-liver oil is not only useless, but harmful. Due attention must be paid to cleanliness and to the maintenance of an unusual supply of fresh air and sunlight. Alcohol, preferably in the form of brandy or whiskey, is often necessary.

The Treatment of Cystitis. By Dr. Charles Chassaignac.—After mentioning the various clinical types of the disease, the author writes of the general indications applying in a greater or lesser degree to all forms of cystitis. In all instances rest is of great utility; sexual intercourse and excitement of all kinds should be avoided. Bland food should be insisted on. In very acute cases milk diet or a bread and milk diet is the most satisfactory. Alcohol should be prohibited. The bowels should be kept gently open. Hot baths, full or only to the waist, are of great utility by producing relaxation and relieving tenesmus. Heat applied over the bladder by means of water-bags, poultices, or compresses is of great service in diminishing pain, tenesmus, and frequency of micturition. Frequent washing of the bladder with warm, mild antiseptic fluids often proves curative as well as palliative. The administration of alkalines is useful in neutralizing the normal acidity of the urine. When anodynes are demanded, if the remedy can be given by the mouth, a good combination is that of codeine with hyosyamus; to this may be added mild diuretics or any special drug indicated. Most of the so-called urinary antiseptics may serve us in the majority of cases, but they must be given cautiously in order not to cause irritation of the stomach and especially of the kidneys. The author follows with a brief reference to the separate types of cystitis.

Medicinal Treatment of Diabetes Mellitus. By Dr. Archibald Dixon.—The author reports favorable experience with the use of the arsenical preparation known as arsenauro. Details of two cases are given.

British Medical Journal, September 7, 1901.

What is Intussusception: How should It be Dealt With? By Edmund Owen, F. R. C. S.—The author defines intussusception as "the catching up of one piece of bowel within another piece." It may be produced by anything which causes vigorous peristaltic action, such as the action of a powerful cathartic, by constipation or diarrhoea, or even sudden and severe jolting of the body.

The usual symptoms are stated to be as follows: Sudden and severe pain in the abdomen followed by vomiting and straining defæcation when a little mucus, or mucus and blood with scanty liquid fæces are passed. The pain is paroxysmal. Distention of the abdomen may not be present.

Generally a "thickening" or "lump" may be made out by palpation in the region of the ascending colon.

The author considers *all* cases of intussusception surgical from the beginning and deprecates any attempt to reduce them by injections.

Discussion on the Treatment of Intussusception in Children. Proceedings of the Section of Diseases of Children at the Annual Meeting of the British Medical Association. Opened by Bernard Pitts, M. A., M. C., F. R. C. S.—The author states that as a result of his experience in the treatment of one hundred and fifteen cases of

intussusception during the past four years he had been led to modify the views expressed in 1897. The conclusions now reached are as follows: 1. Try inflation only when the case is seen within a few hours of onset, and is not of a very acute character. In the great majority of cases it is better to open the abdomen at once. 2. Inflation may be tried in certain other cases for the purpose of reducing the main portion of the intussusception and enabling the incision to be made directly over the cæcum. 3. When reduction is found impossible in chronic cases a resection of the bowel may generally be done through an incision in the ensheathing bowel. 4. In acute cases, and especially if gangrene is present, or the condition of the bowel requires its removal, a wide resection should be undertaken as rapidly as possible, and the ends brought outside the abdomen; continuity should be restored at a subsequent operation. 5. In exceptional cases of enteric intussusception resection and immediate restoration of continuity give the only chance.

On Essential or Toxæmic Dropsy; Dropsy without Albuminuria. By W. P. Herringham, M. D., F. R. C. P.—The author states that a considerable number of observers have reported cases of anasarca in children which exactly resembled renal dropsy where no trace of albumin could be discovered in the urine.

The dropsy may be preceded by chills, fever, *malaise*, pains in the back and furred tongue; in some there is fever alone, and in others the dropsy appears without premonitory symptoms. Sometimes the urine is scanty and sometimes excessive. The dropsy usually begins in the legs and lasts about six weeks, and the mortality is about fifteen per cent.

While the kidneys appear normal to the eye, exudation has been found in the glomeruli and convoluted tubes.

It is believed by the author that these cases are due to a microbic poison in the blood which is virulent enough to produce a dropsy, but not an inflammation of the kidneys.

Results of Tendon Grafting in Infantile and Spastic Paralysis. By A. H. Tubby, M. S., F. R. C. S.—The author reports four cases of calcaneo-valgus, two of calcaneus, one of equino-valgus, three of equino-varus, and one of calcaneo-varus, varieties of club foot which had been operated on by tendon grafting with successful result in each case, except those of equino varus.

In four cases of spastic paralysis in the forearm the results were "good" in four and "fair" in one.

Ultimate Results of Tendon Grafting in Infantile Paralysis. By Sinclair White, M. Ch., F. R. C. S.—The author reports eleven cases of tendon grafting, ten of the lower extremity and one of the extensor muscles of the thumb. The result in the case of the thumb was a failure. Of the ten foot cases, one had been lost sight of, and two were recent. Of the remaining seven, six were greatly benefited by the operation and one was a failure.

The Early Diagnosis of the Acute Specific Fevers. By F. Foord Caiger, M. D., F. R. C. P.

—In the opinion of the author the appearance of the so-called "Koplik spots" on the buccal mucous membrane is almost pathognomonic of measles, and serves to differentiate that disease from rubella and ordinary febrile cold and the early stage of whooping-cough.

If a cough is more frequent at night, has a sudden onset, is somewhat paroxysmal in character with viscid sputum, and associated with vomiting whooping-cough may be suspected. He considers that certain differentiation between simple inflammatory croup and early laryngeal diphtheria in the absence of faucial exudation may be impossible without bacteriological examination, but the presence of the slightest spot of exudate in the throat, or discharge from the nose, is almost positive proof of diphtheria.

In distinguishing between diphtheria, tonsillitis, and scarlet fever, the greatest reliance is to be placed upon the results of the bacteriological examination, but the author thinks that the clinical features of the case should correspond to make the diagnosis positive. In scarlet fever, the accompanying vomiting, the creamy-furred tongue, and the early rash usually make the diagnosis certain quite early.

The Value of Widal's Serum Reaction in the Diagnosis of Typhoid Fever in Children. By J. H. Thursfield, M. A., M. D., M. R. C. P.—The writer states that of forty-two cases of typhoid fever in children all gave a positive reaction; forty on admission to the hospital, and only one gave negative results later than the first week of illness. Many other cases were examined where typhoid was not suspected, but to avoid the possibility of overlooking a case. All gave negative results. As a result of his work, he has reached the following conclusions: (1) In children's disease a positive Widal reaction is trustworthy evidence of the presence of typhoid fever; (2) a negative reaction later than the tenth day of an illness is strong, but not absolutely convincing evidence of the absence of typhoid fever; (3) repeated negative reactions are trustworthy evidence that the disease is not typhoid at all.

The technics employed was quite different from the usual methods for making the test. The patient's blood was received in a small sterile pipette and diluted with an equal quantity of sterile broth. To one platinum loopful of this diluted serum, fifteen loopfuls of a broth culture of the typhoid bacillus were added on a cover-glass, making the dilution one in thirty. Various examinations were made for an hour and if at the end of that time there was no clumping, the reaction was considered negative.

Intra-uterine Rickets. By F. C. Abbott, B. Sc., M. S., F. R. C. S.—The writer presented a specimen and described a case of this rare affection.

Radical Cure of Hernia in Children. By Harold J. Stiles, F. R. C. S. Edin.—The author considers the operation for the radical cure of hernia in children as very safe and much more satisfactory than the wearing of a truss. If the hernia appears early and a truss can be satisfactorily worn, the operation may be delayed until after teething, but many times it has been performed

successfully on infants under six months. The Mitchell-Banks operation is preferred to Bottini's for children, because it does not interfere with the anterior wall of the canal.

Two Cases of Chronic Hydrocephalus in Infants Treated by Tapping and by the Introduction of Aseptic Air in the Place of the Fluid. By William Ewart, M. D., F. R. C. P., and W. Lee Dickinson, M. D., F. R. C. P.—In one of the cases reported, the tapping was done eight times in six months, from nineteen to fifty ounces of fluid being withdrawn each time. No very serious symptoms occurred at any time, and at the end of the period the condition of the child was considerably improved. In the second case the operation produced such marked improvement that it was not repeated.

Diagnosis of Suppurative Pericarditis in Children. By Frederick E. Batten, M. D., F. R. C. P.—The chief diagnostic points of this disease as laid down by the author are: (1) A definite history of onset; (2) irregular and sudden falls in temperature, accompanied by collapse; (3) very rapid pulse, but little distress; (4) increased respiration in ratio with the pulse; (5) general condition poor; (6) severe attacks of syncope; (7) no increase in cardiac dullness, but evidence of lung consolidation.

Observations on Suppurative Pericarditis in Children. By George F. Still, M. D., F. R. C. P.—From observations in twenty-eight cases the author concludes that this disease is almost always due to infection by the pneumococcus.

Filarial Abscess. By J. Preston Maxwell, M. B., B. S., F. R. C. S.—The author reports twenty-three cases of abscess in which microscopical examinations of the evacuated fluid demonstrated the presence of the *filaria sanguinis hominis nocturna*.

Some Points Connected with Human Filariasis. By J. Everett Dutton, M. B. Vict.—This article gives an account of various experiments conducted in Africa and dissections of mosquitoes which seem to prove that several varieties, both of the *Culex* and *Anopheles*, may become hosts for the *filaria* parasite, and convey the same to man by their sting.

Some Remarks on Asylum Practice in Singapore. By W. Gilmore Ellis, M. D. Brux., M. R. C. S.

An Epidemic of Zinc Poisoning through Drinking Contaminated Water in the Tropics. By John D. Gimlette, M. R. C. S. Eng., L. R. C. P. Lond.

Presse médicale, August 21, 1901.

Ambulatory Form of Bacterial Meningitis.—M. A. Sicard divides these cases into two forms: the foudroyant type and the simple, curable form. In the normal cerebro-spinal fluid, no cellular elements are found, but in meningitis of bacterial origin, an abundant leucocytosis appears. In tubercular meningitis, lymphocytosis predominates, but in the variety of the disease under discussion, a marked polynucleosis is a striking feature. The typhoid bacillus, the colon bacillus,

Pfeiffer's bacillus, the staphylococcus, and the streptococcus may be found in the cerebro-spinal fluid or may be the exciting agents of the meningeal inflammation. The author goes into detail as to the manner of making a differential diagnosis by the examination of the cerebro-spinal fluid.

Treatment of Conjunctivitis.—M. F. Terrien divides his subject into two groups, the treatment of specific and of non-specific conjunctivitis. He is opposed to bandaging the eyes for catarrhal conjunctivitis. When secretion is abundant, a solution of one or two per cent. zinc sulphate may be used as a collyrium, to be used three or four times daily. Cocaine is contraindicated on account of its tendency to cause desquamation of the cornea with possible infection. Protargol in a solution of one fifth of one per cent. is also a good collyrium. As a prophylactic against blennorrhagic conjunctivitis, the author advises irrigation of the mother's vagina before the birth with a one to 5,000 bichloride of mercury solution, and Créde's instillation of nitrate of silver. If the disease develops, cauterization of the lids with nitrate of silver solution (two or three per cent.), followed by irrigation with a normal salt solution. Protargol should also be used. Canthoplasty may have to be performed. Frequent irrigations and ice compresses also form part of the treatment.

Wiener klinische Rundschau, August 11, 1901.

Headaches.—Dr. W. Schoen gives the following as the main sources of headaches of all kinds: Heredity, trauma of the head, neuralgia and neuritis of the trigeminus and occipital nerves, eye disturbances, influenza, fever, migraine, nasal and aural disease, syphilis, malaria, hyperæmia, anæmia and chlorosis, neurasthenia, hysteria and Basedow's disease, multiple sclerosis, epilepsy, uræmia, diabetes, helminthiasis, gastric and intestinal disorders, toxic influences (tobacco, alcohol), osteitis, meningitis and encephalitis, tuberculosis, and tumors and abscess of the brain. In making a diagnosis, the character of the pain and its seat must be considered. The latter may be anywhere from the skin to the brain mass itself. The subjective sensations of the patient and the possibility of direct irritation of the brain must also be taken into account. (*Continued article.*)

Chromatopsia. By Dr. Heinrich Chalupecky.

Nitro-benzole Poisoning.—Dr. Vincenz Simerka says that the first influence of nitro-benzole is upon the blood. While this is only functional at first it may cause organic disturbance later. Localized cyanosis then appears in the face, hands, and feet. The entire central nervous system is affected, as shown by vertigo, vomiting, headache, and ringing in the ears. The cortex shows toxic effects by unconsciousness, distraction, and a retrograde amnesia. Various centres of the brain presiding over the gait, the eyes, sensation, the mechanism of the heart and respiration, temperature and speech, are also affected by the poison. Trismus, tetanic and tonic convulsions, involuntary urination and defecation and abortion may also be noted. Treatment consists in

the administration of oils and alcohol and the removal of the poison.

Centralblatt für Gynäkologie, August 17, 1901.

Plastic Models for Obstetrical and Gynecological Instruction. By Professor E. Winternitz.—An interesting article for teachers.

Curetting after Abortion without Assistance.—Dr. A. Solowij describes his apparatus, which consists of a Bandl's speculum armed with a bullet forceps for grasping the cervix. This enables the operator to clean out the uterus without assistance.

Partial Colpocleisis for Vesico-vaginal Fistulæ. By Dr. Odenthal.

August 24, 1901.

Zestocausis.—Dr. Ludwig Pincus maintains that in order to secure the good results which follow from the use of intra-uterine steaming, the technics must be understood. It may be necessary to exercise a deep caustic effect or a superficial one, according to the severity of the lesion. Thus, in gonorrhœal endometritis, a session of ten seconds at 115° F is desirable. Strictures are not obtained if the rules are strictly followed. If pain is complained of, the operation must be stopped at once and antiphlogistic treatment immediately instituted—ice-bags, rest in bed, and hot douches. Zestocausis has shown itself of value in erosions, in the treatment of parenchymatous bleedings, and in gonorrhœal infections.

Münchener medicinische Wochenschrift, August 13, 1901.

Experiences with Malignant Tumors. By Dr. E. Leser.

Vioform. By Dr. Krecke.

Anthrax.—Dr. A. Schattenfroh and Dr. R. Grassberger conclude from their experiments that the anthrax bacillus is a true butyric-acid forming bacillus, fermenting carbohydrates into butyric acid. The bacillus appears in two forms of developmental course, the first having granulose simultaneously with the formation of spores, the second, spores free from granulose. The remainder of the paper is taken up with details of cultural peculiarities.

The Atropine Treatment of Ileus.—Dr. H. Gebele reports a fatal case of paralytic intestinal obstruction treated by atropine, and says that, if any internal treatment is indicated, it is by means of morphine rather than by atropine. Genuine ileus is suitably treated only surgically.

Intestinal Obstruction Due to Gall-stones Successfully Treated by Atropine.—Dr. Frank H. Pritchard reports such a case.

Transitory Lead Amaurosis.—Dr. Friedrich Pincus.

Stomach Tube in Ulcer of the Stomach.—Dr. Flade says that the introduction of the tube in the presence of an ulcer is not an entirely safe operation. Although hæmorrhage may be a comparative rarity, the bleeding which a tube may produce by injuring the ulcer may be prolonged and serious.

If the ulcer lies in the anterior wall, the danger of perforation is great. The use of the tube is not to be recommended, therefore, when there is the remotest possibility of an ulcer's occupying the anterior wall. The author says that the tube can easily be spared in making the diagnosis, and should never be employed when there is even a suspicion of its existence.

Berliner klinische Wochenschrift, August 12, 1901.

Subcutaneous Use of Gelatin as a Hæmostatic.

Dr. Grenouw reports a series of cases including pulmonary and intestinal hæmorrhages, gastric and renal bleeding, bleeding from the bladder, and hæmorrhage from a perforated aneurysm. The results were generally favorable, although other hæmostatics were also used. From the results obtained, the author advises the use of gelatin only in serious cases, as unpleasant phenomena were sometimes noted. These were pain at the site of injection, chill with rise in temperature, and sometimes the appearance of urticarial wheals. Its use is advised in all severe internal hæmorrhages.

Correlated Movements of Nasal and Lid Muscles. By Professor M. Bernhardt.

Cataract Operations in Old Age.—Dr. Fritz Mendel prefers extraction, even in the very aged, to less radical measures. Vision secured in one eye may be considered a satisfactory result without operating upon the second eye. Post-operative delirium is sometimes seen, but is easily treated. Senile bronchitis should be carefully treated before the operation is performed.

Pathogenesis of Delirium Tremens.—Dr. K. Bonhœffer says that, from a study of 250 cases, he finds the infectious diseases of the pulmonary tract to be first in order of importance in evoking delirium tremens, followed in second place by disorders of the gastro-intestinal tract. Epilepsy and the sudden withdrawal of alcohol are also powerful ætiological factors. Injuries are not so prone to call forth the mental disturbance.

Changes in the Central Nervous System after Ligation of the Thyreoid Vessels. By Dr. Otto Maas.

Riforma medica, July 19, 1901.

Intravenous Injections of Sodium Cacodylate in Pulmonary Tuberculosis. By Dr. Anelli.—The author reports a case of pulmonary tuberculosis in an advanced stage, in which he used intravenous injections of sodium cacodylate with good results. Five centigrammes of sodium cacodylate were injected daily in solution in one cubic centimetre of sterilized water.

July 20, 1901.

On the Curability of Obliterating Syphilitic Endarteritis occurring in the Ultimate Stages. By Dr. Giulio Cavazzani.—According to such authorities as Charcot, Brissaud, and Bouchard, the prognosis of syphilitic endarteritis is always grave. The author reports a case of the disease in which the course was distinctly favorable, and continued to be so during a period of three years.

The arteritis affected the popliteal arteries of a woman aged fifty years, who had been infected by her husband twelve years before admission. A milk diet and a course of mixed treatment succeeded in a short time in removing the serious symptoms of endarteritis in her limbs—coldness, anæmia, cyanosis, progressive weakening, and finally complete paralysis of motion and sensation, together with absence of the popliteal and tibial pulses.

July 22, 1901.

Movable Kidney and its Fixation. By Dr. Schiassi.—The author has used with success the following technics for nephropexy: He makes a lumbar incision cutting through the deep lumbar aponeurosis along the same line, and separates the circumrenal fat. The kidney is now grasped with the left hand and brought into position out of the wound and maintained there by packing around it some layers of gauze. Two crossing incisions are now made in the middle of the posterior surface of the kidney, so as to enable the surgeon to reflect four little flaps of capsule and to denude about three or four square centimetres of kidney tissue. The flaps are resected at their bases. The organ is now pierced from before backward with three long round full-curved needles armed with long pieces of catgut, the sutures being placed at equal distances, the first at the upper pole, the second in the middle of the kidney, and the third at the lower pole. The kidney is now replaced into the cavity of the abdomen, the needles and the ends of the threads being kept in hand. The needles are then passed by means of needle-holders through the entire thickness of the muscular wall. The convex surface of the kidney is thus fixed to the posterior or internal margin of the deep lumbar aponeurosis, while the external margin remains free. The aponeurosis and the other muscles are then sutured, and the skin wound is closed with interrupted sutures. A small capillary drainage tube is left. In this manner the kidney more readily assumes its physiological position, namely, more closely to the median line and more perpendicularly along the axis of the body. No recurrence has been noted in twenty cases of operations done in this manner.

July 24, 1901.

On Hereditary and Congenital Heart Affections. By Dr. Luigi Ferranini.—The author gives an account of a family with an hereditary history of cardiac and nervous affections, in which half of the children died of it at an early age, many exhibited tuberculous lesions, and two died of organic heart disease. This contribution to the subject, together with the other studies of the same author, offers conclusive evidence, according to the author, that cardiac disease may be transmitted from generation to generation, and that the substratum of cardiopathy is embryological.

Practich, July 28 (August 6, New Style), 1901.

On Pentose in the Animal Organism, and on the Origin of Pentosuria. By Dr. N. P. Krav-

koff.—The discovery of sugars with five atoms of carbon in the molecule, instead of six, is due to Kiliani. Later E. Fischer prepared a series of carbohydrates from simple elements by synthesis, and thus discovered a number of new carbohydrates. Salkowsky and Jastrowitz, in 1892, found pentoses, or pentacarbonic sugars, in the urine of some patients, and later Salkowsky expressed the belief that the excretion of pentoses was due to a peculiar change in the metabolism. Pentose was later found in the urine of diabetics, along with glucose, and also in the urine of healthy persons. Hammarsten isolated a pentose by decomposing the nucleoproteid of the pancreas, and Blumenthal obtained a pentose from other nucleo-albumins from various organs, and concluded that pentose occurred widely in the organism. The present author, however, denies the identity of the substances obtained by Blumenthal with pentose. Pentoses do not ferment under the influence of yeast, and do not serve in the organism for the formation of glycogen in the liver. In three cases of "pentosuria" Bial and Blumenthal found that the amount of pentose excreted in the urine did not depend upon the amount of pentose ingested, and that the organism of such patients was capable of oxidizing pentose as well as glucose, while in diabetes, as is well known, the organism uses up less glucose than normally.

Pentosuria is important clinically, as it is often taken for glycosuria and diabetes. The author has continued the researches of Bial and Blumenthal, and throws a new light upon the occurrence of pentoses in animals. He first found that the muscular tissues of rabbits contained pentose. From this tissue he isolated the carbohydrate after a complicated chemical process which he describes in detail. Before proceeding to isolate the pentozazon, from which he obtained the pentose, he made sure that there was no glucose or glycogen in the muscles, and for this purpose he took muscles from dogs that had been starved to death. The amount of pentose which was found in the muscles of these animals was equal to that found in similar weights of pancreatic tissue, and the muscles must therefore play a prominent rôle in pentosuria. The muscular tissue of cattle, pigeons, frogs, fishes, and lobsters also gave the reactions for pentose. (*To be continued.*)

The Significance of Acid Self-intoxication in General Pathology and Particularly in Uræmia.

By Dr. V. Th. Orlofsky.—According to von Jaksch and others, uræmia depends upon auto-intoxication with acids, because in this condition the alkalinity of the blood is lowered. The author records a series of experiments on dogs in which he examined the blood before and after ligature of the ureters. He found that the alkalinity was lowered sharply in the last stages of uræmia, while at first the alkalinity was not much lower than normally. This lowering of the alkalinity depends chiefly upon the accumulation of acids in the blood, not on dilution or on destruction of red cells. The saturation of the blood with acids is not the cause of the uræmia, but an accompanying phenomenon. These views were

also confirmed by the examination of the blood in three uræmic patients. The presence of acid intoxication can only be affirmed when (1) there are large quantities of beta-oxybutyric acid in the blood and in the urine, and (2) when alkalies produce a marked improvement, as in diabetic coma. Both these circumstances are found in diabetic coma, and therefore it may be regarded as an acid self-intoxication. In uræmia, however, the lowered alkalinity of the blood must, for the present at least, be regarded as a concomitant, not a cause.

Injuries of the Brain. A Case of Motor Aphasia.

By Dr. M. S. Masloosky.—The patient was a man, aged twenty-seven years, who had received a blow on the head with the butt of a rifle. The injury was in the region of the left temporal and frontal bones, seven centimetres in length, one and one fifth centimetre in width, directed from before backward. The bone was driven inward, making a long furrow along the line of the wound. The patient was in complete aphasia, the pupils were equally dilated, there was paresis of the left half of the face and of the right upper extremity. The patient was conscious and heard and understood everything, but could not speak. Speech came back very slowly, after complete healing of the wound. A slight paresis of the right hand remained. The only treatment was aseptic attention to the wound.

A Rare Case of Hysteria.

By Dr. J. R. Marowsky.—The diagnosis of hysteria from organic disease is often very difficult, and it was especially so in the case of a patient whose case is here reported. The author was called to see a young woman, aged nineteen years, who suffered from frequent hæmorrhages from the nose and who gave a history of what appeared to be a typical attack of hysteria induced by the shock of the news of her father's death. The chief complaint, however, was that she was unable to feel any desire to pass her water or to defecate, and that she would pass urine and fæces involuntarily. After the hysterical attack she felt weak on her feet, and this weakness gradually increased until she was unable to walk or stand. There were anæsthetic and hyperæsthetic areas in various parts of the body. In the lower limbs there was total absence of muscular sense. There was complete paralysis of the right lower extremity, the patellar reflex was considerably increased, and the left lower extremity was paretic. The patient could not sit upright; all attempts at sitting were followed by collapse of the trunk, which fell forward. Hypnotism was used, both for diagnosis and for treatment, and there was a distinct improvement after a few sittings, as regarded the paræsthesiæ and the muscular paralysis. Later the visceral paralyses also were treated hypnotically with good results, so that it was proved that all the symptoms had been of hysterical origin. The paralysis of the bladder and rectum were probably due to anæsthesia of these organs. While other remedies were used in this case, in addition to hypnotic suggestion, the improvement was due largely to the latter form of treatment.

Letters to the Editor.

ROSER'S DORSAL SPLINT FOR FRACTURES OF THE LOWER END OF THE RADIUS.

60 WEST FIFTY-SIXTH STREET,
NEW YORK, September 9, 1901.

To the Editor of the New York Medical Journal:

SIR: In your issue of August 24, 1901, Dr. F. Griffith makes mention of a splint for the treatment of fractures of the lower extremity of the radius which the late Professor Van Arsdale would be the last one to claim as original with himself, though he taught its use for some fifteen years. This method of Roser's, described by Albert (*Lehrbuch der Chirurgie*, 1890, Bd. ii, p. 449), is based upon the following principles:

1. When the forearm is flexed at a right angle to the arm, the dorsal surface of the radius and ulna lie in the same plane and present a flat surface, which adjusts itself accurately to a splint, readily demonstrable on the skeleton.

2. If, after reduction of the fracture, the hand is flexed and abducted at the wrist, the normal position of the fragment will be maintained.

3. The more firmly the arm is bandaged against the splint, the greater the support and impossibility of displacement or deformity.

The splint is made of wood from $\frac{1}{8}$ to $\frac{1}{4}$ of an inch thick, from $1\frac{1}{2}$ to 2 inches wide, and long enough to reach from the finger ends nearly to the



elbow. A notch must be cut in the ulnar edge to prevent pressure upon the head of that bone. The splint is then covered upon one side with a fairly thick, uniform layer of cotton, held in place by two or three strips of rubber plaster.

In private practice it is my custom to seat the patient with the elbow resting upon a table, the forearm being held vertically for fifteen or twenty minutes, before reduction, and to massage the arm and forearm, to remove the swelling.

When I am about to adjust the splint, the forearm is held flexed at a right angle, the ulnar edge down and the cottoned surface placed upon its dorsal surface. Never use rubber plaster to fasten the splint to the forearm, as it will constrict the limb and induce swelling of the hand with pain.

Bandage the splint to the forearm from the wrist up, using a two-inch muslin bandage applied with firm, uniform pressure. Next flex and abduct the hand at the wrist and fill the space between the back of the hand and the lower end of the splint with cotton batting and secure it in position, as shown in the cut. Pads in any other location are unnecessary and will cause painful pressure points.

If the hand is swollen the fingers may be bandaged gauntlet fashion, before placing the splint

Another important point always to be insisted upon is that the hand of the injured arm *must rest across the chest well up toward the opposite shoulder*, to prevent painful swelling. In adjusting the sling, the end next the body must be *carried over the shoulder corresponding to the injured arm*. When slung in this fashion, the hand and forearm rest naturally against the chest in a comfortable position.

In dispensary practice the splint was removed at the end of a week, the limb massaged, and the splint reapplied, to be finally removed at the end of the third week. Under massage, by the patient, the wrist soon acquired its normal mobility.

In private practice it has been my custom, first, to secure the benefit of gravity—the elbow resting upon a table, the forearm vertical—and massage for from twenty to thirty minutes before applying the splint; second, to remove the splint daily, with massage, as a means of reducing swelling and preventing stiffness and loss of muscular tone; third, at the end of fifteen days to discard the splint, massage being continued once daily, and by the twentieth day to remove the arm from the sling and allow it to be used in the ordinary way.

As to our results. In Dr. Van Arsdale's service at the Good Samaritan Dispensary, from 1887 to 1896, we treated the following:

Age.	under 1 yr.	2-5	6-10	11-15	16-20	21-30
Cases.	2	9	17	42	37	39
Age.	31-40	41-50	51-60	61-70	over 70	
Cases	18	24	21	13	1	
Epiphyseal, Colles's, Barton's	200 recent cases					
Radius and Ulna.	16 old cases					
	7 recent cases					
Total.	223 cases					

Perfect union without deformity was secured in the recent cases, and in a few in which, owing to malposition, the bone had to be refractured and the dorsal splint applied, a very good result was obtained in three weeks. When the splint was removed, the patients were instructed how to massage the limb twice daily and to use it actively, when by the end of from seven to ten days normal motion was restored.

A. ERNEST GALLANT, M. D.

An English Tuberculosis Commission.—King Edward has appointed a commission to investigate Professor Koch's tuberculosis theory. The scope of the inquiry is officially said to be whether animal and human tuberculosis are identical, whether animals and human beings can be reciprocally infected, and under what conditions, if at all, transmission to man occurs, and the means of combating it. The commissioners are Sir Michael Foster, secretary of the Royal Society; Dr. Sims Woodhead, professor of pathology, Cambridge University; Dr. Harris Cox Martin, Professor J. McFadyean and Professor R. W. Boyce. To the commission has been granted the fullest powers and facilities, and the members have been urged to make a prompt report.

Book Notices.

International Clinics. A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pædiatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose, and Throat, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the World. Edited by HENRY W. CATTELL, A. M., M. D., Philadelphia. Volume II. Eleventh Series. Philadelphia: J. B. Lippincott Company, 1901. Pp. viii-304.

This volume is replete with interesting lectures. Dr. Doléris, of Paris, writing on the oxytocic effect of the lumbar injection of cocaine, finds that this method of anæsthesia is contraindicated in pregnant women, as it induces uterine contractions. The injections are, for the same reason, useful in inducing labor and in stimulating an inert uterus. He thinks the injections may have a useful purpose in cases of eclampsia in hastening evacuation of the uterus and in allaying some of the reflex symptoms.

Dr. Robert Jardine emphasizes the value of saline infusions in cases of eclampsia. Dr. Schamberg contributes a paper on small-pox, with two beautiful illustrations. A collection of articles on locomotor ataxia by Frenkel, Starr, and Fournier is included under the head of neurology. Dr. Dorland has an instructive paper on the pronunciation and definition of some of the newer medical words.

Taken as a whole, the various departments are well represented and the volume is even broader and more readable than some of its predecessors.

The Microbe-producing-disease Theory Inconsistent with the Laws of Nature. By J. P. SCHMITZ, M. D. San Francisco, 1901.

No mere love of pelf or fame has inspired this monograph; Dr. Schmitz has a message for the world—no cheerless message, either, which compels the awe and terror of mankind and breeds the fear of disease alike in the blow of the peach and the innocent kiss of a maid. For happy optimists does the author wield his fearless pen. He would take from every germ its sting, from every wriggling bacterium its terror, careless alike of "the little weight attached to his words by the worshippers of great names" and of the ultimate fate of his work, if but at last truth shall triumph. Such has always been the spirit of the great investigator; so was it with Galileo, with Newton, with Harvey; so is it with Dr. Schmitz.

To examine minutely the author's essay would demand more space than the columns of the *Journal* can afford. Here and there illuminating points must be picked out, however, that the reader may enjoy the same privilege as the reviewer. Lord Lister would be interested, for instance, in learning that the success of his antiseptic measures in surgery "is not due to the antiseptic as a microbe-killer, but simply to the antiseptic as a stimulant to the cells." Again, the author offers no objection to the bacteriologists's studying histology, but with this vital exception, "as long as he keeps quiet in regard to organic activity and vital functions," which come within Dr. Schmitz's domain. It will

interest the various State medical examiners to know that, "in the first place, they do not know what a microbe is; second, it [antecedent not stated] does not advance medical science a particle."

Some persons might take issue with the author as to his statement that consumption, typhoid fever, the plague, cholera, diphtheria, *et al.*, have not been lessened by the "microbe-killers." A careful perusal of the files of the *New York Medical Journal* might possibly show the author another view, we think. And, yet, we offer this suggestion in all meekness, since our conceptions of the terms—the author's and ours—seem to differ. He must be referring to a different kind of diphtheria than the one we know, which "is primarily produced by cold, never by microbes." And his notion of malarial disease which "is produced by autotoxine, and not by microbes," seems to differ from that of Laveran, Celli, Grassi, Thayer, and Ross; but these are "great names" which the author does not fear.

But we must hasten on; we pass by, not without regret, the author's query: "Why do microbes exist?" in order to reach his dramatic climax. The author was alone in his laboratory. By inadvertence, he poured some water into a bottle of metallic sodium. A violent explosion followed. Thirty-two cuts resulted to the author, but "my specks saved my eyes." The author boldly extracted the various pieces of glass and patched up the larger cuts as well as he could with sticking-plaster. Now mark the sequel. Glass almost invariably produces lock-jaw. In the author's case all went well until the fourth night, when he was awakened by slight twitchings "in the reflex centres of the spinal cord." Muscular pain came on, and the author called his family and told them that he feared "tetanus and lock-jaw." Flannels wrung out of hot water, made hot and kept so on a gas-stove, were applied to the author, and in three hours Dr. Schmitz was cured of his "tetanus and lock-jaw." No medicine was used, because his body was otherwise in good order. This reminds us of a story—but, no! we must let the author tell his own tale: "Had I relied on bromides or other nervous sedatives, or on antitoxine, or on bacilli-killers, no doubt Loeffler's tetanic bacilli in about eight or ten days after the accident would have been very busy in the grave separating and isolating the elements of my body." Is this sarcasm, or does the author imply that he would have been dead? And he omitted the "specks"! No definition of a night-mare appears in the glossary appended to the treatise.

Thus is the germ theory of disease, laboriously built up, demolished by one fell blow, hit in the solar plexus, as it were. A likeness of the author, wearing the eye-saving "specks," appears as a frontispiece.

Anatomical Atlas of Obstetrics, with Special Reference to Diagnosis and Treatment. By Dr. OSKAR SCHAEFFER, Privatdocent in Obstetrics and Gynecology in the University of Heidelberg. Authorized Translation from the Second Revised German Edition. Edited by J. CLIFTON EDGAR, A. M., M. D., Professor of Obstetrics and Clinical Midwifery in the Cornell University Medical College, etc. With 122 Figures on 56 Lithographic Plates and 38 other Illustrations. Philadelphia

and London: W. B. Saunders & Company, 1901. Pp. 3 to 315.

Atlas and Epitome of Labor and Operative Obstetrics. By Dr. OSKAR SCHAEFFER, Privatdocent in Obstetrics and Gynecology in the University of Heidelberg. Authorized Translation from the Fifth Revised German Edition. Edited by J. CLIFTON EDGAR, A. M., M. D., Professor of Obstetrics and Clinical Midwifery in the Cornell University Medical College, etc. With 14 Lithographic Plates in Colors and 139 other Illustrations. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 3 to 111.

These volumes were reviewed by us when they appeared in the original language. They have lost nothing in the translation at Dr. Edgar's hands and really constitute a text-book of obstetrics of no mean didactic value. The illustrations are admirably executed, as they are in all of these atlases, and the text can safely be commended, not only as elucidatory of the plates, but as expounding the scientific midwifery of to-day. For students and practitioners alike, these volumes are of great value.

Proceedings of the Ninth Annual Meeting of the Association of Military Surgeons of the United States, held in New York City, May 31, June 1 and 2, 1900.

Without entering into minute detail, we would say that these transactions cover almost every aspect of military medicine, discussed in the light of recent experiences in the Spanish-American War. Though some of the contributions are fragmentary, there are many articles that attest the high aims and excellent workings of this body of regular army, national guard, and contract surgeons. Military surgery, excluding the element of exigency, is an evolutionary phase of civil surgery, and therefore the plea in one of the articles that an optional course of military surgery be taught in the medical schools is very pertinent. If, then, in complementary fashion, army surgeons are detailed from time to time to inspect and report on medical work in the various centres of population, there would be less talk of unpreparedness, and the element of exigency would be reduced to a minimum. Very complete articles are those on General Hospitals, Military Surgery, and The Ideal Tropical Ration.

Geburtshilfliche Operationslehre. Für Studierende und Aerzte. Von Dr. FELIX SKUTSCH, a. o. Professor an der Universität Jena. Mit 145 Abbildungen im Texte. Jena: Gustav Fischer, 1901. Pp. x-348.

In this volume the normal process of parturition has no consideration. Only those phases of midwifery which involve operative procedures, from the opening of the cervix to the suture of a lacerated perinæum, are discussed. The indications for a forceps operation, which are numerous in the author's category, are early considered, and are preceded by an excellent historical sketch of the forceps. Versions and mutilating operations on the fetus are next taken up. Interruption of pregnancy, the artificial dilatation of the parturient canal, and Cæsarean section follow. The subsequent care of the pa-

tient and the treatment of hæmorrhages and injuries are the subjects of the concluding chapters.

While we cannot follow the author in all his theories, especially as regards the indications for operations, it must be said that the teaching is most modern. For instance, he regards the Cæsarean operation as conservative, and gives as his general indication the malformation of the genital tract. In a monograph of this character, of recent date, one would expect, at least, a discussion of the propriety of the Cæsarean operation in cases of placenta prævia. Symphysiotomy is not recommended for general practice, quite properly, we think. Chloroform is the anæsthetic of choice, ether being condemned on account of its inflammability. Nothing is said on the subject of spinal anæsthesia.

It is, however, mainly on the indications for operative work that obstetricians will differ with the author. These we cannot here discuss in detail. The book is an excellent epitome of what obstetric operations are and are meant to be, and it should be read by those who are especially interested, the specialist and the general practitioner. It is no book for the student.

Clinical and Pathological Papers from Lakeside Hospital, Cleveland. Series 1, 1901.

The view that hospitals have a distinct didactic as well as a clearly-defined charitable purpose is becoming more and more accepted. The material of hospitals is being employed not only for bedside teaching, but also for the general instruction of the profession. This tendency is exemplified in the little volume before us. Clinical, pathological, and experimental papers form the contents, contributed by Dr. John H. Lowman, Dr. Hunter Robb, Dr. W. T. Howard, Jr., Dr. George W. Crile, Dr. Dudley P. Allen, and Dr. W. H. Weir. While it would be difficult to distinguish between the excellence of the various articles, it may be said that the work indicates both scientific precision and professional ardor which must redound to the benefit of the hospital. Some of the articles are reprinted from periodicals and several of them are illustrated.

The Diagnostics of Internal Medicine. A Clinical Treatise upon the Recognized Principles of Medical Diagnosis, prepared for the Use of Students and Practitioners of Medicine. By GLENTWORTH REEVE BUTLER, A. M., M. D., Chief of the Second Medical Division, Methodist Episcopal Hospital, Brooklyn, etc. With Five Colored Plates and Two Hundred and Forty-six Illustrations and Charts in the Text. New York: D. Appleton & Company, 1901. Pp. xxviii-1059.

The comparison of this work with one published some twelve years ago on the same subject discloses the marked advances which have been made in clinical diagnosis, not so much with reference to symptoms and their interpretations as to chemical and microscopical discoveries. The present work will win much of its success by its excellent chapters on laboratory methods in the examination of the blood, the sputum, the gastric contents, the feces, the urine, and the fluids secured by puncture. The chapter on the examination of the blood is especially good; while it is terse and condensed, it gives pretty

much all that it is necessary for the general practitioner to know. The author mentions two methods for staining the sputum for tubercle bacilli. One would have been sufficient—Gabbet's, for instance—and the reader would not have been troubled to make a selection. Here and there minor errors are to be found, which will no doubt be corrected in a later edition.

The second part of the work deals with the direct and distinctive diagnosis of disease. In these chapters the author has been assisted by Dr. Frank W. Shaw in the chapters on parasites and intoxications, Dr. Henry G. Webster in that on the diseases of the kidney and constitutional diseases, Dr. Henry P. De Forest in that on diseases of the blood and ductless glands, and Dr. Smith Ely Jelliffe and Dr. A. B. Bonar in that on the diseases of the nervous system. While these contributions are all "up to date" and thoroughly scientific, they naturally contain little that is new, since they are but descriptions of disease. The space allotted to them makes some of them rather sketchy, although the style is in each instance good.

Taken altogether, the book is an excellent résumé of our present-day knowledge of the means and methods of the diagnosis of internal diseases. It is scientific, it is thorough, it is comprehensive. With the exception immediately to be alluded to, it is a book to be recommended to both the practitioner and the student.

The one feature of this otherwise excellent book which we cannot approve of is the method of illustrating certain areas and some other things by means of outlines imposed upon half-tone reproductions of full-length portraits of nude women. Outline drawings would have answered quite as well, so far as we can see. The reader, however, must not do Dr. Butler the injustice of supposing that he posed the women; the pictures are those of professional artists' models, made in Vienna, we understand, for art students to draw from. The facial expression and attitude of some of the women seem to us to detract from the dignity of the book; nevertheless, we can quite understand that it was on account of their indisputable accuracy of contour that Dr. Butler made use of such photographs. Properly pruned, they would have been unobjectionable. The other illustrations, which are mainly original, are of a character beyond reproach.

BOOKS, ETC., RECEIVED.

A Text-book of the Practice of Medicine. By James M. Anders, M. D., Ph.D., LL.D., Professor of the Practice of Medicine and of Clinical Medicine in the Medico-Chirurgical College, Philadelphia, etc. Illustrated. Fifth Edition, thoroughly Revised. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 5 to 1297.

Nervous and Mental Diseases. By Archibald Church, M. D., Professor of Nervous and Mental Diseases and Medical Jurisprudence in the Northwestern University Medical School, Chicago, etc., and Frederick Peterson, M. D., President of the State Commission in Lunacy, New York, etc. With 322 Illustrations. Third Edition, thoroughly Revised. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 869.

Surgical Technic. A Text-book on Operative Surgery. By Fr. von Esmarch, M. D., Professor of Surgery at the University of Kiel, etc., and E. Kowalzig, M. D., Late First Assistant at the Surgical Clinic of the University of Kiel. Translated by Professor Ludwig H. Grau, Ph.D., Formerly of Leland Stanword, Jr., University, and William N. Sulli-

van, M. D., Assistant of the Surgical Clinic at Cooper Medical College, San Francisco. Edited by Nicholas Senn, M. D., Professor of Surgery at Rush Medical College, Chicago. With Fourteen Hundred and Ninety-seven Illustrations and Fifteen Colored Plates. London and New York: The Macmillan Company, 1901. Pp. xl-866. (Price, \$7.)

Anæsthetics and their Administration. A Text-book for Medical and Dental Practitioners and Students. By Frederic W. Hewitt, M. A., M. D., Cantab., Anæsthetist to His Majesty the King, etc. With Illustrations. London and New York: The Macmillan Company, 1901. Pp. xxiv-528.

Transactions of the American Electrotherapeutic Association. Ninth Annual Meeting, held in Washington, September 19, 20, and 21, 1899. Tenth Annual Meeting, held in New York, September 25, 26, and 27, 1900.

Transactions of the Obstetrical Society of London. Volume XLIII. For the Year 1901. Part II, for March, April, and May.

Eleventh Annual Report of the Eye, Ear, Nose, and Throat Hospital of New Orleans. January 1, 1900, to December 31, 1900.

New Inventions.

AN INSTRUMENT FOR DETERMINING THE PROGNOSIS OF URETHRITIS.

By FREDERIC GRIFFITH, M. D.,

NEW YORK,

SURGEON TO THE BELLEVUE DISPENSARY; FELLOW OF THE NEW YORK ACADEMY OF MEDICINE.

Surgeons interested in genito-urinary work will, I think, bear me out that the course of a gonorrhœa is wayward. While simple inflammatory urethritis is not a rare disease, by far the most common cause of inflammation of the urethra is the gonococcus, and this germ is the determining factor in forecasting the prognosis of the disease.

Gonorrhœal patients may be unequally divided into two classes: 1. The large majority, who, taking no thought for the morrow, desire but to find themselves without pain or soiling discharge. These are they to whom the fleeting virtues of the many specifics which from time to time are brought to the notice of the profession commend themselves. 2. The small minority, comprising candidates for marriage and those desirous of a "clean bill of health."

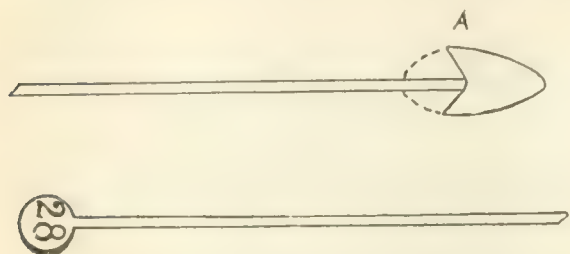
After the morning-drop and all gluing or moisture about the meatus have passed away, the gross study of the course of the disease is based upon the shreds passed in the urine, and, though the so-called "beer test" is used for a provisional prognosis, it is only by continued microscopical examination of shreds and scrapings from the urethra that the surgeon dares approach positive assertions.

As a further precaution in testing for the presence of gonococci in these cases, some surgeons set up a simple inflammatory discharge by means of a strong injection, to dislodge deep-seated germs which may have resisted treatment.

To secure specimens of epithelial cells, either in the form of shreds or scrapings for purposes of staining and examination for gonococci from the urethra, I have devised a bulbous curette.

The instrument may be constructed from the ordinary metal bulbous bougie and of various sizes, to fit the urethra snugly. Removing the bulb from

the wire handle, it is to be countersunk until the edge is at the greatest enlargement (*a*) of the head of the instrument, forming thus a cup with ample



space for specimens, when screwed or soldered to the shaft. Inserted gently, with the least possible lubrication, the instrument will reach any depth of the urethral canal, and by a rotating, scraping movement will detach specimens as it is withdrawn. Removed from the cup by teasing needles to a cover-glass, the specimen is ready for staining. The chief advantages of this curette are that it is under control and the examiner can follow the situation of the head of the instrument as it is passed along the canal.

805 MADISON AVENUE.

Miscellany.

The General Infections of Blennorrhagia.—H. Ullmann (*Deutsches Archiv für klinische Medicin*, Vol. lxxix, fasc. 3 and 4; *Arte medica*, July 21st) says that, besides direct extension to the bladder, kidney, etc., other complications may occur in the course of blennorrhagia, which should be regarded as true metastases since they are produced by gonococci that have penetrated into the circulation, and perhaps, too, by their chemical products. The inflamed urethra may indeed become the point of ingress of other pathogenic microbes. The author communicates five cases from the medical clinic of Greifswald, in which cryptogenic septicopyæmia was diagnosed, whilst at autopsy prostatic abscesses were shown to be the fount of general infection, which, in two instances certainly, and in two probably, could be referred to a blennorrhagia. In two cases it was not possible clinically to recognize any morbid condition in the genitalia, in the third there was a secondary suppuration of the right testicle, in the fourth a prostatic abscess, which had been considered a malignant tumor, and only in the fifth did the origin of the infection clearly manifest itself during life. Wherefore the author insists on the necessity for examining the prostate in all cases of cryptogenic sepsis, even though there may be nothing in the history to call attention to blennorrhagia.

The Medical Treatment of Perityphlitis.—Bourget (*Rivista critica di clinica medica*, May 18th), in a communication to the Therapeutic Society of Paris, recommends a method of treatment in perityphlitis which he has successfully used for ten years. So soon as the crisis is reached, the patient is put upon a rigorously liquid diet (rice and barley meal soup, eggs, tea with milk), and four or five drachms of castor oil, containing in solution from

fifteen to thirty grains of salacetol, are given. The most important part of the treatment consists of gastro-intestinal lavage, combined, if necessary, with lavage of the stomach, with slightly alkalized water. The relief experienced is very great, and the author considers this the only method of treatment directly antagonistic to the morbid process; for, perityphlitis being an inflammation of the cæcum caused and maintained by fecal matter, which is detained there and decomposes, giving rise to abnormal products that, entering the circulation, disturb the entire organism, nothing, he thinks, can be more logical or more efficacious than to attack the infective focus and subject it to a disinfectant and deobstruent process. One cannot fail to perceive the favorable effect of this cleansing of the intestine in subjects of self-intoxication, removing the toxins that the organism itself has endeavored to eliminate through the intestinal mucosa. The problematic danger of breaking adhesions already formed need not prevent us in this undertaking, he says, for the contact of liquid with the walls of the cæcum will not determine perforation. On the other hand, we must not neglect to operate with all possible precautions. An ordinary stomach tube, lubricated with pertolatum, will serve, for it will easily pass the internal sphincter. The liquid should be at a temperature of 100.5° F., and a very useful lavage is a four-per-cent. solution of ichthyol, to which is added a little olive oil containing some volatile aromatic principle, e. g. menthol or thymol. The patient should lie on the right side, the couch being raised somewhat toward the feet. The quantity of liquid introduced ought not to exceed a quart, and the patient should retain it, if possible, from twenty to thirty minutes, remaining in the posture described. This operation should be repeated morning and evening. After the third day's treatment, for the castor oil given *per os* may be substituted the following saline aperient:

℞ Sodium bicarbonate,	} of each 75 grains;
Anhydrous sodium phosphate,	
Anhydrous sodium sulphate,	
Water	1 quart.

M. Four ounces to be taken three or four times in the day.

The advantages of this method of treatment, the author says, will soon be apparent. The colic soon finally ceases, the tenderness on pressure and local tumefaction disappear. After the first twenty-four hours, vomiting, nausea, and cold sweats cease, and the temperature becomes normal at the third or fourth lavage. The lavages may be suspended toward the fifth or sixth day, the administration of the before-mentioned aperient being alone continued. When the acute period is passed and all imminent danger over, operative intervention may be thought of; then only will the case come into the domain of surgery.

[It is possible that in early stages this treatment may be of considerable value, especially in cases far removed from competent surgical aid, but we very much doubt whether the consensus of opinion, either medical or surgical, in this country, would endorse the author's view that surgical intervention is not to be contemplated till after the subsidence of all acute symptoms and of imminent danger.]

Some Indications for Gastro-enterostomy.—

At the annual meeting of the Mississippi Valley Medical Association, recently held in Put-in-Bay, Medical Association, held in Put-in-Bay this week, Dr. William J. Mayo, of Rochester, Minn., read a paper based on experience derived from sixty-four operations. In malignant disease, gastro-enterostomy, he said, was indicated only if symptoms of obstruction were present. The mortality was high, twenty-five to thirty per cent. The writer had lost four out of sixteen patients. The reason for this mortality lay in the bad condition of the patient. The early cases, with the patient in good condition, needed radical treatment, and the operation of pylorotomy, on this account, had an even lower mortality than gastro-enterostomy, which had no such limitations. For open ulcer gastro-enterostomy was of the greatest benefit if the ulcer was situated near the pylorus, and it usually was. Under such circumstances the stomach was of normal or increased size, the latter condition being due either to obstruction or to pyloric spasm. If the ulcer was distant from the pylorus and the stomach contracted, gastro-enterostomy had less value, and the anastomotic opening might close, although the ulcer was usually healed before this took place. The writer had had thirteen gastro-enterostomies for open intractable ulcer, with one death. For benign obstruction, without regard to its origin, gastro-enterostomy was the operation of choice, the cure being immediate and lasting. Pyloroplasty enlarged the outlet, but if the stomach was very large and pouched, the degenerated muscle fibre might fail to elevate the food to the pylorus, and relief was not always afforded. Gastro-enterostomy drained from the lowest point, and was superior in every way to the plastic operation. In thirty-five gastro-enterostomies of this class, only one patient had died.

A British Appreciation of New York's Sanitary Code.—Sir Charles A. Cameron, C. B., M. D., vice-president and ex-president of the Royal Institute of Public Health, Medical Officer of Health for Dublin and Examiner in Sanitary Science to the University of Dublin, in a Report on Public Health, published in the *Dublin Journal of Medical Science* for May, has the following appreciation of sanitary regulations in New York. Sir Charles says:

I have been favored with a copy of the sanitary code of the board of health of the Department of Health of the City of New York, 1899. It comprises a volume of 106 pages. On the whole, this code of sanitary laws gives to the sanitary authority of New York much the same power of dealing with nuisances and matters relating to sanitation as the Sanitary Acts of Great Britain and Ireland confer upon the sanitary authorities. There are, however, a few of the New York laws for which we have no equivalent in these countries.

Section 33 provides that the house drain of every dwelling, manufactory, theatre, store, or building in the city of New York, used or occupied, or intended to be used or occupied, by human beings, must be of iron, with a fall of at least one quarter inch to the foot, and where water-closets discharge into it the drain must not be less than four inches in diameter.

This is an excellent law. I have long maintained

that drains passing under dwellings should be made of iron and have solid leaden joints. The iron pipes have evident advantages over earthenware ones—they can be made of greater length, have fewer joints, and the lead run into the joints in a molten state is more likely to prevent escape of liquid from the drain than the cement of earthenware pipes.

Section 34 provides that no brick, sheet metal, earthenware, or chimney flue shall be used as a sewer ventilator or to ventilate any trap-drain, soil or water-pipe.

Section 43 enacts that no privy-vault or cesspool shall be allowed to remain on any premises or shall be built in the city of New York unless when unavoidable, and in accordance with a permit issued by the board of health. I presume that the "unavoidable" conditions mean when there is no main sewer within a reasonable distance from the premises into which the drainage could be discharged.

This is an excellent law; there is nothing equivalent to it in any of the British public health acts. There can be no doubt as to the great superiority of the water-carriage system of filth removal over the storage plan. In a former report in this *Journal* I showed that the average death-rate in the water-closet towns in England was below that of the towns in which the conservancy system prevailed. There is, however, no special power given to local sanitary authorities to abolish privies. In Dublin they have practically been abolished, even in the poorest class of tenement houses. The plan adopted to get rid of the privies and to substitute water-closets for them was to regard them as nuisances injurious to health. Hundreds of cases of this kind were brought before the police magistrates, who invariably made orders for the abolition of the privies. That, of course, implied the substitution of water-closets for them. In Belfast the magistrates, on the contrary, in general refused to make orders abolishing privies, even in cases where the contents had to be removed through the halls, there being no cleansing passages at the rear of the houses. In a bill promoted by the corporation of Belfast in 1899 a clause was inserted empowering the corporation to abolish privies. The bill was passed.

Turning again to the New York code we find Section 44 prohibiting the sale as food of any animal that died "by disease or accident." It seems a little hard on the owner of a healthy animal, killed, say, by coming in contact with a railway train, that its flesh, if the animal was promptly bled and "dressed," should not be used.

Section 47 prohibits the exposure for sale of meat, poultry, game, or fish outside of any shop or in open windows or door thereof.

Having, I presume, in view the probability of town wells being polluted, Section 61 prohibits the use of water from such well unless by a permit in writing from the department of public health.

Section 63 fixes a standard for milk, which must contain not less than 12 per cent. of total solids and not less than 3 per cent. of fats. There is no standard of the kind in the United Kingdom, but the public analysts certify that milk containing less than 8.5 per cent. of non-fatty solids is watered, or less than 2.75 per cent. of fats has been deprived of part of its fats. There is a probability that a standard for milk will soon be fixed by the authorities.

Section 72 provides that not more than fifteen cows or other cattle should be kept per acre without a permit from the health department.

Section 99 is so important that I shall give it in *extenso*:

"That no person shall boil any offal, swill, bones, or fat in the built-up portions of said city, save in ordinary cooking, nor shall the business of bone crushing, bone boiling, bone grinding, bone burning, shell burning, fat burning, gut cleaning, nor the skinning or making of glue from any dead animals or parts thereof, nor any other occupation that is dangerous or detrimental to life or health, be hereafter established within said city; and no business or pursuit of the kind in this section named shall be carried on anywhere in said city, unless the same be allowed by a permit from the department of health."

Section 135 prohibits the introduction into the city of a milch cow unless it be certified by a veterinary surgeon to be free from tuberculosis. The surgeon must be a graduate of a recognized veterinary college, and he must state in his certificate the date of his graduation. The identity of the cow must be established and an account given of the investigation by which its freedom from tuberculosis was established. The tuberculin tests must be employed.

Sections 145 and 146 are as follows:

"That every physician shall report to the sanitary bureau, in writing, every person having a contagious disease (and the state of his or her disease, and his or her place of dwelling and name, if known), which such physician has prescribed for or attended for the first time since having such a contagious disease, during any part of the preceding twenty-four hours; but not more than two reports shall be required in one week concerning the same person; but every attending or practising physician thereat must, at his peril, see that such report is or has been made by some attending physician.

"That it shall be the duty of each and every practising physician in the city of New York to report, in writing, to the board of health, the death of any of his patients who shall have died in said city of contagious or infectious disease, within twenty-four hours thereafter, and to state in such report the specific name and type of such disease."

Section 193 prohibits the spitting upon the floor of public buildings, railway cars, and ferryboats.

Section 153 refers as follows to tuberculosis of the lungs:

"That pulmonary tuberculosis is hereby declared to be an infectious and communicable disease, dangerous to the public health. It shall be the duty of every physician in this city to report to the sanitary bureau in writing the name, age, sex, occupation and address of every person having such disease who has been attended by or who has come under the observation of such physician for the first time, within one week of such time. It shall also be the duty of the commissioners or managers, or the principal, superintendent or physician of each and every public or private institution or dispensary in this city to report to the sanitary bureau in writing, or to cause such report to be made by some proper and competent person, the name, age, sex, occupation and last address of every person afflicted with this disease who is in their care or who has come under their observation within one week of such time. It

shall be the duty of every sick person with this disease and of every person in attendance upon any one sick with this disease, and of the authorities of public and private institutions or dispensaries, to observe and enforce all the sanitary rules and regulations of the board of health for preventing the spread of pulmonary tuberculosis."

Section 156 provides that the funerals of persons who have died from infectious diseases shall be private, and shall not be attended by any person whose presence is not indispensable.

The people of New York are to be congratulated for having such an admirable and comprehensive code of sanitary laws. If the observance of them is vigorously enforced, New York can hardly fail to become one of the most healthy cities in the world.

"Fourth Disease."—Dr. J. J. Weaver (*Dublin Journal of Medical Science*, June, 1901), in an article on this subject, says that Dr. Clement Dukes (*Lancet*, July 14, 1900) points out that there is an infectious disease which, provisionally, he calls "Fourth Disease" (because it is an additional disease to the other three diseases, scarlet fever, measles, and German measles), closely resembling scarlet fever, and very apt to be mistaken for scarlet fever.

We shall, Dr. Dukes thinks, be all agreed as to the nature and characteristics of the ordinary types of scarlet fever, measles, and German measles, though, perhaps, a word on each of these diseases may help to clear the ground for what follows.

Scarlet fever is a distinct disease, the rash of which is, he thinks, well described by Osler as consisting of "red spots on a deep subcuticular flush," and first appearing on neck and chest.

Measles, or morbilli, or, as it is sometimes called, rubeola, is also a distinct disease, but as it is not likely to be confused with the so-called "Fourth Disease," it may be dismissed without any further remark.

German measles, otherwise known as rubeola notha, röteln, rubella, epidemic roseola, or rose rash, is in many respects like "Fourth Disease," and therefore, requires rather more careful consideration. Probably many will be of opinion that this so-called "Fourth Disease" is nothing more than the scarlatinal form of German measles, and this, it seems, had been the opinion of Dr. Clement Dukes himself up to recently, until, in fact, in 1900, he had to deal with an epidemic at Rugby of "Fourth Disease," in which forty-two per cent. of the cases had already had, comparatively recently, German measles. Dr. Clement Dukes's contention now is that the disease formerly known as the scarlatinal form of German measles is a distinct disease of itself, called by him "Fourth Disease," and that it does not protect a patient from an attack of German measles; nor, *vice versâ*, does an attack of German measles protect a patient from an attack of "Fourth Disease." It is, therefore, necessary now to point out in what way this so-called "Fourth Disease" differs from German measles or rubella.

The principal point of distinction, in Dr. Weaver's opinion, is the character of the rash in each disease. In German measles all authorities seem agreed that at some stage of its course the rash is more or less "patchy" (like measles). This "patchy" character of the rash in German measles

being, in the author's opinion, a very important point in the diagnosis of German measles as against "Fourth Disease," he particularly draws attention to it. Osler, writing of German measles, states that "the patches are less distinctly crecentic than in measles." Liveing (*Handbook of Skin Diseases*), describes the rash of German measles as follows: "At first, patches like measles, subsequently often becoming diffuse like scarlatina." Frederick Taylor (*Practice of Medicine*) states that the rash consists of "pink spots, round or oval, very slightly raised above the surface, uniformly scattered, and generally discrete, though sometimes very closely set." Goodall and Washbourne (*Manual of Infectious Diseases*) say "The rash starts as small, very slightly raised papules, similar to those of measles. . . . The papules often enlarge and coalesce, so as to produce a uniform erythema." Goodhart (*Diseases of Children*, 1894) says "the eruption, though usually raised in coalescing points like measles, is occasionally diffused, and, unquestionably, more like scarlatina," and he adds, "and this practically has suggested to some that r  theln is a term applied to two distinct exanthems."

By the above quotations the author wishes to show that, according to these authorities, the rash of German measles is always, at some stage or other, more or less patchy, and, therefore, unlike the even, uniform non-patchy rash of scarlet fever. Now, in the cases described by the author as cases of "Fourth Disease," the rash, in his opinion, could in no case be called a "patchy" rash. It was of a uniform, finely punctate character, indistinguishable from the ordinary early rash of scarlet fever. In fact, he admits candidly that he has mistaken the rash of what ultimately proved to be "Fourth Disease" for the rash of scarlet fever, and that even now he is unable to distinguish the rashes by themselves, the one from the other. That he is not alone in this difficulty is shown by the fact that several of the cases he describes have been sent into the borough hospital as cases of scarlet fever by various medical men in the town, and have been shown there by subsequent events not really to have been cases of scarlet fever at all.

* * * * *

The author next briefly states the distinguishing points about this so-called "Fourth Disease." In the first place, the rash is indistinguishable in character from that of scarlet fever. In all his cases, however, unlike scarlet fever, it appeared first on the face—generally round about the mouth. In the next place, even when the rash is extensive—for instance, all over the front and back of body and limbs—the temperature is not high, not above about 100° F. usually, and the pulse is not accelerated, as one would expect to find it in scarlet fever. In fact, "Fourth Disease" is to be distinguished, so far as his present experience goes, by the fact that in spite of an extensive and well-marked scarlatina rash, there is little or no rise of temperature or pulse, the throat symptoms are slight or absent, there is little or no feeling of illness, and no loss of appetite (patient eats, or wishes to eat, his food as usual).

In addition to these points of distinction, Dr. Clement Dukes lays a good deal of stress in distinguishing "Fourth Disease" from scarlet fever, on the tongue, which in scarlet fever peels on the fourth

day, but in "Fourth Disease" does not. The author is not prepared to say anything at present on this point.

In all other respects "Fourth Disease" is very like German measles—the eruption is usually the first symptom in both diseases, the incubation period is about from nine to twenty-one days, and the throat and eye symptoms are much the same. In none of the cases recorded by the author as "Fourth Disease" was there any sneezing, coryza, or cough. The enlargement of the lymphatic glands, particularly of the posterior cervical glands, which is said to be pretty general in German measles, does not appear to be so general in "Fourth Disease." In none of the cases recorded in this paper was any enlargement noticed, nor was any complaint made of them by any of the patients.

There are said to be no sequel   after "Fourth Disease," or German measles. None appeared in any of the cases described by the author.

Although, according to Dr. Clement Dukes, cases of "Fourth Disease" may be occasionally followed by free desquamation, practically no desquamation took place in any of these cases (unless the first case, marked as a "doubtful case," was a case of "Fourth Disease" in the first place, and scarlet fever afterward). In one case, though the rash was very profuse there was only a suspicion of peeling at the flexures of the fingers, between the first and second metacarpal bones; so slight, however, that it was difficult to be positive about it.

Sir William Broadbent (*Lancet*, July 28, 1900) states that he "accepts without hesitation the differentiation of rubella into two distinct diseases which Dr. Clement Dukes has made."

The Treatment of Malignant Growths by Coley's Fluid.—Dr. Robert Wild (*Medical Chronicle*, March) review the history of this procedure, and gives the results in eight cases treated in the Cancer Pavilion and Home, Manchester, England. The following is a summary:

Pain was severe in two cases only. Local reaction, in the form of redness and swelling, occurred in three cases. General reaction, in the form of a rise of temperature with or without rigors, was absent in two cases, slight in three cases, marked in three cases. The dose required to produce a general reaction varied widely with different patients, in one case one minim was followed by a temperature of 103° F., while in one case sixteen minims failed to cause any marked rise. In several cases the effects appeared to be cumulative, as in one case, where little effect was produced by a dose of five minims until fourteen injections had been given, when a rigor and rise of temperature suddenly occurred. Effect on the patients: appetite and nutrition were not impaired, and the patients did not lose weight more rapidly than usual in similar cases. One patient gained weight. In four cases there was no effect upon the disease, which steadily progressed, and ended fatally in about the usual time for similar cases in the hospital; certainly no harm resulted from the treatment. In two cases the effects of the injections appeared to be unfavorable, and in feeble patients I think it is not advisable to employ this method of treatment at all. In two cases, the patients themselves considered the treat-

ment to have been beneficial, and certainly lived longer than I should have anticipated from the extent of their disease. Both, however, died within twelve months, and any benefit from the treatment must have been only of a very temporary nature.

From a study of the published cases and his own limited experience, the author does not consider that the results obtained so far justify the trial of Coley's method in any operable cases of malignant disease, whether carcinomatous or sarcomatous. A recourse to it only wastes valuable time, and may render subsequent successful operation impossible. In cases of inoperable carcinoma and epithelioma, there is no evidence of any permanent benefit, and the treatment is by no means free from danger. In the absence of any other means of effective treatment, a careful trial of Coley's fluid is justifiable in cases of inoperable sarcoma, especially the more rapidly growing forms. A limited number of successful cases have been reported in which the disease was of this type, and other cases in which there was temporary improvement. Further researches upon the after-effects produced by erysipelas are desirable, as it appears by no means certain that the effects produced by the toxins are identical with those which result from an attack of genuine erysipelas.

The Prophylactic Induction of Abortion.—Dr. Purefoy (*Dublin Medical Journal*, April), in his Clinical Report of the Rotunda Hospital for the period from November 1, 1899, to October 31, 1900, says that there had been in the institution eight cases in which it was considered necessary to terminate pregnancy before the child became viable. Two occurred before the end of the fourth month; in each case the patient was having repeated hæmorrhages. The cervix was dilated by means of sea-tangle tents, and the uterus emptied by Rheinstädter's curette. The remaining six cases all occurred between the fifth and sixth months, and the patients were suffering from severe and repeated hæmorrhages, two of them being due to the placenta being attached to the lower uterine segment. In three of these, labor ensued shortly after the insertion of the sea-tangle tents, but in the remaining three some delay occurred, the operation not being complete for from three to five days. In one, after the removal of the tents, the vagina was plugged with boiled wool for two days. The second patient had tents inserted on two occasions, and on the third day the membranes were punctured, and version performed, delivery occurring shortly after. These patients all had normal puerperia. In the last case there had been bleeding for five weeks before admission, and the patient was six months pregnant. As the hæmorrhage continued after she was admitted, five sea-tangle tents were inserted, and the vagina was plugged with boiled wool. Next day nine tents were used, and the vagina was again plugged. She delivered herself next day, six hours after a foot was brought down. The placenta, which was adherent, was removed digitally, and the uterus curetted. The temperature did not rise above 99° F. until the eighth day, when it ran up to 103° F., with a pulse of 140. The uterus, which was rather large and soft, was again curetted, and, as the temperature reached 104° F. next night, it was plugged with iodoform gauze after douching. This was repeated

each evening until the sixteenth day, when the temperature and pulse were again normal. The gauze was then removed, and she left hospital five days later in good health.

The Diagnosis of Favus.—Professor Majocchi (*Gazzetta medica lombarda*, July 14th) says in a clinical lecture that, in the present state of our knowledge the unity of achorion, as held by Kral, Pich, Nubelli, Marianelli, in Italy, and by Dubreille, in France, is upheld by a greater amount of facts than the plurality theory of Quincke, Euselberg, Franch, and Unna. One must acknowledge only one achorion which, however, in various culture media, may present varied aspects, but inoculation experiments on man always reproduce favus with its morphological varieties. The cultures of this fungus were made in various nutrient media, but the most characteristic are those of agar-agar. On observing an initial colony with small or moderate increase we see that it presents a granular central zone and a filamentous and frayed peripheral one. The first is constituted by spores, from which filaments are given off; the second is composed of equidistant mycelium threads emanating from the granular zone. The initial colony thus constituted, increases gradually to the periphery and descends also into the agar-agar, appearing of a whitish or whitish-yellow hue and of a powdery aspect. After from eight to ten days, the growth usually stops in its peripheral development, and by examining it under a low power, it is found that in it have appeared some changes which, however, always permit the recognition of a central and a peripheral part. The central part is made up of concentric circles of short equidistant rayed threads; the second, which is the external, of a "halo" of longer threads, with forked or ramifying ends, which constitute the so-called "muscoid emanations," and, when the colony of achorion has developed these radiating filaments, it has attained its complete development and there is no more peripheral increase.

When this is present with the above described morphological characters, the clinical signification is of absolute value. If not thick, favus appears altered in form and color, or maybe complicated with crusts—as on the hairy scalp. It is, therefore, necessary to distinguish it from these cutaneous products.

1. Favus may be distinguished from exudative crusts because these are of an amber-yellow color, semitransparent if the exudation is serous, of a greenish-yellow opacity, if purulent. Moreover, they are situated on an inflamed surface, which also presents residua manifestly of the precedent vesiculo-pustular form, while, in favus, inflammatory phenomena are wanting. In short, the regular form of favus and its characteristic odor make it distinguishable from the crusts of exudation. 2. From transudation crusts it is easily distinguished by the reddish-brown color of sanguine transudation and the amber-yellow color of serous transudation consequent on prolonged cedema of the skin. 3. Finally, it is distinguishable from crusts due to fatty secretion by the waxy consistence, the greasiness, the yellow-brown color or slate color, and by the odor of rancid oil of the latter, the characteristic odor of favus being that of mouse's urine.

Original Communications.

THE LANE LECTURES ON THE SOCIAL ASPECTS OF DERMATOLOGY.

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LONDON,

Surgeon to the Department of Skin Diseases, St. Mary's Hospital.

LECTURE III.

Delivered in San Francisco, September 3, 1901.

Diseases Caused by Vegetable Fungi; Ringworm, its Ætiology; a Lost Discovery; Sabouraud's Work; the Plurality of Ringworm Fungi; the Author's Researches; Practical Conclusions; Geographical Distribution of Fungi; Prognosis of Scalp Ringworm; Ringworm and Education; Special Ringworm Schools; Favus; Plurality of Fungi Producing the Disease; No Scientific Frontier between Favus and Ringworm; Favus in its Social Aspects; Legislation Needed for its Repression; Other Diseases Caused by Vegetable Fungi.

Of the vegetable moulds which find a more or less congenial soil for their growth on the human skin, the most important from the practical point of view are the fungi that cause the diseases familiar to us all under the names of ringworm and favus. Although these affections never threaten life and, indeed, do not appreciably interfere with the general health, they often cause considerable disfigurement and social disabilities which may entail serious consequences on the sufferer. In recent years the study of the fungi which are the exciting causes of ringworm and favus has been pursued, particularly in France, with an ardor and a perseverance that have been crowned with brilliant success. It may truly be said that in this little corner of pathology the "new learning" has brought about a revolution in scientific thought. As the results of recent research on these fungi have scarcely yet been formally incorporated into what may be called the general body of medical dogma, a brief account of them may perhaps not be superfluous. Apart from its strictly scientific aspect, the story is interesting as another illustration of the melancholy truth so often exemplified in the development of medical knowledge, how light shineth in darkness and the darkness comprehendeth it not.

RINGWORM.

Ringworm is an old word in our language, but it is by no means certain that it denoted the affection known to us by that name. Bateman gives a con-

fused account of a disease which he classed in his order "porrigo," and styled "scalled head, or ringworm of the scalp." He had no notion of its parasitic origin, but knew that it was transmitted by contagion "both to the other parts of the head of the individual affected, by the conveyance of the matter from the diseased to the healthy parts," and to other children directly by contact of heads and indirectly by infected towels, combs, and caps. "Whence," he goes on to say, "the multiplication of boarding-schools appears to have given rise to an increased prevalence of this disease among the more cleanly classes of the community at the present time." Antony Todd Thomson, writing in 1850, makes the interesting statement that "ringworm was little known in this country (to wit, Great Britain) until the commencement of the present (nineteenth) century, when some children infected with it came from India, after which it appeared in several boarding-schools, and was afterward extensively and rapidly propagated by contagion." It would seem, therefore, that ringworm, if we may compare small things with great, is like cholera, a kind of propitiatory sacrifice which we colonizing Britons pay to the gods of the ancient empires we have overthrown in the East. One of the manifold grievances which our "sweet enemy, France," professes to have against us is that we are not only the importers but the distributors of cholera. I suppose it is only ignorance of the statement which my regard for historical truth compels me to quote that has saved Albion from a charge of a like perfidy in the importation and dissemination of ringworm. The case against us would seem to be made all the stronger by the fact that ringworm of the scalp appears to have been unknown in France during the first third of the nineteenth century. The first French writer who gave a clear description of it was Mahon, whose work was published in 1829. But then and for several years afterward it must have been rare in France, for Cazenave says he first recognized it in one of the large schools of Paris in 1840. Ten years later, however, he speaks of the affection as being "quite common" in France.

ÆTIOLOGY.

In regard to the ætiology of ringworm, Bateman's view that it "seems to originate spontaneously in children of feeble and flabby habits, or in a state approaching to marasmus, who are ill-fed, uncleanly, and not sufficiently exercised," remained the accepted doctrine till after the middle of the last century. Yet for years wisdom had been crying out in the streets and no man regarded it. In 1839 Schönlein had shown that favus was due to the action on the skin of a particular fungus which we now know

as the *Achorion Schoulenii*, and five years later Malmsten, in Stockholm, and Gruby—the quaint old Jewish physician whose eccentricities provided journalists with much “copy” on his death a year or two ago—in Paris, discovered another cryptogamic fungus as constantly present in certain forms of ringworm. Gruby further discovered—and, with the very primitive instruments which were available for research in the early forties, the achievement can only be described as wonderful—that several different species of fungi were concerned in the production of the polymorphic affection which we call ringworm. In fact, he anticipated in all essential points the discoveries which within the last six or seven years have made the name of Dr. R. Sabouraud a household word among dermatologists throughout the world.

A LOST DISCOVERY.

Owing to a confusion in his terminology which sent those who attempted to verify his results off on a false scent, Gruby's fungi were pronounced to be myths, and his work was accordingly dismissed as a baseless fabric of error and soon forgotten. By way of comment on this episode of medical history I may be allowed to quote some words of my own written some three years ago: “The fact that a misconception as to the meaning of a term should have prevented the recognition of so important a discovery for half a century has in it a moral of universal applicability in medical research, and assuredly not least in the study of diseases of the skin—the necessity of looking at things and taking heed not to be misled by names. Had the numerous investigators who failed to confirm Gruby's observations looked at what he described and not at what he misnamed they would doubtless have seen what he saw.”¹

SABOURAUD'S RESEARCHES.

Gruby's work was buried in oblivion long before his death, and it probably would have remained so but for the chivalrous generosity of a later explorer in the same field, who might well have said, with a writer whose name I am sorry to say I do not know, *Pereant qui ante nos nostra dixerunt*. Fifty years after Gruby's words had been offered to an inappreciative world, M. Sabouraud began the investigations which have so profoundly changed our conception of the ætiology of ringworm, and independently rediscovered the new world of pathology which had been treated as travellers' tales when announced by Gruby. It was only after he had practically completed his work that M. Sabouraud became aware that another pioneer had been over the same ground before him. With a fine sense of

loss of which is not so common a feature in the scientific character as it should be, M. Sabouraud at once called attention to his predecessor's researches, and it is mainly through his full analysis of Gruby's work that it is known to us at the present day. Before passing on to give a sketch of modern researches on ringworm, it may be mentioned that the parasitic theory of its origin did not for a considerable time gain general acceptance in the medical profession. In 1850 we find A. Todd Thomson declaring that “the pustules constitute the disease, and the mycoderm merely finds its habitat on them,” and Cazenave warning dermatologists against “the illusions of micrography.” Both Cazenave and Erasmus Wilson remained obstinate unbelievers till the end of their lives.

And yet they were asked to accept only one fungus; now we are invited on pain of excommunication from the true church of science to believe in a countless host of them. Sabouraud, indeed, appears to hold that the number of species of trichophytes is “unlimited”; in hardly any two cases of trichophytic ringworm is the same fungus found. His teaching may be summed up in the formula *tot capita tot fungi*.

THE PLURALITY OF RINGWORM FUNGI.

It would be unprofitable as well as impracticable to give here a critical analysis of M. Sabouraud's doctrine; I can only state it in the roughest outline. His view is that under the sweet simplicity of a single name, *tinea tonsurans*, till lately supposed to be caused by a single fungus, *Trichophyton tonsurans*, there really lurk two distinct diseases, one caused by a cryptogamic fungus of the trichophyte class, the other caused by a microbe of a wholly different mould to which Gruby gave the name *Microsporon Audouini*. The trichophyte has relatively large spores, and there are two great varieties, sharply distinguished by the position which the fungus assumes in regard to the hair which it attacks, one lying outside the shaft, the other penetrating it. From these characters Sabouraud gives it the name of *Trichophyton megalosporon endothrix* and *ectothrix*. Hence there are three great varieties of ringworm, one caused by the *Microsporon Audouini*, the two others by the two classes of trichophytes which have just been mentioned. The *Microsporon Audouini* is said to be the cause of from sixty to sixty-five percent. of all cases of ringworm of the scalp met with in France, the *endothrix* trichophyte being accountable for most of the rest.

Of the species of trichophytes, as already said, the name is legion. It is to this multiplicity that, according to M. Sabouraud, the polymorphism of ringworm is due. He thinks it possible that these fungi may have an independent saprophyte exist-

¹ *Review on the Diseases of the Skin*, London, 1878.

ence, and he has succeeded in cultivating them on decaying wood and other vegetable substances. Some of them live and have their being on animals, among which the horse, the cat, and the dog are those that concern us most nearly. A fungus closely allied to the *Microsporon Audouini* has also been found on the horse by Bodin. From animals the fungus may under certain conditions be transmitted to man.

CLINICAL APPLICATION OF THE DOCTRINE.

Coming to the clinical application of the doctrine of plurality of species of fungi, Sabouraud holds that (1) the *Microsporon Audouini* is the cause of all those forms of ringworm that resist all treatment and are the despair of practitioners, parents, and pedagogues; (2) that ringworms for which the *Trichophyton megalosporon endothrix* is accountable do not, as a rule, exceed one year in duration; and (3) that ringworms due to the *Trichophyton megalosporon ectothrix* are easily curable and do not last more than two or three months. Whatever divergences of opinion there may be as to details, all workers are agreed on two points: (1) That all the various affections and multifarious lesions of the hair and skin connoted by the term "ringworm" are caused by fungi; (2) that those fungi are of more than one kind. The plurality of species of ringworm fungi is no longer a theory but an established fact. But as to the exact number, Nature, mode of existence, and pathogenic properties of the fungi there is still the greatest uncertainty, while as to classification, chaos reigns supreme. While dermatologists are not agreed as to what the trichophyton does, botanists differ widely as to what the trichophyton is. In this darkness and confusion the smallest glimmer of light may be of help.

THE AUTHOR'S RESEARCHES.

I have given considerable attention to the mycology of ringworm, and, though neither my material nor my opportunities for this particular line of research have been comparable to those of M. Sabouraud, I may be allowed to state the results of my work. Whatever its value, I can at least say, with Touchstone, that if it is "an ill-favored thing" it is "mine own." I should first state that, unlike most other workers at the subject, I have used a method of staining which has received the approbation of highly competent judges such as Dr. Unna, Dr. Allan Jamieson, and Dr. Norman Walker. Preparations made by means of it were exhibited at the International Congress of Dermatology, held in London in 1896, and reproduced in my book on *Ringworm*, to which reference has already been made. The hair is first washed in ether for some seconds, in order to get rid of the superfluous fatty

material. It is then placed for staining purposes in a solution of gentian violet (5 per cent. in 70 per cent. of alcohol). The small-spored fungus stains very quickly, not more than five minutes, as a rule, being required. The large-spored parasite takes much longer to stain; it must be left for half an hour in the solution, which should, moreover, be heated over a spirit lamp for five minutes or so; in this way the alcohol is driven off, the keratin is dissolved, and the fungus in the interior of the hair takes a deep stain. The parasitic elements can be stained red by treating them in exactly the same way, but only substituting a 5-per-cent. solution of fuchsine in water, with a little alcohol, or a 2-per-cent. solution of carbolfuchsine. The red is better than the violet stain for photographic purposes. When the hair is taken out of the staining solution, it should be steeped in iodine in order to fix the stain; next it is decolorized by being placed in aniline oil or a mixture of two to four drops of nitric acid in aniline for ten to fifteen minutes; then it is placed in pure aniline and kept in it for some seconds; next it is washed in xylol and lastly mounted in xylol balsam. It will be noted that liquor potassæ has no place in this method. It is my experience that potash destroys the mycelium and causes swelling of the spores; hence the use of this agent produces effects that are misleading.

PRACTICAL CONCLUSIONS.

My investigations have led me to the conclusion that there are at least two distinct fungi which may cause ringworm—one distinguishable by the smallness, the other by the relatively large size of its spores. In the former the spores are irregularly scattered about like the stones in a mosaic, and, as far as can be seen, they are disunited; interwoven with them is a felting of branching mycelium, the whole forming a sheath around the hair. The parasite eats its way into the hair and grows down toward the root; the hair becomes brittle and after a time breaks off, leaving a short stump. The microsporon attacks the scalp chiefly, in children almost exclusively. The disease produced by this fungus is often very refractory to treatment and indefinite in duration. The large-spored fungus (*trichophyton*) first attacks the root of the hair and grows upward. The spores are arranged in regular chains intermingled with short, regularly jointed mycelium; they lie around the hair, sometimes inside it, sometimes both inside and outside. The ringworm caused by this fungus yields more readily to treatment than that produced by the microsporon. The large-spored fungus attacks the body (*tinea circinata*), the region of the beard (*sycosis*), the nails (*onychomycosis*), and occasionally the scalp.

GEOGRAPHICAL DISTRIBUTION OF FUNGI.

The geographical distribution of ringworm fungi is interesting, as it furnishes a possible explanation of the different results of the same treatment in the hands of practitioners of different nationalities. The small-spored fungus, which is the cause of the most refractory form of the disease, is found in about 90 per cent. of all cases of ringworm in London and Edinburgh, and also, according to J. C. White, in the United States. In France it is found in a much smaller proportion of cases—60 to 65 per cent. But in the South it is almost unknown. Dubreuilh and Fleche failed to find it at Bordeaux, and in Italy it has, I believe, been found in only one case. In Spain it is very rare, and it is by no means common in Germany. There is a similar diversity in the distribution of the trichophytes. Of the distribution of the various ringworm fungi in other parts of the globe I can say nothing. It would be interesting to have some information on the subject relative to India, from which, as I have said, there is some reason to believe that ringworm was imported. Hence observations on these fungi or the diseases which they produce made in one country must not be assumed to hold good for other countries.

On the whole, therefore, it may be said that, although the relation of ringworm to the fungi producing it is still, as a question of mycology, far from a complete solution, as a question of practical medicine it may, as far as the essential point is concerned, be regarded as settled. We have learned to distinguish the intractable from the tractable form of the disease in a way at once easy and certain. This in itself is a great progress, and for this progress we are indebted to M. Sabouraud.

PROGNOSIS OF SCALP RINGWORM.

It would be out of place were I before such an audience as I see before me to go minutely into details as to the clinical varieties, symptomatology, diagnosis, and treatment of a disease which most of you meet with in your every-day practice. But there are one or two practical points on which I may be permitted to touch. One is as regards the prognosis of ringworm of the scalp. However refractory to treatment a case may be, we have the satisfaction, so rare in the practice of medicine, of being able with a clear conscience and with perfect confidence to foretell that it will ultimately end in cure. Usually, as you know, if it is not cured earlier, ringworm comes to a spontaneous end soon after puberty. But this must not be taken as an absolute rule. I am afraid that in medicine there is no rule without an exception, and, indeed, it might almost be said that, as is the case in some old grammars of the classic tongues, the exceptions are so numerous

as almost to neutralize the rule. I have myself seen cases in which ringworm of the scalp continued in defiance of age and of treatment till adult life. I have, however, never known it last much beyond the age of twenty-five.

Another point that may be mentioned is that of the destruction of the hair that is an invariable consequence of ringworm and, in fact, a necessary condition of its cure. Parents are naturally anxious as to the prospects of the restoration of the hair; on this point also they may be reassured without any "economy," as the casuists call it, of the truth. I have never known permanent baldness to result from even the most severe and long-enduring ringworm if the case has been treated with a due regard to the tolerance of the scalp. Where an excess of therapeutic zeal has led to too free a use of powerful irritants, such as croton oil, I have known the scalp turned into a barren waste without any trace of hair. Such a result reminds one of the famous cartoon illustrating the dispatch of a Russian general who reported to his government that "order reigns at Warsaw." There was, indeed, "order," but it was caused by death and desolation. In the same way a too energetic therapy may "cure" ringworm by leaving nothing that any fungus can prey on. A third point to which I venture to refer, because some misconception still exists on the subject among practitioners of what I hope I may without offense call the old school, is that ringworm has no relation whatever to dirt. The most scrupulous cleanliness is no protection against the attack of the fungus; a dirty condition of the scalp will, of course, help to aggravate the disease by preparing the way for an invasion of pyogenic microbes. In such circumstances complications may arise which will make treatment a matter of serious difficulty, taxing to the very utmost the resourcefulness of the practitioner.

RINGWORM AND EDUCATION.

There appears to be every reason to believe that the diffusion of ringworm of the scalp is one of the penalties we pay for the diffusion of education. The statement of a careful observer is that after the importation of the disease from India it spread through boarding-schools, and it is by schools that it is kept alive and disseminated. Some sanitarians attribute the increase which has undoubtedly taken place in the prevalence of diphtheria to the fact that the bacillus has such large opportunities of development in suitable soil from the gathering of large masses of children into schools; exactly the same thing may be said of ringworm. The authorities of our English board schools, which bring the blessings of education within the reach of the poorest, get grants from the government in proportion to the

number of their pupils who succeed in passing certain standards. This system of capitation grants, though it undoubtedly promotes the zeal of the teachers, for that very reason makes them anxious that the attendance at their schools should be as large as possible. Hence they are inclined to look with a certain amount of prejudice at anything that may tend to diminish such an attendance. In the case of an affection like ringworm, which is of no importance in regard to the general health, they are apt to regard withdrawal of the patient from school as a superfluity of precaution. In like manner the masters of private schools, to whom the temporary loss even of a single pupil may be a matter of some importance, are often too ready to trust to kindly fortune rather than insist on the removal of a child affected with ringworm.

All this makes the extirpation of the disease, which is perfectly feasible if public authorities and private persons would combine in the effort required, a matter of the greatest difficulty. While it is necessary for the greatest good of the greatest number that the subject of ringworm should be rigorously excluded from school, the interest of the child itself has also to be taken into consideration. The disease may last from early childhood to puberty, that is, throughout what is for the vast majority of people the whole period of school age. What is to be done for it? It has been suggested that in default of isolation of the patient the peccant or infective part should be isolated, the head being kept under a coating of germicidal substances and covered with a close-fitting cap. But I cannot help thinking that the condition of a child with such a mark of the beast about him would be made a burden to him by his fellows.

SPECIAL RINGWORM SCHOOLS.

The only practical plan, it seems to me, is to establish special schools for children suffering from ringworm. A somewhat similar plan has been in operation for a good many years in Paris in connection with the Hôpital St.-Louis, where there is a school in which the children under treatment at the hospital are educated as long as may be necessary. This is certainly a step in the right direction, and the results have been excellent. But I think it would be better still if special schools were established apart from hospitals. At the Seventh International Congress of Hygiene and Demography, held in London in 1891, I read a paper on Ringworm in Elementary Schools in which I suggested the establishment of special schools in which children suffering from the disease could be educated while continuing under medical inspection and treatment. In that paper I made two recommendations which are embodied in the following passage:

"It is clearly necessary, before attempting to cope with the disease, that the exact extent and frequency of its occurrence should be estimated. This can only be carried out by means of a *systematic inspection*, in order to accomplish which persons should be trained in each school by skilled medical men to make a weekly examination of every child's head. By this means alone trustworthy statistics would soon be obtained. My second recommendation is directed toward the eradication of the disease without interrupting the educational progress of the child. In the more crowded districts, or wherever feasible, special schools ought to be established in which both systematic treatment and instruction could be carried out. In less populous districts a single class-room might be isolated, with a separate entrance. If such a system could be enforced, the advantages would be that the education returns would at once show a marked improvement, that the children would no longer be deprived of their just privileges of education, and that ringworm would be materially diminished in Great Britain, if not entirely eradicated."

Schools of the kind referred to have within the last few years been established in Rome and, I think, in one or two other cities in Italy and in Belgium. A first step in the direction indicated was in the early part of the present year taken by the Metropolitan Asylums Board of London, which on February 12th opened a school at Witham, in Essex, for children suffering from ringworm. There is accommodation for 160 children, but the present building is temporary and it is, I believe, in contemplation to erect a larger building. Dr. Colcott Fox has been appointed dermatologist to the school.

The school just referred to is intended exclusively for children under the care of London boards of guardians. But for the vast numbers of children who attend the board schools there is as yet no provision of the kind. I think it is clearly the duty of the state, which provides education for all and compels them to take advantage of the opportunities which it offers, to take care also that its benefits are not lost by a class of sufferers who through no fault of their own must be excluded from schools except at the risk of spreading an annoying and disfiguring complaint through the community. There are special school board officers whose duty it is to see that children attend; if the plan suggested were carried out, it could easily be arranged that such officers should see that treatment was not neglected at home and should impress on the family the necessity of a strict domestic hygiene. It would be well if the great principle of making hygiene educative, which promises such fruitful results in the case of tuberculosis, were also applied to ringworm.

FAVUS.

Another skin disease caused by a vegetable parasite which is of some importance from a social point of view is favus. Till a short time ago dermatologists thought the ætiology of this disease was definitively settled. But here, too, our simple faith in a single fungus has lately been shaken. The fungology of skin diseases seems in these days not unlikely to serve as an illustration of the gospel story of the evil spirit that was driven out and brought back seven worse than himself. If it cannot be said that the *Achorion Schönleini* has been driven out from the abode where it has so long dwelt alone, it is the fact that other parasites have turned up to dispute its sole possession thereof. Unna and Frank have found three varieties and Bodin has found five. It is possible, however, that the morphological peculiarities which seem to these observers to establish a plurality of fungi are due to differences of the nutrient media used in culture. On the other hand, the line of demarcation between ringworm and favus, which a short time ago seemed to be well marked, has become obscured by the discovery made by Bodin, Sabrazes, and others of fungi that are regarded as intermediate forms between the *achorion* and the trichophytes. These include, on the one hand, *Mucedineæ*, having the mycological characters of the *achoriones* which, in men as well as in animals, produce lesions of trichophytic appearance; and, on the other, parasites which morphologically and biologically are trichophytes, but cause favus-like lesions. Before I was aware of the researches of Bodin and Sabrazes, my own clinical observation, supplemented by microscopical research and cultural experiments, had brought me to the same conclusion; namely, that the boundary line between the favus fungi and the trichophyton was by no means clearly marked. To use a famous phrase of Lord Beaconsfield's, there is no longer a "scientific frontier" between favus and trichophytic ringworm.

Here, then, we have a fresh element of confusion in a matter already in the highest degree complex. It does not, however, add materially to the difficulty of diagnosis, for cases on the borderland between ringworm and favus are not frequently met with. As regards cases which can be definitely classed as belonging to the domain of favus, it is immaterial from a diagnostic point of view whether the unicist doctrine or that of the plurality of fungi is the true one, since, unlike ringworm, the clinical appearances of favus present in general uniformity of type.

From the pathological point of view, favus must be looked upon as a more serious disease than ringworm. It is sometimes associated with tuberculosis, and cases of death from gastro-intestinal irritation caused by the presence of the characteristic lesions in the stomach and intestine have been re-

corded. Like ringworm, favus is disseminated by contagion, which is often derived from animals; cats appear to be the most frequent sources of the disease, but ponies, mice, rabbits, and fowls are also subject to it. The fungus finds its most congenial soil in filthy and unwholesome persons, and the presence of pediculi is an almost invariable concomitant. Phthisical persons are particularly apt to become the prey of the favus fungus, and in a patient who had long been the subject of favus and who died of consumption lasting three months the rapidity with which the skin disease spread over the whole body during that period was very noteworthy.

SPECIAL ASPECTS OF FAVUS.

From what has been said it will be seen that in its social aspects favus is a worse ailment than ringworm. It is not only a much more serious thing to the sufferer, but much more disagreeable to those about him. In addition to the foul and verminous condition of the patient, which has been referred to, an unpleasant mousy smell is given off from his person. This alone would suffice to exclude him from any ordinary employment, even if there were not besides the risk of contagion. It is a fortunate circumstance, therefore, that favus is a disease much more frequently met with in the country than in towns. The cause of this is doubtless to be found in the fact that it is often conveyed through animals. The affection is very rare in England, but in Scotland it is much more common. In France it appears to be pretty prevalent, and there it must be regarded as of some public importance, as it is not infrequently the cause of the rejection of conscripts as unfit for military service. In most parts of the United States I gather that favus was till a few years ago very rare, but I believe the importation of cases from abroad has lately attracted the attention of some of your sanitary authorities.

LEGISLATION NEEDED FOR ITS REPRESSION.

I do not know whether any action has been taken in the matter, but there can be no doubt that the disease is one which should be rigorously excluded from a community. Some years ago a bill was introduced into our Parliament providing for the exclusion of "filthy and verminous aliens," but it was thrown out. So Jews from Russia and Poland continue to bring us an incalculable increase to our native stock of parasites and fungi. A nation has surely every right to protect itself as far as possible against all enemies, visible and invisible, to its health. The so-called humanitarian sentiment that would deny this right is open to the criticism that it cares less for the comfort of humanity than of the parasites that live on man.

Like ringworm, favus could undoubtedly be stamped out by a properly organized system of medical and sanitary repression.

DISEASES CAUSED BY OTHER VEGETABLE FUNGI.

The other affections of the skin caused by vegetable fungi are so unimportant that I need only mention them. *Tinea versicolor*, which is produced by the *Microsporon furfur*, consists in patches of brownish discoloration on the trunk and sometimes on the upper parts of the limbs. The characteristic feature of the lesions is that they can be scraped away with the finger nail. The only subjective symptom is itching, which is seldom very troublesome. The disease is contagious, and a skin which perspires freely offers a favorable soil for the growth of the fungus. From the social point of view, the only importance of *tinea versicolor* is that the lesions are often mistaken for secondary syphilides—a circumstance which makes it necessary for the practitioner to be careful in giving an opinion. The fact that the discoloration can be scraped away is a proof that the lesions are not syphilitic.

Erythrasma, which is caused by the *Microsporon minutissimum*, is a trivial affection. The fungus manifests its activity by the production of brown patches in warm and moist parts—the axilla, the genitocrural region, etc.

THE GONOCOCCUS AND ITS TOXINE.

By J. RILUS EASTMAN, M. D.,

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Practically all are agreed with Guirard that the gonococcus of Neisser is the specific bacterial agent in all cases of severe urethritis of more than a few days' duration. The germ was discovered by Neisser in 1879 and first grown on artificial culture media by Bumm in 1885.

Morphological Characteristics.—Gonococci, or, as they have been called, micrococci gonorrhœæ, are nearly always seen in the form of diplococci—that is, arranged in pairs. These pairs show a decided tendency to group themselves in tetrads. Occasionally a single coccus is noted. The gonococci have been described as reniform. They have a kidney, biscuit, or coffee-bean shape, and in each pair are so arranged that the flattened surfaces appose each other, separated by a narrow interval which in stained preparations remains unstained. The approximated faces sometimes present a slight concavity. The gonococcus has a rotatory and oscillatory motion, but no autolocomotion (Eisenberg). The method of multiplication, so far as has been made out, is by fission, or direct cell division in two

planes, at right angles to each other, as a result of which the grouping is in twos and fours.

The gonococcus is an unusually large diplococcus, measuring about 1.25 mikron in the long diameter.¹

It has no distinguishing morphological characteristics. In other words, it presents no unique feature as to shape, distribution, size, or colorability, which absolutely distinguishes it from other diplococci that inhabit the normal and inflamed urethra.

It has been given as a distinguishing characteristic that the diplococcus of gonorrhœa is found only within the protoplasm of pus cells. This point is without diagnostic value, since Broese and Schiller and many others have found the gonococci lying quite extracellularly. The writer has seen this phenomenon many times.

F. Bierhoff (*Medical News*, January 12, 1901), in studying gonorrhœal cystitis in the female, found the gonococcus, both intracellular and extracellular in the bladder sediment and urethral discharge. Orcel thinks that the location of the gonococci depends on the way in which the secretion is secured, stating that if the secretion is taken after urinating or after irrigating the urethra, the gonococci are found either separately or in heaps, but outside of the cells, while when the secretion is taken before urination or before washing the urethra, the gonococci are found inside the lymphoid cells.

Crippa and Perzoli found the gonococci in groups outside of the cells, in secretion which had been taken from the urethral glands, Littré's glands, and Morgagni's pockets by inserting a bougie immediately after the patient had urinated. Padres and Droberg state that they found in a series of cases of violent acute gonorrhœa that the gonococci were mostly free outside of the cells, while in the ordinary cases, with a tendency to a benignant course, the gonococci were located inside of the cells.

Ravogli (*Cincinnati Lancet-Clinic*, April 15, 1901) constantly found the gonococci free outside of the lymphoid cells in the beginning of the gonorrhœal urethritis. He says: "When the inflammatory process begins to show with severe intensity, then the gonococci are contained in the cells. The cells appear greatly enlarged and distended, full of gonococci. When the inflammatory process begins to subside, then heaps of gonococci free from the cells are found, and gradually, when the affection is better, the gonococci diminish in quantity and are found free outside of the cellular elements. When gonorrhœal inflammation has reached a chronic stage, then the few gonococci which can be found are mostly located in the epithelial cells."

Ravogli holds that the location of the gonococci is the direct result of the inflammatory process, due

¹Degenerated gonococci were observed by Broese and Schiller which had coalesced, losing their characteristic shape and grouping.

only to the fight of the white corpuscles of the blood against the cocci. "The inflammatory process is not produced immediately, it takes some time to see the result of the natural reaction of the tissues. In the very beginning of the gonorrhœa the hyperæmia is the first step of the inflammation; the exudation has not yet begun, and for this reason the gonococci are found free outside of the histological elements. But when the gonococci are produced in a large quantity, the *vis medicatrix naturæ* opposes its strength, the inflammatory process reaches its height, a copious exudation is the consequence, and the leucocytes with their phagocytic properties take the cocci within their protoplasm so as to free the infected surface."

The writer's observations have closely coincided with those of Ravogli. During the subsiding stage many extracellular cocci were noted. In the acute form the intracellular grouping predominated. It is not a satisfactory explanation to say that such gonococci as lie extracellularly have been mechanically shaken from the protoplasm of the cells. It is more reasonable to assume that the extracellular cocci occupy the site or detritus of completely disorganized cells.

The extracellular distribution is observed very often in carefully prepared specimens from undoubted gonorrhœal pus. The gonococcus grows readily in all the albuminous fluids of the body when these are used *ex corpore* as artificial culture media. Why, therefore, should the albuminous liquor puris be unsuitable as a culture medium? Moreover, diplococci other than those of gonorrhœa may occupy an intracellular position, as was shown in normal urethral cells by Lustgarten and Mannaberg and demonstrated by Bumm in a case of puerperal cystitis. Intracellular grouping is not to be regarded as characteristic of any bacterium. To identify the gonococcus bacteriologically, the tout ensemble of its features, embracing its size, shape arrangement, decoloration by Gram's method of staining and behavior upon artificial culture media, should be carefully weighed. The result of such a bacteriological examination, when added to the opinion drawn from contemplation of the clinical picture, will make up a diagnosis which will rarely fall short of precision.

Diplococci varying in color from lemon to milk white, and closely resembling the gonococcus morphologically, have been found by Bockhart, Lustgarten, and Bumm in preputial smegma, lochial discharges, mammary abscess, and ulcerous processes in the vagina. Bumm discovered likewise in the dust of the air a red diplococcus which might under certain conditions be confounded with the gonococcus. Most of these diplococci, however, grow readily upon gelatin and stain by Gram's method.

The so-called pseudo-gonococcus, an occasional inhabitant of the male urethra, may be clearly distinguished from the micrococcus of gonorrhœa by the application of Gram's method of staining, but hardly by the detection of morphological variations, for morphologically these bacteria are often indistinguishable. This has, without good reason, been held up as a weak point in the evidence as to the specific nature of the gonococcus.

Pescioni, Eraud, and Straus contend that the gonococcus has been found by them to be a denizen of the normal urethra. Heiman explains this by assuming that the gonococci seen in so-called normal urethra by these observers are, although dormant and apparently innocuous, relics of an old gonorrhœa and capable of taking on virulence at any time. Lydston regards the gonococcus as a very variable evolutionary product, and presents strong argument against its specificity.

Methods of Staining.—Gonococci readily take up the stain of the aniline dyes. For rapid diagnosis, Loeffler's alkaline blue, or a concentrated alcoholic solution of fuchsine, or of methyl or gentian violet is satisfactory. Methylene blue stains the gonococcus intensely, but slowly. Loeffler's alkaline blue is convenient for simple and rapid staining. If, however, the methyl or gentian violet is used, the colorizing test of Gram may be applied in doubtful cases without restaining. A peculiarity in the staining of the gonococcus is that, whereas it greedily takes up aniline stains, it gives up such stains readily upon immersion in certain discolorizing agents. Roux's or Gram's method of differential diagnosis depends upon this peculiarity.

In staining according to Gram, the cover glass is prepared after Koch's well-known precepts and stained with gentian violet. The gentian violet stock solution is composed of one part of gentian violet, fifteen parts of alcohol, three parts of aniline water, and eighty parts of water. A sufficient amount of the solution should be filtered and diluted with ten times its volume of distilled water before using. The cover-glass is treated with the diluted stain for ten minutes and then washed with sterile water. The specimen is then examined for gonococci. The cover-glass is next made to float for two minutes, "battered side down," upon Gram's solution in a watch-glass. (Gram's solution is composed of iodine, one part, iodide of potassium, two parts, and sterilized water, 300 parts.)

The excess of iodine is washed off in water and the specimen is placed for two minutes in absolute alcohol for complete decolorization. The alcohol is then rinsed off with water, and the specimen again examined. The gonococci will have been decolorized, while other diplococci, such as the pseudo-

gonococcus, which may have been present will still be clearly visible.

Rarely diplococci other than the gonococcus are encountered which give up their stain when treated with Gram's solution. Absolute dependence, therefore, cannot be placed upon the method of Gram or Roux. Steinschneider and Galewski recommend as a differential method that the preparations be left for half an hour in a solution of gentian violet, that they then be decolorized with iodide-of-potassium solution and alcohol, rinsed, dried, and then double-stained with dilute alkaline methylene blue. Thus stained, the gonococci are pale, and the other diplococci blackish.

Schuetz's method (*Elements of Bacteriology*, Schenk, page 202) consists in preparing a filtered saturated solution of methylene blue in five-percent. aqueous carbolic acid in which the preparations are stained for from five to ten minutes (cold). After rinsing in water, they are laid for an instant in very dilute acetic acid, again rinsed in water, and double-stained in a very dilute solution of safranin. The gonococci thus stained are blue and the pus cells salmon-colored.

It is alleged for Goldhorn's polychrome methylene blue solution that it gives beautifully clear pictures of the gonococcus. It is not serviceable, however, in distinguishing the gonococcus from morphologically similar diplococci.

Other special stains for the gonococcus are prepared with the view of brilliantly differentiating the bacteria from tissue elements; these are the carbol fuchsine and ethylene-diamine-methylene blue solution of Schaeffer and the carbol fuchsine (Zeihl's) and methylene-blue stain of Pick and Jacobson. Czaplowski used fuchsine, decolorizing with Gram's solution (*Berliner klinische Wochenschrift*, 1898, page 60).

For routine practice, Loeffler's methylene blue will meet all requirements as a simple stain, and in doubtful cases Gram's method will nearly always suffice to distinguish the gonococcus from other diplococci of whatever character. In making a rapid examination, a clean slide is prepared with a small drop of gonorrhœal secretion and immediately passed several times through the flame without being previously dried in the air (Winkler). The pus is thus desiccated in a thin film. It is stained with any concentrated alkaline solution of methylene blue, such as Loeffler's, for one minute, rinsed, dried, and mounted in Canada balsam. The pus cells appear pale blue and the gonococci dark blue.

Bacteriological Diagnosis.—There are two chief methods of bacteriological diagnosis, the microscopical and the cultural. Gonococcus inoculations upon animals give little information of diagnostic value. Many of the ordinary test animals are im-

mune, and the degree of susceptibility of all is still uncertain. Cover-glass preparations of doubtful subacute or chronic cases should be stained by the method of Gram and examined, if possible, with a microscope provided with a movable stage, in order that the entire specimen may be searched with mathematical accuracy. These examinations should be repeated, if necessary, several times.

Fürbringer, Heiman, and others have called attention to the fact that the absence of the gonococcus in cover-glass preparations is not conclusive evidence of the non-existence of gonorrhœa, and advise free use of an adaptable culture medium as a more sensitive test. Heiman was able to confirm the value of this advice on one occasion when, having failed to demonstrate the gonococcus on a cover-glass, he succeeded in growing it on chest serum agar. Yet Heiman regards the decolorization by Gram's method (Park, page 533) as a very reliable criterion. His method of securing the urine for examination in chronic urethritis is to allow the patient to urinate directly into two sterilized centrifugal tubes. The urine is centrifuged in the two portions, and each examined separately. The first tube will contain pus or shreds from the anterior urethra, and the second will contain the discharge from the pars posterior.

Broese states (*Berliner klinische Wochenschrift*, 1898, page 646) that in many cases, for example, in Sängers's so-called residual gonorrhœa, a condition supposedly produced by the action of the toxine alone, the gonococcus cannot be demonstrated by any method, either upon the microscopic slide or upon the culture plate. He regards the culture, however, as the surer method of bacteriological diagnosis.

Biological Characteristics.—Since Bumm, in 1885, instituting the first study of the biology of the *Micrococcus gonorrhœa*, noted that the germ would not grow upon the ordinary culture materials, many artificial media have been employed for its cultivation. There are almost as many of these special media as there are bacteriologists who have specially engaged themselves in the study of gonorrhœa, and the fact that no one method of cultivation has found general acceptance may fairly be taken as an indication that an altogether satisfactory medium for the growth of this particular bacterium has not been discovered.

Until a few years ago solid media alone were utilized, and knowledge of the biology of the germ was limited to scattered observations relative to the physical conditions governing its growth and the appearance of the colonies. Bumm, the pioneer in this field, succeeded in developing the gonococcus upon solidified blood serum from the fresh human placenta. Wertheim, in 1892, produced a more

constant and luxuriant growth, reinoculating to many generations upon a mixture of placenta blood serum and two-per-cent. peptone agar.

Hammer used a mixture of albuminous urine and glycerin agar. By others glycerin agar has been used in combination with fluids rich in albumin, such as those produced in hydrocele, hydrothorax, ascites, and cysts, in the proportion of two parts of the glycerin agar to one part of the albuminous fluid. The albumen of plovers' eggs has been successfully used as a culture material for the gonococcus. Thalmann grew gonococci upon small cubes of sterilized and acidified horse brain. Young, of Johns Hopkins, uses ascitic and hydrocele fluid mixed with nutrient agar. Loeffler's or Koch's solidified serum smeared with fresh sterile human blood makes a convenient and satisfactory medium.

Abel and Fisher suggested blood-smeared nutrient agar as a special medium. (*Deutsche medizinische Wochenschrift*, 1893, p. 265; *Berliner klinische Wochenschrift*, 1895, p. 1156.) The colonies upon the blood-smeared solidified serum of Loeffler, however, develop with greater activity. The human blood may be readily obtained from a needle-prick wound upon the sterilized palmar surface of a finger. The blood should be taken up a drop at a time, upon a platinum loop, and spread over the free surface of the Loeffler's coagulated serum contained in a test-tube.

The isolation of the gonococcus in pure culture may be accomplished in several ways. A gonorrhœal urethritis during the first week is usually a pure infection, and cultures made by direct inoculation from the pus to the blood-smeared serum during the first few days will nearly always grow without contamination. Later, the naturally slow growth of the gonococcus may be interfered with by the rapid proliferation of other pyogenic micro-organisms.

If the infection has become mixed, the pure culture may be obtained by transferring a colony of gonococci from a mixed stroke culture upon the serum agar in a Petri dish to the slanting surface of blood-smeared Loeffler's medium in a test-tube. Or we may use the method of Wertheim, which is briefly as follows:² Several loops of gonorrhœal pus are diffused through liquid blood-smeared agar, warmed to 40° C., contained in a test-tube. Two dilutions are made from this, an equal quantity of melted two-per-cent. agar, cooled to 40° C., is added to the three tubes, and the contents after thoroughly mixing, are poured into Petri dishes. The Petri dishes are placed in an incubating oven at a temperature of 36° C. At the end of twenty-four hours there will have developed on at least one of the

plates distinct colonies. By transferring such a colony to slant tubes of blood-smeared Loeffler's medium, the pure cultures are secured. The colonies are thin and translucent. Their surfaces are smooth, moist, shining, and of a grayish-white or grayish-yellow color. The edges are finely scalloped and diffuse into the surrounding media. The medium is not liquefied. Throughout the course of the growth of a culture it shows a tendency to form jagged protuberances or excrescences, which with their sharply defined edges give the appearance of plateau-like mountains. These are the superficial colonies. (See Fig. 1.)

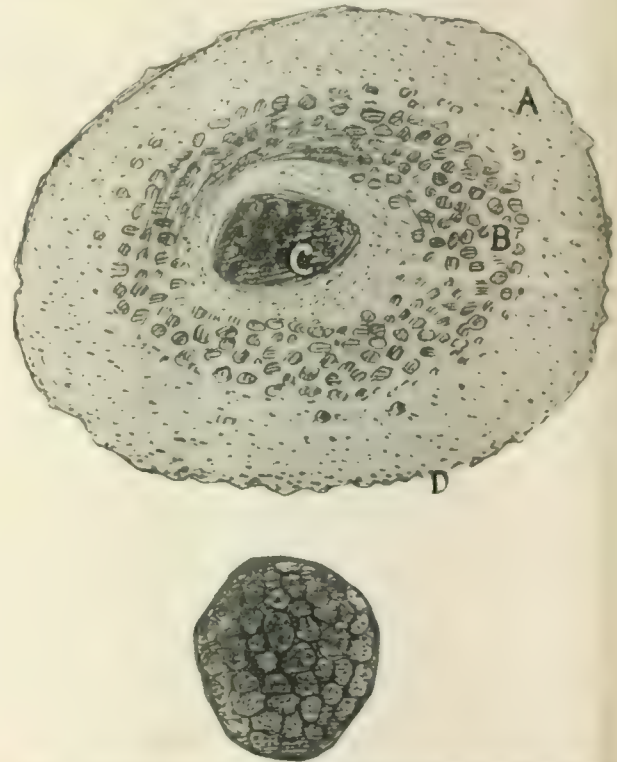


FIG. 1.—Appearance of gonococcus colonies under low power lens. Superficial colony: a, finely granular periphery; b, condensed zone; c, central spot; d, finely scalloped margin. Deep colony.

Many of the colonies, however, develop in the substance of the medium, these deeper ones appearing whitish-gray by direct, and faint yellowish-brown by transmitted light. In three days they show a peculiar nodulation which suggests the appearance of a blackberry. The superficial colonies show a distinct spot situated exactly in the centre and surrounded by a superficial film which, though at first it is very delicate, transparent, finely granulated, and colorless, develops in three days round the central mass numerous minute accumulations of condensed matter having a brown color. Upon the periphery such superficial colonies are thinner and more finely granular.

The gonococcus grows very slowly on artificial media. After twenty-four hours of growth, the colonies will vary in diameter from one to one and a

half mm. The surface of the culture gradually becomes punctated with the colonies, which remain quite small. (See Figs. 2 and 3.) After two or three days the cocci lose their vitality and the growth of the colonies ceases.



FIG. 2.—Colonies of gonococci on blood-smear Loeffler's serum. Thirty-six hours old.

The gonococcus is a strict parasite (Sternberg). It is not found as a saprophyte outside of the body. Gonorrhœal pus which has become entirely dried by exposure to air or otherwise will develop no colo-

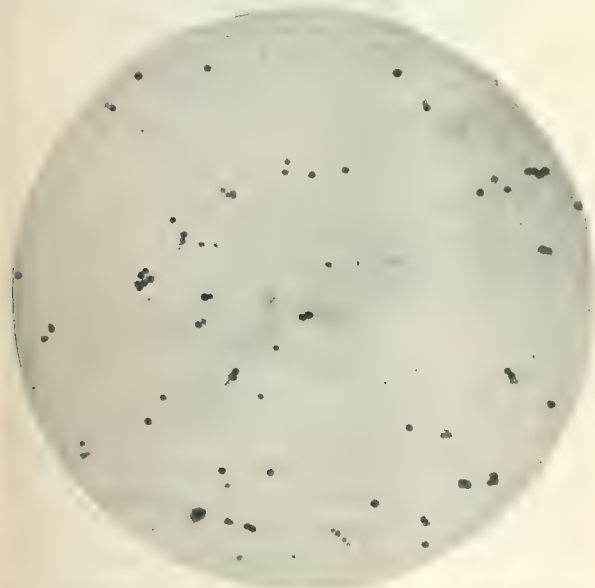


FIG. 3. Cover glass specimen from culture of gonococci on blood-smear Loeffler's serum.

nies of the gonococcus upon any medium. It has been observed by the writer, however, that gonorrhœal pus may retain some moisture when exposed upon a slide for at least forty-eight hours, as cul-

tures were made from pus which had been thus exposed to the air at room temperature for two days.

Sternberg states that the gonococcus is a facultative anaerobe. Wertheim, however, regards it as an anaerobe. It is difficult to understand why it is thus classed by so eminent an authority as Wertheim, for its growth upon the various suitable artificial culture media is in no wise retarded, but rather stimulated, by the admission of oxygen. The frequently noted phenomenon of the rapid decrease of gonococci in encapsulated abscesses of the urethral follicles, in walled-off tubo-ovarian abscesses, etc., militates against the assumption that the germ grows best under exclusion of oxygen. The writer submits that the gonococcus may be more properly classed with the aerobes.

The superficial colonies upon the solid media have, in the writer's experience, grown more rapidly and have as a rule assumed larger dimensions than the deeper ones from which the supply of oxygen must be partially cut off. It is significant in this connection that such abscesses as have been discovered to contain gonococci have, except in a few notable instances, been of the acute type, chronic encapsulated abscesses being usually comparatively free from gonococci.

In the deep layers of the urethra the gonococcus receives oxygen from the circulating blood, but in a walled-off abscess the supply from this source is curtailed. If it were assumed that the presence of the ordinary pyogenic microbes was distinctly inimical to the life of the gonococcus in abscesses and elsewhere, it would be difficult to explain the common tendency to chronicity of specific gonorrhœal inflammations of the susceptible mucosæ. It is not easy to reconcile many clinical phenomena with the conclusion of Wertheim and others, according to whose researches the growth of the germ takes place decidedly quicker when deprived of oxygen than when the gas is admitted.³

The gonococcus thrives at body temperature. It grows slowly at 85° F. and ceases to grow if the temperature is elevated and maintained at 108° F. It was noted by the writer that cultures which had been exposed to a temperature of 105° F. for an hour had lost their power of growth and multiplication, the colonies after exposure to such heat ceasing to increase in size.⁴

It is not unlikely that the diminution of discharge and disappearance or decrease of the gonococci which become apparent upon the development of

³Hare states that the gonococcicidal power of permanganate of potassium depends upon the fact that in the presence of the tissues it gives up its oxygen in the form of ozone. It should be remembered that it is ozone which is here the antigonorrhœicum, and not simple oxygen.

⁴The distinctly destructive action of even moderate heat upon the gonococcus in culture should be kept in mind in treating gonorrhœa by irrigation.

fever-producing complications in gonorrhœal urethritis may be explained in this way; the rise of body temperature interfering with the growth of gonococci but not retarding the development of ordinary pyogenic microbes which mix the infection and produce complications.

Fluid Media.—When it became evident that the pathogenic action of the gonococcus was exerted through the medium of a toxine, an adaptable fluid culture medium was sought in which the bacterium might grow and elaborate its toxine. Such a fluid culture, after pressure filtration through porcelain, would contain nothing but the toxine. The bodies of the cocci being caught in the filter, the filtrate would represent a solution of the poison only. Torro cultivated gonococci by using an acid fluid medium, asserting that the difficulty in cultivating the gonococcus lay in the fact that the alkaline media had been universally employed. He found that gonorrhœal urine, though alkaline when passed, became acid as soon as the pus had settled, and that in the supernatant acid urine the gonococci developed rapidly. Torro professes to have grown gonococci upon ordinary nutrient gelatin without neutralization, and, further, to have produced gonorrhœa in dogs by inoculation from these cultures. He recommends fresh sterilized urine, with or without the addition of peptone, as an excellent culture medium. He states that the gonococcus loses its virulence when transferred from an acid to an alkaline medium, and that in an acid medium it retains its pathogenicity for months.

Heiman, contrariwise, declares that the diplococcus described by Torro, Thalmann, and others in connection with acid media experiments is not the gonococcus. Heiman believes human placenta serum to be a good medium, but prefers sterilized chest serum. Wasserman (*Berliner klinische Wochenschrift*, 1889, p. 685) used a fluid medium composed of 15 cubic centimetres of swine serum, 30 to 35 cubic centimetres of water, and eight tenths of a gramme of Salkowski's nutrose (sodium phosphate and casein). The mixture is sterilized by boiling from twenty to thirty minutes over an alcohol flame. The solution becomes clear upon boiling. At the moment of using, two per cent. of peptonized agar is added and the whole is poured into a Petri dish. Theobald Smith used a mixture of fermentation broth with liquid chest serum, and Dunham made use of liquid chest serum plus peptone solution. Nutrient broth plus liquid chest serum has also been employed by several experimenters.

As an easily obtainable culture medium, De Christmas recommends ascitic fluid and peptonized bouillon, one part to three, to which is added glucose in the proportion of one to one thousand. All albuminous fluids from man, when peptonized, make

serviceable culture media for the gonococcus, but the life of the germ in such media is short. In rabbit's blood serum, however, the gonococcus will live and retain its virulence for two or three weeks. DeChristmas states that if glycerin is added to the rabbit serum, gonococci will live in the medium almost indefinitely. (Fig. 4 shows gonococci in a cover-glass specimen taken from a pure culture in this medium.) DeChristmas has used more recently a medium composed of three parts of ascitic fluid to one part of rabbit bouillon. Whichever medium is selected, it must be carefully sterilized by the fractional method before inoculation.



FIG. 4. Gonococci from pure culture in rabbit's blood serum.

Pathogenesis.—The ætiological relation between the gonococcus and gonorrhœa in the male has many times been demonstrated by the production of urethritis in healthy men by urethral inoculation of gonococci from blood serum cultures. Wertheim produced violent urethritis in this way, using cultures in the thirtieth generation.

The gonococcus has long since been demonstrated by cover glass and culture test in pus from urethritis, cystitis, conjunctivitis, endotrachelitis, proctitis, and vulvovaginal inflammation in children,⁵ and more recently it has been defined in the inflamed tissues of endocarditis, arthritis, epididymitis, ureteritis, orchitis, gynecystitis, prostatitis, inflammation of the vas deferens, pleuritis, lymphadenitis, myo-

⁵Doederlein states that the notable rarity of gonorrhœal colpitis in adult women is not to be explained by assuming that the gonococcus cannot thrive upon flat epithelium, but that its failure to grow is due to the presence of the vaginal bacillus and the acid vaginal mucus.

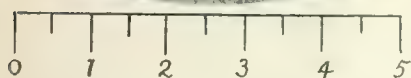
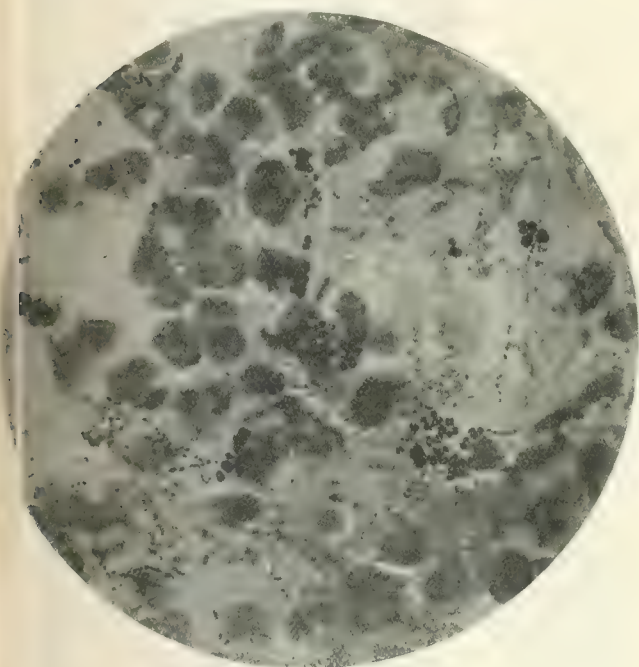
sitis, tenonitis, neuritis, cellulitis, peritonitis, endometritis, salpingitis, inflammation of the vulvovaginal gland, and oophoritis.

It has been fairly established, moreover, that many and various other pathological processes which present themselves in tissues remote from the site of primary gonococcus infection are produced by the action of the toxine or toxins of the gonococcus, since in these remote, secondarily involved tissues the gonococcus is not demonstrable.

Among conditions of this kind may be enumerated several exanthemata. A. Buschke has classified these in four groups as follows: 1. Simple erythema. 2. Urticaria and erythema nodosum. 3.

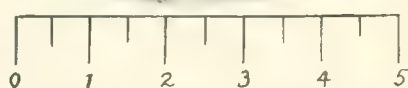
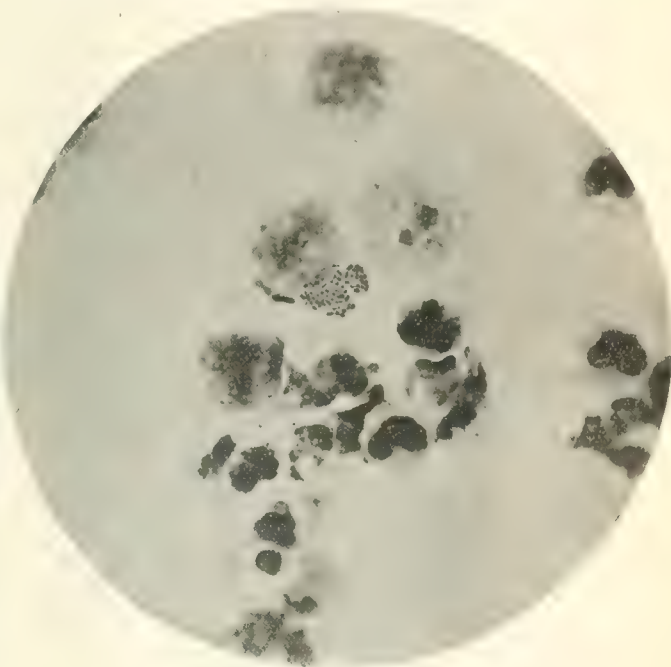
which he believes to be caused by the presence in the involved tissues of gonotoxine persisting after the death of the gonococci themselves, for example, in the posterior urethra. Many of Neisser's so-called post-gonorrhœal neuroses may doubtless be explained in this way. It must not be forgotten, however, that processes which seem to be gonorrhœal in character, and in which the gonococcus cannot be demonstrated, may in reality be induced by gonococci which have come to such a state of coalescence and disintegration as to be unrecognizable.

It is probable, but not proved, that the gonotoxine plays an important rôle in the production of the severe symptoms of the general gonorrhœal infec-



X 1000 SCALE $\frac{1}{100}$ M. M.

FIG. 5.—Gonococci in pus from epididymitis suppurativa.



X 1000 SCALE $\frac{1}{100}$ M. M.

FIG. 6.—Clump of gonococci in pus from perineal abscess complicating acute gonorrhœa.

Hæmorrhagic and bullous exanthemata. 4. Hyperkeratoses. The external form of the exanthemata may vary greatly. Papules, vesicles, and deep infiltration are all seen. As a rule, only one form of eruption appears in a single case, but several may appear at once in the same case. The possibility of a medicinal eruption was constantly considered by Buschke, and this was ruled out in each instance. In no one of these forms was the gonococcus discoverable in the eruptions; therefore Buschke and Schoeltz attribute their development to the action of the toxine of the gonococcus, which they assume is absorbed and carried about in the circulation.

Sänger denominates as residual gonorrhœa a condition in the nature of a low-grade inflammation

tion described by Lesser and others and characterized by Eisenmann, Ritter, Schoenlein, Schuster, and others as lues gonorrhœica. Rudolph Bloch reports such a case in which an anteroposterior urethritis was followed successively by lymphadenitis, coxitis, *gonitis gonorrhœica bilaterallis*, and inflammation in the muscles of both legs below the knee. Bacteriological examinations revealed no gonococci in the blood, but they were abundantly present in the urethral secretion. The nervous system, if not often the subject of direct attack by the gonococcus, is not spared by the gonotoxine. Moltschanoff injected the toxine into animals, and produced acute and chronic poisoning. In these animals more or less characteristic changes in the ganglion cells were

discovered by the use of Nissl's method of staining. By the Marchi method degeneration of the posterior roots and columns was detected, and a marked hyperæmia of the meninges was observed. In some animals a degenerative neuritis was demonstrable. Moltschanoff states that these animals were all under careful clinical observation before death.

Lesser reports a case of violent inflammation of the sciatic nerve complicating urethritis. The crural, external pudic, optic, and ilio-inguinal nerves have frequently been found to be inflamed during the course of an acute urethritis. Among the milder nerve complications that have been noted are paraplegia reflectoria, paræsthesia, and general reflex excitability.

Eichhorst called attention to a painful condition of the muscles in acute and chronic gonorrhœa. This, he states, may be the only complication. Whereas it has been assumed that the toxine is chiefly concerned in the production of the foregoing complications, there are yet many complicating inflammatory processes which develop remotely from the primary infection site in which the gonococcus has been repeatedly found to be the chief local ætiological factor.

V. Leiden demonstrated gonococci in a specimen made from the secretion of a gonitis gonorrhœica. The fluid in which the gonococci were found was non-purulent. It was removed from the joint by puncture.

Ground (*St. Paul Medical Journal*, September, 1900) reports a similar observation. Ware reports a case of gonorrhœal myositis with microscopic findings. He is inclined to believe that the gonococcus myositis is an extension from a similar inflammation of adjoining joints or bones (*American Journal of the Medical Sciences*, July, 1901).

Seifert found gonococci in pus from the first metacarpophalangeal articulation of a girl aged four years. W. L. Johnson (*St. Louis Medical Review*, April 13, 1901) narrates a very similar observation. It concerned a newly born infant. A few days after its birth a small area of inflammation surrounding the navel was noticed. The inflammation was attended with granulation and a slight discharge of yellowish pus. The abdomen was tympanitic. Over the metacarpophalangeal joint of the left thumb was a red painful swelling extending around to and over the vola. There was no fluctuation. The temperature was 101°. There was also slight swelling over the site of the left metatarsophalangeal joint of the great toe. A diagnosis of metastatic abscess was made. The streptococcus was believed to be the causative bacterial agent, and it was assumed that the umbilicus was the port of entry. Abscesses developed in the right elbow and in several minor joints. The constitutional symptoms

became grave. A bacteriological examination of the pus from the abscessed joints disclosed the presence of gonococci. The baby eventually recovered.

Cushing (*Journal of the American Medical Association*, June 10, 1899) reports two cases, both thoroughly examined, in which a general acute peritonitis was proved to exist with only the gonococcus as its cause. He maintains that this brings for the first time convincing evidence of the existence of a diffuse general inflammation of the abdominal cavity caused by this germ. While such may occur, it must be either rare or unrecognized and may depend upon some especially receptive condition of the serosa or the virulence of the organism. The peritonæum is not more immune than is the pericardium or endocardium to the gonococcus inflammation and, being more exposed, suffers more commonly in females, although the relatively benign course of the disease makes it a rare condition to come to the attention of the surgeon in an acute stage.

The gonococcus was found by Ahman in the blood in a case of gonorrhœal rheumatism (*Berliner klinische Wochenschrift*, 1897, p. 701). In order to prove his discovery, Ahman inoculated a human urethra with a culture in the fifth generation, and produced urethritis, rheumatism, joint and tendon sheath inflammations, epididymitis, and prostatitis. Johann Almkoist made pure cultures of the gonococcus from a phlegmonous metastasis in the subcutaneous connective tissue of the right foot. In the light of evidence, it cannot but be conceded that the gonococcus may travel from organ to organ in the circulating blood.

It has been contended that many inflammatory complications of acute urethritis are caused solely by such ordinary pyogenic bacteria as might mix the infection. Epididymitis was until recently included among the non-specific accompaniments of gonorrhœa. Routier and Collan, however, made cultures of the gonococcus from a purulent epididymitis, and established the specificity of at least a certain percentage of such abscesses. Gonococci had previously been seen in the pus of epididymitis, but had received the erroneous and misleading appellation "orchiococci." In Fig. 5 are to be seen gonococci demonstrated by the writer in pus from a suppurating epididymitis involving the globus major and globus minor. These large diplococci decolorized by Gram's method and grew typical colonies on Loeffler's solidified serum smeared with blood.

In Fig. 6 is shown a clump of gonococci in pus evacuated from a perineal abscess complicating acute gonorrhœa involving the posterior urethra. Gonococci were abundant in this pus. Other bacteria were so sparingly present that the infection seemed at first to be purely gonococcal; search.

however, revealed a small proportion of short diplococcus-like bacilli coli⁶ and a few scattered staphylococci.

Cases of gonococcal kidney infection have been reported by Fürbringer, Kelly, Mendelsohn, Dowd, Stojanschoff, and Rosenfeld with strong clinical evidence, although lacking the conclusive bacteriological proof. Potter grew typical cultures of the gonococcus from the purulent contents of a huge pelvic abscess which had dissected its way upward in front of the peritonæum to the level of the xiphoid cartilage. The writer has recently observed the symptoms of general gonococcal infection immediately following gonorrhœal ophthalmia. Swope, of Crawfordsville, Ind., has demonstrated gonococci in multiple abscesses complicating acute gonorrhœal urethritis. The constitutional symptoms in this and similar cases were such as to indicate that general gonococcal infection existed as a veritable pyæmia analogous to that caused by the pyogenic microbes. It is unnecessary at this day to multiply examples in order to prove that the gonococcus not infrequently produces a specific pyæmia. This is now *res adjudicata*.

Gonotoxine.—Wassermann, DeChristmas, and Wertheim have within the last four years answered with reasonable certitude the question as to whether the gonococcus produces an active specific poison. They grew the gonococci for experimentation in fluid culture media. DeChristmas separated the gonococci from the toxine after elaboration of the latter in the fluid medium by filtration through porcelain or talc, and experimented with the filtrate containing the poison. Wassermann and Wertheim (*Berliner klinische Wochenschrift*, 1897, p. 696) applied heat to the fluid cultures, killing the gonococci, and used for experimentation the resulting liquid. This contained the toxine and the bodies of the destroyed gonococci. They found that injection into test animals of very small quantities of this fluid produced local inflammation at the site of injection, fever, swelling of the lymph glands, and pain in the muscles and joints. Wassermann's observations led him to the conclusion that the poison was contained in the body of the gonococcus and became free only upon disorganization of the body of the germ.

M. Nicolaysen (*Centralblatt für Bakteriologie*, 1898, No. 22) found that small intraperitoneal doses of fluid cultures of the gonococcus, after destruction of the germs themselves by the application of heat, would kill a white mouse, but that the filtered cultures had little or no pathogenic effect. M. T.

⁶The shortness of the rods and the arrangement in pairs, coupled with their decolorization by Gram's method, might easily lead to a confounding of specimens of the protean bacillus coli, as shown in Fig. 7, with the micrococci of gonorrhœa.

Laitinen (*Centralblatt für Bakteriologie*, 1898, No. 23) corroborates the belief of Wassermann that the toxine is not easily separable from the body of the gonococcus before disintegration of the latter.

Schaeffer produced a mild urethritis by injecting a filtered culture of the gonococcus into the human urethra, and Schoeltz and Panichi profess to have set up a reactive inflammation by the introduction of dead gonococci into the urethra. DeChristmas (*Annales de l'Institut Pasteur*, 25 Mai, 1900) made many interesting observations relative to the nature and action of gonotoxine. Growing the gonococcus in a mixture of ascitic fluid and rabbit bouillon, he found that there was elaborated in the fluid medium a toxic substance which, when injected into the brain of a guinea-pig, produced death. He thoroughly filtered out the bodies of the bacteria before

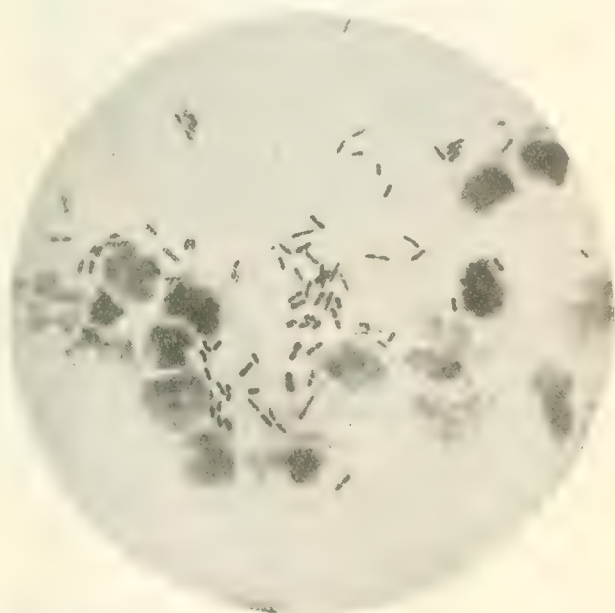


FIG. 7. Diplococcus-like bacilli coli from gonorrhœal perineal abscess.

experimentation, and therefore concludes that the poison may exist in the medium as a biological product of the gonococcus, but entirely separable from the bodies of the germ. He did not succeed in dialyzing the gonotoxine, but precipitated it from the culture with a solution of sulphate of ammonium.

By repeated injections of gonotoxine DeChristmas professes to have immunized goats. He withdrew the serum of the immunized goats, and discovered that it possessed decided specific antitoxic properties. This antitoxic serum neutralized many times its bulk of the solution of gonotoxine in the culture medium. He noted, however, that the anti-gonotoxine had no perceptible neutralizing or antitoxic effect if injected after the gonotoxine. The neutralization was apparent only when both were introduced simultaneously in the same solution.

The writer grew the gonococcus in rabbits' blood

serum to which had been added five per cent. by volume of glycerin. The medium was sterilized by the fractional method. In order to prove that the gonococci were actually thriving in the serum, cover-glass preparations were made in which the

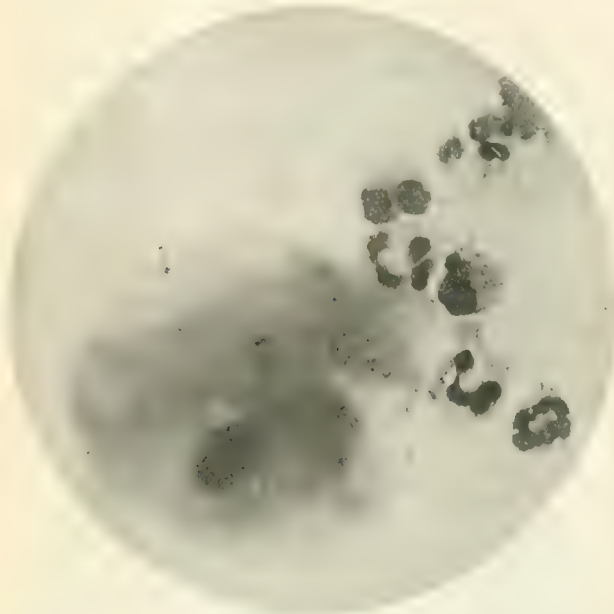


FIG. 8.—Pus from posterior chamber of eye of hare inoculated with pure cultures of gonococcus grown in rabbit's blood serum.

Gram's solution. Injection of a five-drop dose of this culture into the posterior chamber of the eye of a Belgian hare produced suppuration, and the pus contained typical gonococci (see Fig. 8). Attempts to inoculate the cultures upon the conjunctival and diplococci decolorized upon the application of urethral mucosa of the rabbit gave negative results. Cultures seventy-two hours old were subjected to a moist heat of 200° F. for ten minutes, and the medium containing the presumably dead gonococci was used for experimentation. Injection of this solution in doses of one cubic centimetre into the peritoneal cavity of the Belgian hare produced fever, malaise, and anorexia, but in no case was the result fatal. The effect of the injection of this fluid in ten-minim doses into the cavum peritonæi of mice was toxic.

Young cultures filtered through a Pasteur porcelain tube possessed no discoverable toxic qualities when injected into the rabbits, but when cultures two weeks old thus filtered were used, a mild toxic potency was apparent. The filtrate of such old cultures, when introduced in two-cubic-centimetre doses into the abdominal cavity of the rabbit, caused fever and anorexia and localized or diffused peritoneal congestion. Most experimentation with the filtered cultures was negative in result. To sum up, the writer's experimentation led to the conclusion that gonotoxine was contained in the protoplasm of

the diplococcus and was liberated only upon degeneration of the latter.

Vaughan, Cooley, Buchner, and Pfeiffer believe that the specific poisons of most bacteria are formed within the cell and constitute a part of the organism itself. In the opinion of most investigators, the gonococcus is a bacterium of this sort. Whether disorganization of the body of the gonococcus is a condition necessary for the liberation of the toxine or not, it cannot well be disputed that the toxine does become liberated and generally diffused throughout the human organism in cases of general infection. The researches of Drobny, Brewer, and Ward disclosed evidences of a destructive action of gonotoxine upon the leucocytes and the lymphatic system. The views of A. H. Ward, of London, which follow, are near the truth: "Gonorrhœa is a general toxæmic affection, but the microbes which form the toxins are generally located in or around a mucous tract. The infection may spread by continuity to the ducts and organs which communicate with the tract affected, or it may penetrate to the interior of the body, either by direct extension or by a process of growth through the mucous membrane affected. Thence the invasion reaches the cellular tissues, the lymphatics and glands, and the vascular system. This invasion is rendered possible by the paralyzing effect of the toxine absorbed upon the leucocytes, which in susceptible individuals hinders

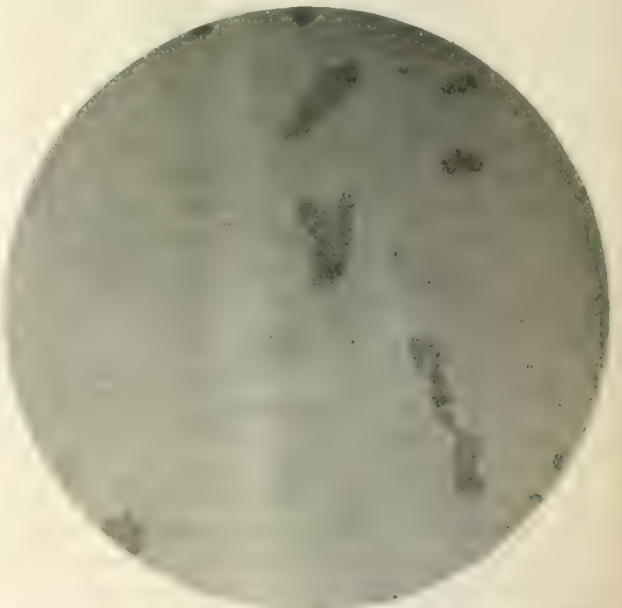


FIG. 9.—Cover-glass preparation of bacteria of occlusive urethral folliculitis. The staphylococci are much more abundant than the gonococci.

the process of phagocytosis. Having reached the circulation, the microbes are conveyed to the heart or to the terminal capillary circulation in serous and synovial membranes or to the slender vessels in tendons and fibrous structures. In these situations

they become stranded and develop, forming more toxine, which sets up local inflammations."

It has been observed by many gynæcologists, notably Sânger, that in encapsulated gonorrhœal abscesses, as in pyosalpinx, the pus is frequently found to be quite sterile. When cut off from the circulation, the gonococci rapidly die. In cases of gonorrhœal urethral folliculitis, with occlusion of the duct, the pus is usually found to contain very few gonococci (see Figs. 9 and 10). It has been noted that the rupture and emptying of a gonorrhœal "pus-tube" into the peritoneal cavity is often productive of no peritonitis. After the death of the gonococci the clinical symptoms persist as the result of the pathogenic action of the gonotoxine. Such a post-gonorrhœal process, or residual gonorrhœa, is never progressive. Mechanical irritation of the focus may, however, produce, through the

cases of undoubted gonorrhœa cannot but suggest that gonotoxine may play a more important part in the continuance of the disease than has heretofore been ascribed to it.

Immunity.—The insusceptibility of animals presents an almost insurmountable obstacle to the production of an antitoxic serum by the ordinary methods. DeChristmas succeeded in producing immunity in the goat. The serum of this goat, in small quantities, neutralized the pathogenic action of the filtrate or filtered fluid cultures in large quantities. Wassermann failed in his attempts to produce immunity in animals.

That a certain degree of natural immunity exists in such individuals as have been entirely cured of an attack of gonorrhœa would be obviously rather difficult to prove. There is much evidence, however, to support such an assumption. How rarely do we see an old roué with acute gonorrhœa. If he presents himself with urethritis, it is in the great majority of instances an old, relapsing case. Dr. I. N. Bloom (*American Practitioner and News*, September 15, 1898) says that "Seventy-five per cent. of cases treated occur in men under twenty-five years. No such ratio exists with syphilis and chancroid." Even young men who are entirely cured rarely return with gonorrhœa.

The great frequency of gonorrhœa in children is most significant in this connection; children are readily susceptible to gonococcal infection; as age advances, fresh infections become rarer. Dr. Jen Paulsen says that the gonorrhœal diseases of the skin of new-born infants are much more frequent than similar eruptions in adults suffering from the disease. They are caused by the gonococcus and are metastatic from ophthalmia or are direct cutaneous infections. In severe cases glandular involvement and suppuration appear (*Münchener medicinische Wochenschrift*, June 16, 1901). The writer has been impressed with these observations, and submits his belief that a gonorrhœal urethritis, once cured, confers to some degree an immunity against a subsequent attack.

A Pennsylvania Physician Talks Strongly on Impure Milk.—The Delaware County Medical Society met on August 9th at Chester, Pa., when a paper was read by Dr. McMasters, of Ridley Park, on Pure Dairy Products. He stated that a majority of the children that died in infancy were victims of milk, which was either from unhealthy cows or was impure, or from poison methods used by some dairymen to keep milk sweet in hot weather. Instances were cited in Philadelphia where milk thus treated was given to pups, which lost weight and died from intestinal troubles. The reading of Dr. McMaster's paper is likely to result in an investigation of the milk supply of Chester.

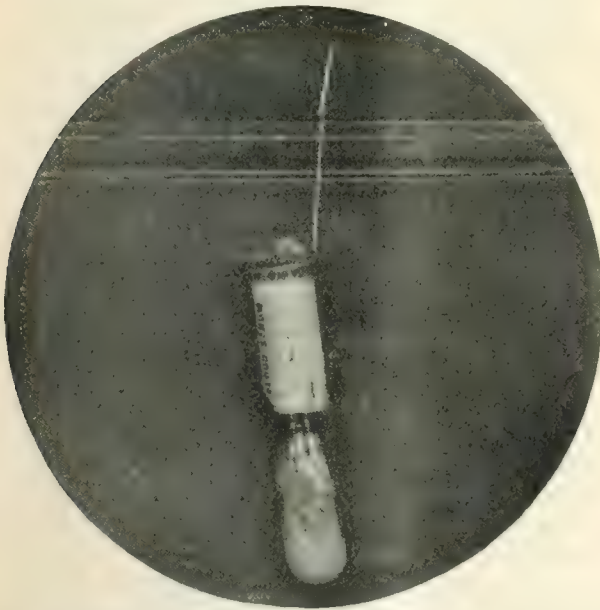


FIG. 10.—Culture from pus of occlusive folliculitis of urethra. Pure, staphylococcus.

agency of the chemotactic attraction of the gonotoxine, an increased activity of suppuration. The cause of the continuance of many cases of relapsing gonorrhœa is to be explained in this way:

Neisser's thesis to the effect that chronic gonorrhœa can only be diagnosed by the discovery of the gonococcus has not met with general endorsement. Broese and Schiller unqualifiedly disapprove of it, maintaining that in chronic gonorrhœa of the female the microscope is unsafe. They rely upon the clinical symptoms for diagnosis, since after long and careful investigation they have found that in the majority of cases of unquestionable chronic gonorrhœa in women the gonococcus cannot be isolated.

A negative result in a search for the bacterium proves little or nothing, yet failure to find it in many

A STUDY OF THE TEMPERATURE, PULSE, AND RESPIRATION IN THE DIAGNOSIS AND PROGNOSIS OF CERTAIN DISEASES OF THE BRAIN.

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(Concluded from page 543.)

Traumatism of the brain, for the purposes of a clinical study of the temperature, pulse, and respiration, may be divided into three stages, the second and third of which may never be reached. In the severer cases death occurs before the second stage develops. In the lighter cases the injury may not be grave enough, although convalescence may be prolonged, to cause the development of the second and third stages. In the first stage we have the immediate effects of the injury. These are shock; often fracture, with or without depression of bone. intracranial hæmorrhage, or not infrequently hæmorrhages from several bleeding vessels at different points within the cranial cavity; diffuse or limited contusion of the brain and its membranes; finally, laceration of the brain and much less frequently of its membranes. Simple concussion of the brain may possibly occur without any change in the intracranial structures, but during an active practice extending over more than a quarter of a century, in which I have seen several hundred head injuries of all descriptions, I have not met with a single case that appeared typical of concussion.

It is rare for inflammation, which is usually of microbic origin, of the brain or its membranes to develop before the third or fourth day after the receipt of the injury. Therefore, by the third or the fourth day, traumata of the intracranial structures may be followed by secondary inflammation. Such an occurrence may be termed the beginning of the second stage.

Suppuration or abscess of the intracranial structures, especially of the deeper portions of the brain, rarely takes place as the result of an injury to the head before the middle or end of the second week. The development of suppuration, if it does take place, marks the beginning of the third stage, and the termination of the inflammatory, or second. Fortunately, with strict antisepsis and asepsis suppuration is of comparatively infrequent occurrence if the patient is seen by a competent surgeon before the intracranial structures have become infected.

Will a careful study of an accurate record of the temperature, pulse, and respiration aid us in the diagnosis and prognosis of cases during any or all of the three stages?

This question is much more difficult to answer intelligently and satisfactorily than it at first seems, especially on analyzing the records of a few cases or certain more or less definite classes of cases. After carefully studying and comparing the detailed records of my eighty-eight cases, some extending over periods of hours, some over days, and others over periods of weeks or months, in which the temperature, pulse, and respiration were recorded every few hours, both day and night, I find it impossible to arrive at definite conclusions. The results of injuries to the intracranial structures are so variable, and concomitant conditions so numerous, that after one has formulated in his own mind certain rules to guide him in the diagnosis of this class of cases he finds on subsequent observation cases that upset all his preconceived opinions in regard to the temperature, pulse, and respiration. This apology seems necessary in this connection, for what I now say I may wish in the future had been left unsaid. Besides my own cases, I have carefully studied most of the cases recorded by Charles Phelps, M. D., in his excellent work entitled *Traumatic Injuries of the Brain and its Membranes*. In this book he gives condensed histories of 300 cases, together with the results of the autopsies in 225 of them. The entire work is of such a character as to entitle him to the gratitude of the medical profession.

When we come to study the temperature in traumatic injuries of the intracranial structures, especially soon after the receipt of the traumata, we must bear in mind that shock and hæmorrhage have a tendency at first to lower the temperature, and laceration and contusion of the brain and its membranes usually cause a slight rise of temperature. All these different conditions are frequently found in the same patient at the same time.

I have seen no cases of traumatism of the brain within four hours after the receipt of the injury, and most of the cases have been first seen by me several hours later. In eighty-seven of the eighty-eight cases the temperature was normal or slightly above normal a few hours after the head injury. In the one exception the temperature was 97°, and the patient died within a few hours. The autopsy revealed an enormous epidural hæmorrhage covering most of the convex surface of the brain. In twelve cases the temperature was practically normal, as it varied in the different cases from 98.2° to 98.6°. In all these cases, seen within a few hours after the injuries had occurred, the temperature became elevated subsequently. In the seventy-five remaining cases the temperature ranged from 99° to 101° at the time of my first seeing them, with two exceptions, in which the temperatures were 102° and 103° respectively within four hours after the injury, and the temperature in each went to 105° before death,

which occurred in one case four hours and in the other six hours after I had first seen them. In each there was hæmorrhage in the posterior fossa, with fracture of the bone and contusion of the soft structures around the pons and medulla.⁹ In thirteen of thirty-nine cases studied by Dr. Phelps, in regard to temperature on admission to the hospital, the bodily heat was found to be subnormal. In the eighty-eight cases of which I have records, only one had a subnormal temperature a few hours after the occurrence of the accident. This discrepancy may be accounted for from the fact that, as a rule, I only see those cases in which the surgeon desires the assistance of a neurologist. Most of those cases that prove rapidly fatal I have not had an opportunity to study. In the three cases which proved fatal within a very few hours, one with a subnormal and the two others with high temperatures, the pulse in each, on admission, was rapid, weak, and intermittent. The respiration in the case with the subnormal temperature at first was nearly normal in frequency, but it was stertorous. Before death it became very rapid, registering 64 to the minute. In the two with high temperatures and injuries around the pons and medulla, with considerable hæmorrhage at the base, but not surrounding the pons and medulla, the respiration was at first slow, from 8 to 10 a minute, and very intermittent. Some of the intermissions were twenty seconds in length. In neither case did death occur suddenly, but from profound shock and exhaustion of the respiratory and cardiac centres. The respiration became exceedingly rapid before death. In one the nurse recorded 72 and in the other 78 respirations half an hour before death, to the minute. In many of those cases that prove suddenly fatal from injuries in the region of the pons, especially from large quantities of fluid blood surrounding the pons and medulla, respiration is infrequent at first and becomes more and more infrequent until death occurs. Phelps has recorded thirteen such cases.¹⁰

The pulse and respiration in most of the eighty-eight cases were nearly normal at the time I first saw the patients. In those in which shock was playing a very important part the pulse was rapid. In some cases with large hæmorrhages the pulse was slow, but otherwise presented nothing worthy of record. Respiration is less affected than the pulse from traumatism. In cases with large hæmorrhages and in lesions around the pons or medulla the respirations were slow in the first instance, and slow and intermittent in the second.

To facilitate the study and analysis of the eighty-eight cases mentioned in this paper, with a view to

utilizing the study of the temperature, pulse, and respiration, it is convenient further to divide the cases into five groups, as follows:

1. *Cases that proved fatal during the first stage, from shock, hæmorrhage, injuries to the brain and its membranes, death taking place from exhaustion without the apparent occurrence of septic inflammation, 14. Death took place in all these cases within from a few hours to a few days.*

2. *Cases that ended in recovery without any apparent septic inflammation, 42.*

3. *Cases that went through the first and second stages (traumatic and inflammatory) and ended in recovery without the formation of an abscess, 16.*

4. *Cases of persons that passed through the first and second stages (traumatic and inflammatory) and died exhausted from sepsis without the formation of an abscess, 7.*

5. *Cases in which abscess of the brain developed, 2, and others in which abscess of the membranes and suppuration of the adjacent brain surface developed, 9.*

Group 1.—Of this group, I have already given the records and termination of three cases. Of the remaining eleven, five were so desperate that no operation for their relief was attempted, and the patients all died within thirty-six hours. The temperature rapidly rose and reached from 103° to 104° and in two 105° before death. The pulse increased in frequency as the temperature ascended, and became exceedingly rapid before death. Respiration in two varied from 24 to 28 within twelve hours after the patient had been admitted to the hospital. In three it was slow and intermittent until exhaustion became well marked, when it increased in frequency. In all there was fracture, with bruising of the intracranial structures and hæmorrhage. In the three with slow and intermittent respiration the fracture and bleeding had occurred at the base, in the two others at the vault. In six the condition did not seem quite so desperate as in the others of this group, although the temperature was rising and the pulse and respiration were becoming more frequent at the time of the operation. In two there was a depressed fracture of the skull, extending from just above the orbit backward toward the ear. In four there was no apparent fracture, but there were localizing symptoms on one side of the brain. An operation revealed a linear fracture extending to the base of the skull in all. The temperature was depressed by the operation to nearly normal in most of the cases, but the pulse was increased in frequency and lessened in strength by it. As soon as reaction from the operation took place, the temperature began to rise and the respiration and pulse to increase in frequency. Before death, which took place in all the cases within three days after the operation, the tem-

⁹In all the traumatic cases the temperature was taken in the axilla.

¹⁰*Loc. cit.*, pp. 100 and 101.

perature varied from 102° to 103° , the pulse from 100 to 150, and the respiration from 24 to 40. Autopsies in four of these cases, besides fracture, revealed hæmorrhage at the base and injury to the membranes and brain. In the two others no post-mortem examination was obtained, but from the character of the symptoms it is more than probable that the same conditions existed in these also.

Group 2.—Cases that recovered without any apparent septic inflammation, 12.

- a. Strong evidence of fracture, hæmorrhage, and probably contusion at the brain base in. 14
- b. Evidence of contusion of the brain without apparent fracture or localizing symptoms in 16
- c. Evidence of depressed fracture in. 8
- d. Localizing symptoms without apparent fracture in. 4

In subgroup *a* the surgeon did not attempt to open the cranial cavity. The temperature varied from 99° to 100° , being sometimes 100.5° for four or five days, then becoming normal or slightly subnormal in the morning, and rarely going above 99° , sometimes to 99.5° in the evening. The pulse varied from 48 to 66. Infrequently, apparently from gastro-intestinal trouble, the pulse reached 72 or 80 for a few hours at a time. It was regular and of good quality. The respiration varied from 20 to 28, but most of the time it was about 22 to the minute. On a few occasions the respiration was slightly disturbed in its rhythm, becoming for a time slightly intermittent or sighing. The temperature, pulse, and respiration were practically normal after the end of the first week, although the length of convalescence extended over periods varying from two or three weeks to six or eight.

In subgroup *b* the cranial cavity was not opened. The temperature varied from 99° to 101° for a week to ten days, and even subsequently to this the temperature would rise from half to one degree on the slightest irritation. The pulse varied from 70 to 80, sometimes reaching 90 to 100 on slight provocations. The respiration was less disturbed than the pulse and temperature. It rarely varied much from the normal. Convalescence was often prolonged in these cases. The temperature, although practically normal a week or ten days after the occurrence of the injury, would become elevated a degree or more for weeks subsequently without any appreciable cause. The pulse would increase in frequency when the temperature rose.

In the subgroups *c* and *d*, 12 cases, the cranial cavity was opened in each instance. The temperature, pulse, and respiration varied less from the normal than in subgroups *a* and *b*.

Group 3.—Cases that went through the first and second stages (traumatic and inflammatory), and ended in recovery without the formation of an ab-

scess, 16. In two of this group there was a direct communication established by means of a fracture between the brain and the cavity of the nose. In four the fracture had probably established a communication between the middle ear and the cavity of the brain. In ten there were compound fractures, extensive lacerations of the scalp, and contusion of the brain and its membranes, so that it is quite probable that the wound became infected before the surgeon saw the cases. So far as could be determined, there were no fractures or hæmorrhages at the brain base in these cases. In four of the ten cases considerable brain substance was lost.

In all of the sixteen cases surgical operations were necessary and were skilfully performed. There was a slight lowering of the temperature immediately following the operation. In those that required several hours for the temperature to reach the normal, and manifested but little power of reaction for the next few days, the patient did the worse. In those in which the temperature was elevated to 99.5° to 100.5° within twenty-four hours after the operation they did the best. The beginning of the stage of secondary septic inflammation was indicated by a difference in the morning and evening temperatures of about one degree. The pulse was frequently quite rapid after the operation, depending, of course, upon the amount of the prostration. It varied from 80 to 90 during the stage of inflammation and was often irregular. The respiration remained practically normal.

Group 4.—Cases in which the patients passed through the first and second stages (traumatic and inflammatory) and died exhausted from sepsis without the formation of an abscess, 7.

The temperature, pulse, and respiration differed in this group of cases from those in Group 3 only in denoting greater exhaustion. The temperature became more variable, the fluctuations being greater from the normal; the pulse became weaker and more rapid, but the respirations often remained normal or subnormal to the last. These cases rarely ran a long course. In some of them, especially those in which the respiration remained slow and intermittent throughout the course of the disease, considerable hæmorrhage was found at the base of the brain at the autopsies.

In *Group 5* there were two cases in which abscess developed deep in the brain substance, one fatal. There were seven with local suppuration involving the cortical substance of the brain and membranes in the immediate site of the external wound. Three proved fatal from a general suppurative meningitis, and four recovered. The formation of the abscesses in the brain substance was attended by low temperature, 97° to 99° , slow pulse, 60 to 70, and infrequent respiration, 12 to 16.

In the cases of local suppuration at the seat of the wound, the temperature lessened, but continued to vary considerably between the evening and the morning; the pulse was weak and often rapid and sometimes intermittent, or showed other deviations from the normal. The respiration remained slow, but showed, at times, marked intermissions. In the three cases of general suppurative meningitis, the temperature rose to 103° , and the pulse and respiration became quite frequent.

For the convenience of a brief study of this paper, the following conclusion may be added:

1. By a careful study of the temperature, pulse, and respiration much valuable information that will aid us in the diagnosis and prognosis in certain diseases of the brain can be obtained.

2. Much care must be exercised and considerable time and patience are required on the part of the physician in obtaining reliable records.

3. Nurses are totally incompetent for such detailed work, unless they have been specially drilled for it.

4. A change in the character of the respiration, rather than in its frequency, is sometimes one of the first positive symptoms of organic intracranial disease, especially of tuberculous meningitis.

5. A respiration that is more frequent while the patient is asleep or unconscious than it is during the waking or conscious moments is very strong evidence of organic disease of the brain so situated as to interfere with the respiratory centres.

6. Apoplexy due to hæmorrhage is attended with greater disturbance of the temperature of the body soon after the occurrence of the stroke than is the case when the apoplexy is due to thrombus or embolus. The temperature disturbances in apoplexy due to hæmorrhage, especially if attended with hemiplegia, are a slight fall of the axillary heat within an hour or less after the occurrence of the hæmorrhage, the fall being a little greater on the paralyzed side; after reaction has occurred (eight to twelve hours on the average) a slight rise of temperature, a little greater on the paralyzed than on the opposite side; an elevation of temperature from half to 2° or 3° above normal for the next few days, the temperature remaining a little higher on the paralyzed than on the unaffected side for a week or more (in cases of complete hemiplegia); later, the temperature slightly lower on the paralyzed side if trophic disturbances occur.

7. In apoplexy from thrombus or embolus there is scarcely an appreciable disturbance of temperature before the end of the second day, except in the severer cases. In these cases it is slight. In the majority of cases of apoplexy from thrombi or emboli there is no marked variation of temperature from the normal at any time, so that disturbance of

the temperature the first day points very strongly to hæmorrhage as the cause.

8. Considerable disturbance of temperature, beginning from the second to the fourth day, is significant of thrombus or embolus, and indicates extensive softening and an unfavorable prognosis.

9. If the temperature on the paralyzed side remains higher than on the opposite side several weeks after the occurrence of the apoplexy from any cause, it indicates that softening or inflammation of the brain is going on, and lends great gravity to the prognosis.

10. It is premature to attempt to arrive at any definite conclusions from a study of the temperature, pulse, and respiration in traumatism of the brain. This class of cases, on account of their great importance, deserves a more detailed study of all their symptoms. It is probable that, if cases of traumatism of the brain were classified and grouped according to the severity of the injuries and the character of the symptoms, a careful comparison of the temperature, pulse, and respiration would lead to important conclusions.

In regard to the traumatic class of cases it seems that we are justified in making the following tentative statements:

a. All cases of injuries to the head in which the temperature does not reach normal or slightly above a few hours after the receipt of the traumata will probably prove rapidly fatal. The higher the temperature, the greater the probability is that contusion or laceration of the brain and membranes is a more important factor in the case than intracranial hæmorrhage. The greater the variation of the temperature from normal, either above or below, the worse the prognosis.

b. A rapid, weak, and intermittent or irregular pulse denotes great danger. A pulse that is at first slow, but soon after becomes quite rapid, indicates that brain power is being overwhelmed by the intracranial lesion, and justifies a bad prognosis.

c. An exceedingly slow (8 or 10 to the minute) and intermittent respiration indicates a lesion at the base, in the posterior fossa. The slower and the more pronounced the intermission of the respiration, the greater is the danger of sudden death. A respiration at first nearly normal in frequency, but soon after becoming quite rapid, indicates a rapidly fatal case.

Pneumococcic Meningitis.—M. Guinon (*Progrès médical*, June 22d) recently reported to the Société médicale des hôpitaux the case of an infant five weeks old in which the liquid coming from lumbar puncture contained pneumococci. The diagnosis of pneumococcic meningitis was confirmed at autopsy.

TWO CASES OF INTESTINAL OBSTRUCTION DIAGNOSTICATED BY THE X-RAYS.

By J. RUDIS-JICINSKY, A. M., M. D., M. E.,

CEDAR RAPIDS, IA.

Some idea of the steady advance of radiology into fields formerly considered essentially medical can be had by reading the excellent results reported nearly every day. The diagnostic value of the X-ray in some cases cannot any longer be disputed. There is reason to suppose that, with greater experience and improvement in technics, the application of the X-ray may become more universally employed and that it will take in the near future the first rank among the modern diagnostic measures. To illustrate this, allow me to relate two very interesting cases of *intestinal obstruction* where the value of the X-rays in diagnosis and revelation of the existing conditions showed itself beyond doubt. The X-rays decided the question whether surgical interference was necessary or not, and its findings were absolutely correct.

L. M., a boy ten years of age. Two weeks ago he swallowed a round tin whistle. The case was carefully observed, but the whistle did not pass. Constipation, with more or less severe colicky pains, not relieved by injections. Feeling of weight and soreness, but no distention of abdomen. Sometimes nausea and vomiting. Pulse quick and feeble. Skin cold, eyes sunken. Some days the symptoms were not so pronounced, the patient feeling better; the whistle seemed to act as a valve and the bowels moved a little better. The diagnosis as to the location of the foreign body producing such closure of the intestinal canal was very difficult, and the site of the occlusion could not be determined in the usual way. Two surgeons advised immediate operation. On X-ray examination, however, we found the whistle at the junction of the small and large intestines, and advised hypodermic injections of atropine to begin at once. On the third day the whistle was passed and the patient relieved without surgical interference.

A. K., a boy, twelve years of age. When the case was seen first it was diagnosticated as one of invagination at the lower portion of the ileum. The patient was in a very bad condition. There were severe colicky pains, a feeling of soreness with distention of the abdomen, pain becoming violent, and tenderness at different limited areas. Pulse feeble; skin cold, with a clammy sweat; vomiting. Patient was unable to speak. On X-ray examination an altogether different status *præsens* was found. The sudden closure of the intestinal canal was not at the ileum down into the cæcum, but there was an actual obstruction in small intestines under the umbilicus, nearly at the median line, and a little to the left. Laparotomy was advised and done with a surprising result. The obstruction itself was produced by a small wooden whistle, round and oblong. The whistle was swallowed accidentally, but the patient,

being unable to talk, could not give us the proper history.

The diagnosis of intestinal obstruction is nearly always one of the most difficult. The site of the occlusion can rarely be determined positively by the usual methods of diagnosis. A careful study of the case, along with the different causes producing the affection, ends very often negatively. Prognosis in these cases is grave and collapse may occur sooner than we might expect. But, as we see from these two cases reported, the diagnosis may be made soon and absolutely correctly, if we apply the X-rays in time. Before those two cases came under my observation I had made a few experiments in this line, just to see what could be done for those who suffered from intestinal obstruction. I have produced an artificial obstruction in the intestines of three dogs, one strangulation, one twisting, and one produced by a foreign body not opaque to the X-rays. In all these cases the exact condition of affairs could be made out in three hours with the help of the X-ray. I gave for the purpose of diagnosis to each dog a pill which, after the lapse of few hours, could be seen on the plate of the fluoroscope and traced gradually to the point of the obstruction in the intestines. It was not necessary to take a skiagraph. The diagnosis in each case was verified. Encouraged by these results, I have tried the pill myself just to see if it will pass freely, being not affected by the juices of digestion. It passed in two hours without any discomfort to me. The pill is prepared specially.¹ Take a gelatin capsule No. 3, put a No. 4² shot into the same, close the capsule and cover the whole surface with a smooth layer of dental gutta percha, which must be applied warm. In this way you will get a nice pill, which may be easily swallowed, and the gastric juice cannot act upon it. The heat of the body will not destroy the pill. The shot being opaque to the X-ray, will show plainly, and may give you the direction in which the strangulation took place. Such a diagnosis is correct and may solve the problem of immediate operation, if necessary, as shown by those two cases related above. I made a few skiagraphs in succession, tracing the pill in my own body, and, I assure you, the procedure itself was very interesting.

Sic Itur ad Astra.—The *Indian Medical Record* has to answer for the following:

An Irish brakeman being hurt by a train, his friends offered to send for a physician. "Do you want an allopath or a homœopath?" they asked. He replied: "It doesn't matter—all paths lead to the grave."

¹The *American X-Ray Journal*, April, 1904, by the author.
²According to the age and thickness of the patient's body.

THE ABSTRACTION OF
CALCIUM SALTS FROM THE MOTHER
BY THE
FŒTUS A CAUSE OF OSTEOMALACIA IN
THE FORMER.

By JENNIE G. DRENNAN, M. D.,

ST. THOMAS, ONTARIO.

Osteomalacia is a rare disease, sporadic everywhere and endemic in some localities, as in the valleys of the Rhine. It occurs in adults mainly beyond middle life, but occasionally in infants. It occurs more frequently in females than in males, and has been discovered generally during pregnancy, more often in multiparæ than in primiparæ, and it increases in each succeeding pregnancy. There is supposed to be more than a casual relationship between it and this condition. Cold, damp dwellings, insufficient air and light, inadequate aliment and exposure are supposed to be exciting causes.

It is characterized by decalcification of the bones. In pregnancy, the bones of the pelvis and the vertebræ are those principally affected, but many may be involved. The medulla increases in bulk; the osseous matter is absorbed gradually, first from the cancellous, then from the compact tissue.

Some authorities assign lactic acid in the blood as a cause; others, a depression of the nervous system.

On reading an article in the *New York Medical Journal* for August 10th, by Dr. Branth, entitled Cleft Palate and its Association with Hare-lip, a new theory for the causation of this disease occurred to the writer. In his article Dr. Branth mentions the fact that lionesses fed on flesh containing bones too large for mastication gave birth to offspring with cleft palates; but, he adds, lack of a meat diet and insufficient phosphate of calcium in the human mother's case would not cause the same result in human offspring, as in this case the fœtus would draw upon the mother's tissues for its calcium salts, if there were not a sufficiency by ingestion. From this latter statement the question occurs to me, May not this very abstraction of calcium salts from the mother's tissues result in producing osteomalacia in her? But the question to be first settled is, Does the fœtus abstract nourishment from the tissues of the mother? Or does it do so only indirectly by taking from her blood the pabulum which she requires to rebuild her own tissues? This seems to me to be the more correct view. In the case of poorly fed women, this would easily occur. This is really an abstraction of the calcium salts only in an indirect manner, or, rather, in the taking of them up by the fœtus before they reach the mother's tissues. We may then say that osteomalacia is a disease, the result of a poverty of calcium salts in the blood of the

mother, by which her osseous tissues are starved by the fœtus assimilating all the available salts. If her diet had been rich in salts, there would have been a sufficiency for both. The women in whom this disease occurs oftenest are those whose diet is poor in lime. The disease is commonest among the poor; peasant classes in Europe, foreigners in America, and the slum classes of British cities. Naturally, in each succeeding pregnancy the supply of calcium in the tissues will be less, as, in all probability, the osseous tissues will not recover their first state.

Correspondence.

LETTER FROM TORONTO.

A Reduced Consumption Mortality in Ontario.—Crime in Canada.—The College of Physicians and Surgeons and the License to Practise.—The Medical Defense Union and the Medical Council of Ontario.—Dr. Adami on Bovine Tuberculosis and its Communicability to Man.—Christian Science in Toronto.—McGill University.

TORONTO, September 21, 1901.

A very noticeable reduction in the number of deaths from consumption in Ontario is reported in the returns of deaths for the month of July, as compared with the month of July, 1900. The returns, which represent 91 per cent. of the population, compared, however, with 97 per cent. last year, show a total of 1,939 deaths from all causes, there having been reported 2,021 in the same month in 1900. In July, 1901, there were 182 deaths from consumption as against 264 for the same month in 1900, and 174 in June of this year.

The statistical branch of the Department of Agriculture at Ottawa has recently published figures which show that there is quite a body in Canada of habitual criminals. During the period from 1895 to 1900 there were 44,046 trials of persons for indictable offenses. Of these, 41,046 had never been before the courts before. An examination of the statistics shows that seven persons were tried seven times, eight eight times, five nine times, one eleven times, and three twelve times. Of the three who figure as having been convicted twelve times each, one belonged to Quebec, one to Ontario and one to British Columbia.

A short time ago Mr. Justice Langelier, of the Quebec bench, granted a petition for a writ of mandamus to Dr. H. C. Dumont, of that Province, against the College of Physicians and Surgeons. It appears that Dr. Dumont, who had passed the necessary examinations, and had studied medicine during the number of years prescribed by the college, had not conformed to the regulations governing admis-

sion to study, and a license was therefore denied him to practise in that Province. Dr. Dumont took legal action against the College of Physicians and Surgeons, and his petition has been granted in its entirety. Five or six cases of a similar nature were decided in Quebec last year in the same manner; so now the College of Physicians and Surgeons will take the case through the courts to maintain their jurisdiction.

While the College of Physicians and Surgeons of the Province of Quebec is having troubles along these lines, the College of Physicians and Surgeons, or its executive body, the Medical Council, of Ontario, is also being subjected to troubles of its own. The Medical Defense Union, or Association, organized some years ago in the Province of Ontario, having for its avowed purpose the correcting of evils stated to exist in the governing of the profession by the Medical Council, has come forward still another time to attack the Medical Council; and at a meeting a short time ago held in Toronto, by a body representative of this organization, it was decided, in fact unanimously ordered, that Dr. J. H. Sangster, of Port Perry, should be the chosen mouthpiece of this organization, who would, in a series of letters to the press, lay before the public generally and the profession in particular the need of a reformation in the Ontario Medical Council, its composition and its methods of taxation to be the chief bones of contention. Dr. Sangster has perhaps been appointed to a difficult task, and he apparently appreciates the situation when he writes of the formidable obstacles in the way, the second of which he styles "the almost Asiatic apathy of a large section of the profession itself."

Dr. J. George Adami, professor of pathology at McGill University, does not mean that Professor Koch shall have all the credit, if credit there be, in his important announcement at the recent conference at London. In a paper read before the Canadian Medical Association when that body assembled in Toronto two years ago, Dr. Adami himself discussed this selfsame question, the title of the paper being "Is Bovine Tuberculosis Infectious from Animal to Man?" For the last two years, Dr. C. F. Martin and Dr. C. Higgins, of Montreal, have been working along these very same lines, as set forth in Dr. Koch's address, work which they have been unquestionably carrying on under the knowledge of the Canadian Government. Dr. Adami believes that quite too great emphasis has been placed in the past on the danger to be apprehended in milk from tuberculosis in cattle; but he believes that it is quite wrong to state that there is absolutely no danger. It seems to be quite certain that Professor Koch became conversant with the work being carried on in

Canada through the medium of Professor Adami's paper.

It now looks as though the authorities in Toronto were in the present and in the future going to look after the Christian Scientists who take it upon themselves to treat young children by the "silent" method when ill with any disease, especially of a contagious nature. A short time ago a six-year-old boy died from diphtheria without medical attention. The father of the child was arrested, and in the preliminary investigation which was held last week some very interesting scenes and incidents occurred. The Crown attorney who was prosecuting the inquiry and the magistrate on the bench were not slow in their denunciations of the peculiar treatment adopted by these people. The Crown attorney stated: "I have no hesitation in saying that this Christian Science, as set out in Mrs. Eddy's book, is the most damnable blasphemy I ever heard or read." Mrs. Eddy and her book got a hot roasting and long extracts were read out in court. "Is that woman still at large?" asked the magistrate. "Yes. She got this message from God copyrighted," said the Crown attorney. "Oh, that shows she is sane enough in one respect," replied the magistrate. The father of the dead child was committed for trial at the coming sessions.

During their recent visit to Montreal, the Duke and Duchess of Cornwall and York were welcomed at McGill University, and the Duke performed the ceremony of declaring the new medical buildings open for the work they were to perform. In the address which was delivered by the dean, Dr. Craik, on behalf of the Medical Faculty, there was a history of that famous medical school from its foundation in 1824 down to the present time. At that time McGill only had four teachers and a total student body of twenty-five. Last year there were four hundred and ninety registered on its rolls, and it now takes a faculty of seventy members to look after their welfare. The Duke was presented with a small casket containing a gold key to the doors of the new buildings, which have been constructed through the generosity of two members of the family of Lord Strathcona, the chancellor of the university—Lady Strathcona and the Hon. Mrs. Howard.



Post-mortem Eponymics.—"Well, sir, Dr. Blank and I have had a little talk, and we are quite agreed about your case."

"Oh, then you think I shall get better, doctor."

"On the contrary, we are afraid your condition is very serious, and we think it right to tell you so."

"But, doctor, what is the matter?"

"Well, you are suffering from a hitherto unknown combination of maladies, and when you die and we know more about it, we are going to name it after you."

Therapeutical Notes.

The Treatment of Perimetritis.—*Ἱατρικὴ πρόοδος* for April gives the following formulæ.

1. Rub the sacral region with the following liniment:

℞ Chloroform. 10 parts;
Ether. 15 "
Camphorated alcohol. 90 "

M.

2. The suprapubic region with

℞ Extract of digitalis. 4 parts;
Alcohol. q. s.
Lard. 40 "

M.

3. To the cervix uteri is to be applied a pledget of cotton soaked in

℞ Extract of digitalis. 1 part;
Glycerole of starch. 30 parts.

M.

4. The perimetric discharges may be combated by injections of artificial serum prepared as follows:

℞ Glacial carbolic acid. 1 part;
Sodium chloride. 2 parts;
Sodium phosphate. 4 "
Sodium sulphate. 8 "
Distilled water. 100 "

M.

These injections are given in quantities of 5, 20, 40, and even 100 grammes in obstinate cases. They stimulate and raise the arterial tone, which is constantly lowered in these patients, heal the underlying symptomatic anæmia, and energize the vitality of the organism.

For Diabetic Pruritus Pudendi.—*Ἱατρικὴ πρόοδος* for April says that the physician should always look for diabetes whenever the pruritus is persistent and does not depend upon obvious local changes. When the physician is assured of the presence of sugar in the urine, in addition to the special diet, hot boracic lotions are recommended:

℞ Boric acid. 750 grains;
Borax. 75 "
Distilled water. 1 quart.

M.

The Treatment of Ulcers with Camphor.—According to the *Clinica Moderna* for July 24th, Schulze advises the application of the following ointment in ulcers of the thigh:

℞ Powdered camphor. 30 grains;
Oxide of zinc. 225 to 300 "
Lard. 1,500 "

M.

Or,

℞ Powdered camphor. 30 grains;
Olive oil. 750 "
Oxide of zinc. 600 to 750 "

M.

The application is to be renewed twice or three times daily and a rapid cure may be looked for. It should be well shaken before being used.

For Putrid Bronchitis.—Professor Combemale (*Écho médical du Nord*, June 30th) says that the principal indication is to attain asepsis of the dilated bronchi by balsamic inhalations, which also help to loosen and evacuate the secretions. The following formula as an expectorant also lends efficient aid:

℞ Senega in powder. 75 grains;
Infuse in hot water. 5 ounces.

And add, after filtration, either

Sodium benzoate. 15 grains;

or

Kermes. 1½ grain;
Oxymel of squill. 1 ounce.

M.

For inhalation, the following is recommended:

℞ Oil of eucalyptus. 75 minims;
Alcohol. 375 "
Water. 1,500 "

M.

A tablespoonful is to be added to a quart of water in a beaker placed over a Bunsen burner or alcohol lamp. The continuous evaporation of this mixture in the sick-room will lead to its deep penetration into the respiratory passages.

Eucalyptol in 30-grain pearls, myrtol, gomenol, and cajeput are also recommended.

Hypodermically, the following mixture is said to be very efficacious:

℞ Eucalyptol (the rectified and
crystallized essence). 300 grains;
Liquid vaseline. 1,200 "

M.

From 30 to 75 minims of this mixture may be subcutaneously injected in the course of twenty-four hours.

The author specially praises the following also:

℞ Sodium hyposulphite, from 60 to 150 grains;
Gum julep. 1,800 "
Tincture of eucalyptus. 30 minims.

M.

A tablespoonful every three hours for eight consecutive days.

Injections of Apocodeine Hydrochloride in Intestinal Obstruction.—The *Revista de medicina y cirugía prácticas* for May 21st cites the *Écho médical du Nord* to the effect that apocodeine hydrochloride exercises a special action on the digestive apparatus, augmenting the peristaltic movements and the glandular secretion. It is very useful in obstruction dependent on atony of the muscular coat of the intestine, on deficient glandular secretion, or on both causes.

Dr. Raviart and Dr. Bertin have successfully used this drug in many cases of obstruction without observing any other accident than pain at the site of puncture. The following is their formula:

℞ Apocodeine hydrochloride. . . . 7½ grains;
Sterilized water. 750 minims.

M.

The quantity for an injection is thirty minims, which contains about three-tenths of a grain of apocodeine.

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THE CASE OF THE LATE PRESIDENT
McKINLEY.

Before making further comment than what follows on the lamentable case of our late revered President, we think it wise to await the issue of the "official" report of the case, which, we understand, may be expected within the course of a few days. Last week we ventured upon the statement that in all probability there had been no serious disagreement among the distinguished medical men who were in attendance, and that statement we were able to verify by means of an announcement signed by them. The assassin's trial took place on Monday of this week. The medical testimony was straightforward and to the point. Particularly to be commended is Dr. Mynter's reply to the question "What caused the infection of the wound?" He answered: "I wish you could tell me." This, of course, was equivalent to saying "I don't know"—an unusual, courageous, and most commendable reply for a medical witness to make. Happy would it be for the members of our profession, now reputed bad witnesses, if they could oftener pluck up the courage to say "I don't know." They could do it if they could only bring themselves to a realization of the fact that to answer a question under oath is a different thing from giving a makeshift reply to a person interested in a certain patient, as we have often pointed out.

The pancreatic juice theory seems still to play a part in the case. Replying to a question, Dr. Mann is reported to have said: "Raising the stomach, we found [at the post-mortem examination] a large cavity, the walls of which showed evidence of gangrene. In the cavity was a quan-

tity of pancreatic fluid. The tissues surrounding it, covering a space as large as a silver dollar, were affected." It is in evidence that the pancreas was not wounded. If, then, the fluid that was found in that cavity was really the pancreatic secretion, we must conclude that leakage from the pancreas results more readily from gangrene than from traumatism, for our information is to the effect that experimental physiologists find it difficult to obtain enough of the fluid for their purposes, since mechanical injury is very prone to give rise to absolute cessation of the functional activity of the gland.

The notion that the assassin's bullet was poisoned appears also to have some supporters yet. We have received several letters on the subject. Some of our correspondents argue that there has been such a thing as the use of poisoned bullet, a fact which we have never denied. One of our correspondents makes an interesting suggestion. He says: "There are fewer than a half-dozen cartridge factories in the country. My calling your attention to one variety may put you on the track of an interesting development. Ask to be shown a cartridge with *inside* lubricant, which lubricant is forced through very minute channels in front of the bullet at the moment of explosion. These, or one of these, small channels could be readily enlarged to admit a hypodermic needle with which poison could be mingled with the lubricant without removing the bullet from the brass shell, a difficult operation." Granted, but what could the poison be?

There has been some criticism of the pathologists for desisting from further efforts to find the bullet. We have not at any time felt that such cavilling was at all justified, and we are glad to be able to say that it now appears that the abandonment of further efforts was in obedience to Mrs. McKinley's wishes, wishes which under all circumstances had, most properly, the force of commands.

THE DETECTION OF HEPATIC INADEQUACY.

Any advance in means of diagnosis is likely to prove of ultimate practical advantage even if no immediate therapeutical indication is revealed. We must therefore attach importance to certain methods of testing the functional activity of the liver de-

scribed by Dr. Strauss at a recent meeting of the Berlin Society for Internal Medicine and recorded in abstract in the *Gazette hebdomadaire de médecine et de chirurgie* for July 18th. Starting with the postulate that the excretion of fatty acids is augmented when the liver is disordered, Strauss has been giving test meals to which about five drachms of sodium butyrate had been added. In six out of eight cases of persons affected with hepatic disease he has observed an increase of the amount of fatty acids eliminated in the urine after the ingestion of the sodium butyrate. The same result followed in feverish subjects, in the victims of lead poisoning, and especially in diabetics. This fact is interpreted as showing impairment of the antitoxic power of the liver.

On the other hand, Strauss has conducted test experiments which seem to show the fallacy of Kolisch's proposition to the effect that disease of the liver so interferes with the assimilation of albuminoids that the amount of ammonia contained in the urine varies in direct proportion to the percentage of albumin in the food taken. He therefore believes that Kolisch's test is of no diagnostic value. Here again, if Strauss's conclusion is verified, he has rendered a distinct service, for to demonstrate the untrustworthiness of a test alleged to be reliable is to make an advance second only in importance to the establishment of a new diagnostic sign.

Finally, Strauss has studied the significance of alimentary glycosuria as a sign of hepatic disorder. He has administered levulose to twenty-nine persons affected with grave disease of the liver. In twenty-six of them, that is to say, about ninety per cent., levulose appeared in the urine, whereas, of fifty-eight persons free from hepatic disease, only six (a little more than ten per cent.) showed levulose in the urine. Some stress is laid on the fact that in two diabetics with hypertrophic cirrhosis, who had taken levulose, notable quantities of that substance were excreted in addition to dextrose, although under similar conditions diabetics having no hepatic complication excreted dextrose almost exclusively. Moreover, having observed that the urine of two persons with cancer of the pancreas, together with hepatic disorder, contained only levulose after the ingestion of that form of sugar, Strauss concludes that in those cases there was no disturbance of metabolism of a diabetic nature.

Only once in fifty times has Strauss found the administration of dextrose to give rise to glycosuria. This result is at variance with those of French observers, who have found glycosuria in half the cases. Such a discrepancy Strauss explains as due to the fact that in France nearly five ounces of cane sugar were given in the application of the test, which amount might readily give rise to the appearance of levulose in the urine as the result of intestinal decomposition of the saccharose into glucose and levulose.

A NEW PHYSICAL SIGN OF CHRONIC ALCOHOLISM.

Under the name of Quinquaud's sign, or Quinquaud's symptom, M. Aubry (*Archives de neurologie*, June; *Centralblatt für innere Medizin*, September 14th) describes the following procedure as a test of chronic alcoholism: The person under examination is directed to straighten the fingers of one hand and spread them apart; holding them perpendicular to the examiner's outspread palm, he is then to press upon it with the ends of his fingers, using only moderate firmness, for it is explained that very firm pressure interferes with the test. In the course of two or three seconds, if the person is a tippler, the examiner perceives crepitation of the phalanges, little concussions, as if the bones of each finger impinged roughly upon each other. The sensation ranges in intensity from that of a slight grating to that of actual crashing. It is found that the phenomenon is more pronounced in men than in women.

Many of the author's trials of this test have been made upon the inmates of the Maréville Asylum, who are allowed only a moderate amount of alcohol. Among fifty-two epileptic women, only one showed the sign, and she was a notorious tippler who had often had to be punished for drunkenness and, as was afterward ascertained, was given to stealing the wine furnished to the other patients. Out of twenty-nine paralytics, twenty of whom had previously been addicted to alcohol, two showed Quinquaud's sign, while the others were free from it. The two in whom the sign was elicited had been in the institution only a few months. Sixty-one patients affected with insanity and alcoholism were divided into two groups—forty-two who had lived abstemiously for a long time, and nineteen who had been admitted within the preceding two years. Of the lat-

ter, ten showed Quinquaud's sign, while nine did not; of the former, three showed it. But these three, as was subsequently shown, had not been strict in their abstinence. According to the author, there seems to be no connection between Quinquaud's sign and tremor, for in the cases of the nineteen newly admitted alcoholics tremor was observed in those who showed the sign as well as those who did not.

Besides his investigations of asylum inmates, experiments on a number of students and workmen have been undertaken by the author, who has often elicited the sign in drunkards and in moderate drinkers, but never in total abstainers. The condition is held to be pathological, but it cannot positively be said to be confined to alcoholics. At all events, however, it is thought that in many cases it will prove of importance as a diagnostic measure. It is suggested that additional value may be ascribed to the sign from the fact that it is not known to the general public, so that attempts to disguise it are not likely to be made. Further observations with regard to this phenomenon seem to us eminently desirable. It would be interesting to know, for example, the duration of its persistence after the renunciation of alcohol. It will be noticed that M. Aubry makes no extravagant allegations, and that fact in itself makes his communication worthy of careful consideration.

THE OCCASIONAL CURATIVE EFFECT OF VACCINATION.

All our readers are doubtless aware of the fact that vaccination has been thought to be curative of whooping-cough and of some other morbid conditions. Possibly its action is that of certain living elements other than the one which gives it its potency against small-pox, in which case it might be classed with that of the various curative forms of serum. At all events, this seems to be the view taken by such a capable observer as Sir James A. Grant, of Ottawa, who, so long ago as in February, 1863, published in the *Medical Times and Gazette*, of London, an interesting account of four cases of skin diseases treated successfully by vaccination. The *Canada Lancet* for November, 1899, reproduced Sir James's account under the heading of Serum Therapy in Canada in 1863.

THE MARCONI TELEGRAPHY AS A MEANS OF SECURING PROMPT MEDICAL AID.

Too much importance can hardly be attached to the fact that this week a passenger on an incoming European steamship, 250 miles from New York, was able, by means of "wireless" telegraphy, sending his dispatch at about the middle of an afternoon, to notify a friend of the serious illness of another passenger, and summon aid on the ship's arrival the next morning.

TRAUMATISM AND EXTRA-UTERINE GESTATION.

The ætiology of extra-uterine gestation is doubtless most complex. That traumatism may play an important part has been suggested by Freund, and now Seeligmann (*Deutsche medicinische Wochenschrift*, 1901, No. 26; *Berliner klinische Wochenschrift*, August 26th) corroborates that view on the strength of the histories given in five cases, in all of which there had been an injury at the outset—specifically, a severe fall on the buttocks. The jarring caused by the fall seems to drive the fecundated ovum from the grasp of the fimbriated extremity of the Fallopian tube or from the ciliary stream of the tube.

SUGAR AS AN ARTICLE OF FOOD.

Sugar has of late come to be regarded as a supporting agent, one capable of counteracting the causes of fatigue to a considerable extent, but its habitual and excessive consumption often induces a sense of satiety which leads to the neglect of aliments highly necessary for the system. Dr. G. von Bunge (*Allgemeine medicinische Central-Zeitung*, 1901, No. 58; *Wiener medicinische Blätter*, August 1st) emphasizes this fact and advises the use of sweet fruits instead of pure sugar by persons who crave sweets. Sugar, he remarks, contains neither iron nor calcium, both of which are necessary for the nutrition of the body.

On the other hand, M. Lépine, of Lyons, who controverts von Bunge's contention (*Semaine médicale*, 1901, No. 27; *Wiener medicinische Blätter*, August 1st) points out that numerous other common articles of food are poor in iron and calcium, while meat, milk, and the yolk of an egg are rich in those elements. The use of sugar, he feels sure, will never keep children from drinking milk or eating eggs. Our own impression is that it would take an inordinate amount of sugar to interfere with a healthy child's appetite to any serious extent, though we did once know a man who was reputed to give his children sugar to keep them from over-eating.

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general, during the week ending September 21, 1901:

Smallpox—United States

Illinois	Freeport	Sept. 7-14	1 case.	
	Peoria	Aug. 1-31	24 cases.	
Maine	Portland	Sept. 7-14	1 case.	
Massachusetts	Boston	Sept. 7-14	2 cases.	
Nebraska	Omaha	Sept. 7-14	1 case.	
New Jersey	Newark	Sept. 7-14	4 cases.	1 death.
New York	New York	Sept. 7-14		3 deaths.
Pennsylvania	Erie	Sept. 7-14	1 case.	
	Philadelphia	Sept. 7-14	25 cases.	4 deaths.
Utah	Salt Lake City	Sept. 7-14	4 cases.	
Washington	Tacoma	Sept. 1-8	1 case.	
Wisconsin	Green Bay	Sept. 8-15	1 case.	

Smallpox—Foreign

Austria	Prague	Aug. 24-31	1 case.	
Belgium	Antwerp	Aug. 24-31	3 cases.	2 deaths.
Colombia	Panama	Sept. 2-9	12 cases.	
France	Paris	Aug. 24-31		3 deaths.
Gt. Britain	London	Aug. 24-31	71 cases.	7 deaths.
India	Bombay	Aug. 13-20		1 death.
"	Calcutta	Aug. 10-17		1 death.
"	Madras	Aug. 10-16		9 deaths.
Italy	Messina	Aug. 24-31	3 cases.	
Mexico	City of Mexico	Aug. 25-Sept. 1	1 case.	
Russia	Moscow	Aug. 17-24	2 cases.	1 death.
"	Warsaw	Aug. 17-24		2 deaths.
Uruguay	Montevideo	July 18-25	10 cases.	

Yellow Fever.

Cuba	Matanzas	Aug. 25-31	2 cases.	
Haiti	Port au Prince	Aug. 19-26	1 case.	1 death.

Cholera.

India	Bombay	Aug. 13-20		11 deaths.
"	Calcutta	Aug. 10-17		7 deaths.
"	Madras	Aug. 10-16		76 deaths.
Japan	Yokohama	Aug. 3-17	3 cases.	1 death.

Plague.

India	Bombay	Aug. 13-20		201 deaths.
"	Calcutta	Aug. 10-17		20 deaths.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending September 21, 1901:

DISEASES.	Week end'g Sept. 14		Week end'g Sept. 21	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	110	23	122	21
Scarlet fever	93	8	95	2
Cerebro-spinal meningitis	0	2	0	3
Measles	35	7	50	1
Diphtheria and croup	123	26	155	29
Small-pox	8	3	3	1
Tuberculosis	237	149	283	159
Chicken-pox	0	0	5	0

Society Meetings for the Coming Week:

TUESDAY, October 1st.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Maine, County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, October 2d.—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Maine, County Medical Society (Bangor); Bridgeport, Connecticut, Medical Association.

THURSDAY, October 3d.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psy-

chological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, October 4th.—Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, October 5th.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Massachusetts, Medical Society.

St. Louis Medical Society of Missouri.—At a meeting, held on September 21st, Dr. H. C. Dalton read an account of a case of stab wound of the liver.

The Bond County (Ill.) Medical Society met recently in regular quarterly session. Dr. E. P. Poindexter was elected president and Dr. W. T. Easley secretary.

A Munificent Gift to Medicine.—The widow of Theodore Stern, the banker, has given Frankfort-on-Main, Germany, 5,000,000 marks to promote the objects of medical science.

Dr. J. Edward Stubbert announces that he has opened an office at No. 25 East Forty-fifth Street, New York, and will receive patients on Friday, Saturday, and Sunday, from 9 a. m. to 11.30 a. m.

Changes of Address.—Dr. Titus Bull, to No. 515 West One Hundred and Forty-ninth Street, New York city; Dr. S. V. Ten Eyck, to No. 138 West Ninety-fourth Street, New York city; Dr. F. T. Labadie, to No. 122 West Sixty-fourth Street, New York.

The American Association of Obstetricians and Gynæcologists.—At the recent annual meeting, held in Cleveland, Dr. Edwin Ricketts, of Cincinnati, was elected president, and it was voted to hold the next annual meeting in Washington. We congratulate the association on the choice of such an excellent presiding officer as Dr. Ricketts.

The German Medical Society of the City of New York.—The programme for the next meeting, on Monday evening, October 7th, includes the following items: Report on a Case of Caterpillar Inflammation of the Eye, by Dr. R. Denig; Gastric Disturbances in Typhoid Fever, by Dr. M. Toeplitz; The Traditional Technical Language of Physicians in its Elements—an Esoteric Art Picture and Testament of Antiquity, by Dr. H. Riedel.

New York's Department of Health Asks a Larger Appropriation.—The Department of Health of New York has submitted its estimate of the amount necessary for the coming year to the Board of Estimate and Apportionment. While last year \$1,053,990 was allowed by the board, this year an increase of \$346,266 is asked for, making a total of \$1,400,256. While the increase is practically nominal in the different boroughs, the largest is in Manhattan, where nearly \$80,000 is asked for added work.

A Brooklyn Physician Saves a Man from Drowning.—A drowning man was rescued in Gravesend Bay on September 15th by Dr. Andrew M. Gillen, of No. 560 Clinton Street, Brooklyn. There were three men fishing in a rowboat, and while one of them was trying to raise the anchor he lost his balance and fell overboard. The tide was so strong that it took him away from the boat, and he was in danger of drowning when Dr. Gillen, who was in a passing yacht, jumped into the water and held up the drowning man until the other two men in the rowboat came to the rescue.

Peary's Physician Said to have Left the North Pole Expedition.—Herbert L. Bridgman, secretary of the Peary Arctic Club, in charge of the relief party on the *Erik*, and Dr. Frederick A. Cook, a member of the party, have confirmed the statement that Dr. Thomas S. Diedrick, of Washington, N. J., had been left to shift for himself at Etah, a desolate place on the northern coast of Greenland, with only a few Esquimaux for companions. It is denied that he was put ashore. On the contrary, he left against the orders and wishes of Lieutenant Peary and others of the party, and it is hinted that his mental condition is not of the best.

The Medical Directory of New York, New Jersey, and Connecticut, published by the New York State Medical Association, for 1901 is being distributed. It contains the names of 12,644 physicians, of whom 10,112 are in the State of New York, 1,472 in New Jersey, and 1,060 in Connecticut. Of the 10,112 names in New York State, 3,991 are credited to the Borough of Manhattan and the Bronx. A total of all the boroughs of Greater New York is 5,579 physicians. The publication is said by the committee which has had the work of compiling it in charge to be the most perfect and satisfactory which has yet been published. It can be secured from the secretary of the New York State Medical Association, at No. 64 Madison Avenue.

Consumption Statistics for Indiana.—The annual report of the Indiana State Board of Health promises to furnish interesting reading. The statistical portion of the document will show that 21.8 per cent. of last year's deaths were of infants. The report declares that most of this infantile mortality was due to preventable causes. The report says that consumption decreases the expectancy of life between the ages of fifteen and twenty years and between twenty and twenty-five years, as shown by the following figures: Total number of deaths between fifteen and twenty years, 1,377, of which 315 were due to consumption; total number of deaths between twenty and twenty-five years, 1,621, of which 550 were caused by consumption. The report calls attention particularly to the fact that between the ages of fifteen and twenty-five years, which is termed "the finest period of life," consumption does its worst work, and the principal reason assigned for this state of affairs is the bad ventilation of many schoolhouses. It is asserted that in eighty per cent. of instances school children are compelled to breathe foul air.

The Baltimore County Medical Association held its regular meeting on September 20th. Resolutions on the death of President William McKinley were offered by Dr. H. F. Cassidy and, after addresses by Dr. Gorsuch and Dr. C. M. Franklin, Dr. Jackson Piper, and Dr. R. C. Massenburg, were unanimously adopted and the meeting adjourned out of respect to the departed President.

A Pasteur Institute Opened at Richmond, Va.—The Pasteur Institute at the University College of Medicine, Richmond, Va., equipped with the most modern laboratory, has been opened for the reception and care of patients. Dr. A. G. Hoen, of Baltimore, is at the head of the institute. For four years he was connected with the anatomical department of Johns Hopkins University. Richmond, Va., is now one of six or seven cities scattered through America that have a Pasteur institute. The oldest is in New York.

The Northwestern University Medical School.—It is announced that Dr. A. P. Ohlmacher has been appointed professor of pathology in the medical school. He has been connected with the pathological laboratory of the Ohio Hospital for Epileptics, in Gallipolis, Ohio, and will, for the time being, continue the direction of that laboratory. Dr. Ohlmacher is very favorably known through his contributions to pathology, particularly of late, in reference to the morbid anatomy of epilepsy, and brings to his new position an immense experience in laboratory methods and in the practical work of the pathologist.

A National Medical Bureau.—In an address to the members of the Rocky Mountain Interstate Medical Association, at its recent convention at Denver, Col., Dr. C. K. Fleming, the retiring president, sounded a note which seemed to find a ready response in the convictions of all the members that the government should institute a national medical bureau to be conducted on lines similar to those followed by the interstate commerce commission, for the purpose of investigating the sanitary and health conditions of every part of the country, and to make reports and recommendations for needed improvements in that direction.

The Chicago Pasteur Institute, in its latest report, shows that since the establishment of the institution 1,150 patients have been treated, and of this number only seven died, making the mortality but little more than one half of 1 per cent. Records of untreated cases show that the mortality is about 88 per cent. for bites on the face, 67 per cent. for bites on the hands, and 20 to 30 per cent. for bites on the limbs and body. Many States and Territories, as well as Canada, have sent patients to the institute. Of the total number of patients received, 1,040 had been bitten by dogs. Cats had wounded 36, horses 41, skunks 12, wolves 5, cows 6, a calf 2, a rat 1, a mule 1, a pig 1, and human beings 6. Of the seven persons who died, four were overtaken by hydrophobia soon after reaching the institute, many days having elapsed since they were bitten.

The Rocky Mountain Interstate Medical Association.—The third annual convention of the Rocky Mountain Interstate Medical Association was held at Denver, Col., on September 3d and 4th. Physicians were in attendance from Arizona, Colorado, Idaho, Montana, New Mexico, Utah, and Wyoming. The following were the officers elected for the ensuing year: President, Dr. R. Harvey Reed, of Wyoming; first vice-president, Dr. Donald Campbell, of Montana; second vice-president, Dr. Walter R. Pike, of Utah; treasurer, Dr. E. S. Wright, of Utah; recording secretary, Dr. George P. Johnson, of Wyoming; corresponding secretary, Dr. S. D. Hopkins, of Denver. Cheyenne, Wyo., was selected as the next place of meeting.

The Medical Society of the County of New York met in regular session at the New York Academy of Medicine on September 23d. Officers for the ensuing year were nominated as follows: President, Dr. Frank Van Fleet; first vice-president, Dr. Charles N. Dowd; second vice-president, Dr. Robert Lewis, Jr.; treasurer, Dr. E. W. Peet; secretary, Dr. John Vandoren Young; assistant secretary, Dr. E. P. Fowler; censors, Dr. George B. Fowler, Dr. H. S. Sterns, Dr. Wendell C. Phillips, Dr. Robert F. Morris, and Dr. James F. McKernon. One hundred and seventy-five delegates were elected to the State medical society and a committee was appointed to arrange for a reception to the State society when it meets at the Academy of Medicine in New York for its semi-annual session on October 15th and 16th. The chief interest of the meeting was the report of the Milk Commission appointed in January, 1900, consisting of Dr. Henry Dwight Chapin, Dr. Abraham Jacobi, Dr. W. L. Carr, and Dr. Joseph E. Winters. The report was read by Dr. Chapin, the chairman of the committee. He first spoke of what the committee had done, having made over 800 bacteriological tests, thirty visits to farms, many of them more than 200 miles from the city, and having had two conferences with milk dealers. "From a chemical point of view," he said, "we found the milk good. Out of twenty samples which we examined all showed at least four per cent., and some five per cent. of fat, while the law requires but three per cent. So we devoted our attention to the bacteriological conditions of milk and the question as to its proper handling and preservation. It has seemed wise to establish a standard of cleanliness for bacteria, a standard to which dealers must conform. The standard prescribed by the commission is that the acidity must not be higher than three per cent. and that the milk must not contain more than 30,000 germs or bacteria of any kind per cubic centimetre, and that butter fat must reach 3.5 per cent. The amount of bacteria in the milk used in the city is something alarming. Out of twenty samples examined on November 19th, the lowest was 90,000 germs and the highest 2,280,000, while on June 29th, with the thermometer at ninety degrees, out of twenty samples examined the lowest contained 240,000 and the highest 516,000,000 per cubic centimetre. The prevalence of bacteria, to a great extent, arises from the dirt in the milk."

The Bubonic Plague in San Francisco.—Dr. Rupert Blue, formerly the United States Marine-Hospital physician stationed at Milwaukee, who has been sent to San Francisco to investigate the bubonic plague, has made a report to the government on the last four cases coming to official notice there. Three of the persons afflicted, he says, were Japanese and one Chinese. The Japanese victims were all women and of the lower order of society.

President Roosevelt to Appoint Medical Inspector P. M. Rixey Surgeon-General of the U. S. Navy.—President Roosevelt has notified Mrs. McKinley, through Secretary Cortelyou, that, in pursuance of the intention of the late President McKinley, and in recognition of devoted services, as well as because of eminent fitness, Medical Inspector P. M. Rixey will be appointed surgeon-general of the navy upon the expiration of the term of Surgeon-General Van Reypen. The naval list shows that Surgeon-General Van Reypen will not retire in the ordinary course until November 14, 1902. Dr. Rixey stands No. 28 on the list of naval surgeons. Though Surgeon-General Van Reypen's retirement from active service does not occur for more than a year, his commission as surgeon-general, which was for a period of four years, will expire on December 18th, and Dr. Rixey's appointment may be expected then. Preston Marion Rixey, medical inspector, U. S. N., has been President McKinley's physician since Leonard Wood left Washington as colonel of the Rough Riders, in 1898. He was born at Culpeper, Va., on July 14, 1852, and graduated from the medical department of the University of Virginia in 1873, and after a year's post-graduate course at Philadelphia entered the navy as assistant surgeon on January 28, 1874. He has seen service on many naval vessels in European, South American and home squadrons, and since 1887 has been almost continuously on special duty in Washington, part of the time, from 1893 to 1895, as surgeon of the *Dolphin*. He attended the President in a serious case of the grippe last January and was with Mrs. McKinley during her nearly fatal illness in San Francisco, in May last.

Tri-state Medical Society of Alabama, Georgia, and Tennessee.—At the thirteenth annual meeting to be held at Nashville, Tenn., on Tuesday, Wednesday, and Thursday, October 8th, 9th, and 10th, the following papers have been promised:

President's Address, by Dr. McGannon, of Nashville, Tenn.; Some Points in the Diagnosis and Treatment of Heart Disease, by Dr. J. B. Marvin, of Louisville, Ky.; Tuberculosis, by Dr. Y. L. Abernathy, of Hill City, Tenn.; Malaria as a Cause of Puerperal Eclampsia, by Dr. E. O. Williamson, of Gurley, Ala.; Static Electricity, by Dr. J. B. Goodwin, of Kingston, Tenn.; Smallpox, by Dr. William A. Duncan, of Chattanooga, Tenn.; Remarks on Some Recent Cases, by Dr. A. B. Ramsey, of McMinnville, Tenn.; Anæsthesia in General Practice, by Dr. J. B. Murfree, of Murfreesboro, Tenn.; Anæsthesia, by Dr. German Haymore, of Chattanooga, Tenn.; Local Anæsthesia, by Dr. C. Holtzelaw, of Chattanooga;

Local Anæsthetics as Applied to Mucous Membranes, by Dr. B. F. Travis, of Chattanooga, Tenn.; Studies of the Blood and Urine in Connection with Anæsthesia, by Dr. H. Berlin, of Chattanooga, Tenn.; Autoinfection, by Dr. A. W. Boyd, of Chattanooga, Tenn.; Report of Committee on Sociology, by Dr. R. R. Kime, chairman; (a) Hereditary and Acquired Characteristics as a Social Question, by Dr. R. R. Kime, of Atlanta, Ga.; (b) Legislation and Its Limitation in Prevention of Crime and Disease, by Hon. John Bell Keeble, of Nashville, Tenn.; (c) Marriage and Heredity in Relation to Insanity, by Dr. T. O. Powell, of Milledgeville, Ga.; (d) Suppression of Consumption, by Dr. R. C. Bangston, of Birmingham, Ala.; (e) Tuberculosis, Its Prevalence and Prevention, by Dr. J. D. Cromer, of Atlanta, Ga.; (f) Syphilis and Its Prevention as a Social Question, by Dr. Childs and Dr. Champion, of Atlanta, Ga.; (g) Syphilis and Its Relation to Eye Disease, by Dr. A. W. Sterling, of Atlanta, Ga.; (h) The Prevalence of Gonorrhœa in the Male as a Social Question, by Dr. W. Frank Glenn, of Nashville; (i) Gonorrhœa in the Female, with Suggestions as to Means of Prevention, by Dr. W. G. Bogart, of Chattanooga, Tenn.; (j) The Development and Control of the Sexual Instinct, by Dr. J. W. Maquillan, of Chattanooga, Tenn.; Softening of the Brain, by Dr. Michael Campbell, of Knoxville, Tenn.; Migraine, by Dr. Curran Pope, of Louisville, Ky.; Diagnosis and Treatment of Typhoid Fever, by Dr. J. C. LeGrand, of Birmingham, Ala.; A Plea for the Better Teaching of Physical Diagnosis in Southern Colleges, by Dr. Hazle Padgett, of Columbia; Acute Dysentery, some Experiences, with Report of Cases, by Dr. Allen E. Cox, of Milan, Tenn.; Limitation in Abdominal Surgery, by Dr. T. J. Crofford, of Memphis, Tenn.; Conservative Treatment in Appendicitis, by Dr. W. E. Fitch, of Savannah, Ga.; Trachoma of the Female Genital Tract, a Plea for Its Early Recognition, by Dr. J. A. Hale, of Alto Pass, Ill.; Flat Foot, by Dr. Michael Hoke, of Atlanta, Ga.; Anatomy of the Genito-urinary Organs, with Specimen, by Dr. J. S. B. Wolford, of Chattanooga, Tenn.; Malignant Disease of the Liver, by Dr. George R. West, of Chattanooga, Tenn.; Gonorrhœa, by Dr. J. W. Johnson, of Chattanooga, Tenn.; Disease of the Sigmoid Flexure, by Dr. W. L. Nolan, of Chattanooga, Tenn.; Infant Feeding, by Dr. C. S. Durand, of Chattanooga, Tenn.; Scarletina and Complications, by Dr. H. B. Wilson, of St. Elmo, Tenn.; Brain Surgery, Report of Cases, by Dr. Edwin B. Anderson, of Chattanooga, Tenn.; Rheumatism, Cause or Effect in Affections of the Throat, by Dr. W. Cheatham, of Louisville, Ky.; The Work of the Laryngologist in Its Relation to that of the General Practitioner, by Dr. Richmond McKinney, of Memphis, Tenn.; Superficial Foreign Bodies in the Eye, by Dr. A. C. Corr, of East St. Louis, Ill.; The Future of the Negro from the Standpoint of the Southern Physician, by Dr. Seale Harris, of Union Springs, Ala.; Title to be announced, by Dr. W. D. Gaines, of Lafayette, Ala.; Title to be announced, by Dr. W. R. Blue, of Louisville, Ky.; The Sanitation of Havana, by Dr. Charles M. Blackford, of Washington, D. C.; Title to be an-

nounced, by Dr. Joseph Price, of Philadelphia, Pa.; Night Sweats or Phthisis, by Dr. L. P. Barbour, of Boulder, Col.; Gonorrhœa in Relation to Diseases of the Eyes, by Dr. C. E. Peete, of Macon, Ga.; A Case of Chorea, by Dr. F. B. Sloan, of Cowan, Tenn.; Pain and Its Pathology, by Dr. J. E. Clark, of Chattanooga; Traumatic Injury of the Eye, by Dr. J. T. Herron, of Jackson, Tenn.; Spinal Cocainization, by Dr. R. E. Fort, of Nashville, Tenn.; Treatment of Acute Lobar Pneumonia, by Dr. W. S. Britt, of Eufala, Ala.; Local Anæsthesia as Applied to Mucous Membranes, by Dr. G. H. Price, of Nashville, Tenn.; Tuberculosis, Its Relation to Marriage and Heredity, by Dr. J. A. Witherspoon, of Nashville, Tenn.; The Necessity of Careful Diagnosis, Prognosis, and Treatment in Some Diseases of the Heart, by Dr. L. W. Johnston, of Tuskegee, Ala.; An Operation for Tubal Pregnancy Complicated with Appendicitis and Fibroid Tumors of the Uterus, by Dr. P. U. Brown, of Troy, Ala.; Traumatic Injuries of the Brain, Report of Cases, by Dr. Hugh Boyd, of Scottsboro, Ala.; Hernia, by Dr. G. Manning Ellis, of Chattanooga, Tenn.; Surgical Shock, by Dr. D. S. Middleton, of Rising Fawn, Ga.; Rodent Ulcer, by Dr. A. R. Robinson, of New York; Acute Mastoiditis, by Dr. J. A. Goggans, of Alexander City, Ala.

Births, Marriages, and Deaths.

Married.

BLANCHARD—GOODWIN.—In Norfolk, Va., on Wednesday, September 11th, Dr. William M. Blanchard and Miss Hattie Goodwin.

BREARLY—GAGE.—In Park Rapids, Minn., on Tuesday, September 10th, Dr. Brearly, of Wadona, and Miss Rose Gage.

JOHNSON—SAUNDERS.—In Middlesex County, Va., on Thursday, August 29th, Dr. Sidney Latimer Johnson, of Washington, D. C., and Miss Maria Lucille Saunders.

PATTON—BIRCH.—In West Superior, Minn., on Tuesday, September 10th, Dr. Frederick J. Patton and Miss Alfrona Mae Birch.

MADURO—WOOLF.—In New York, on Thursday, September 26th, Dr. M. L. Maduro, of New York, and Miss Lydia Woolf.

MCDANIEL—PATTON.—In St. Louis, Mo., on Tuesday, September 17th, Dr. E. C. McDaniel, of Golden Lake, Ark., and Miss Lela I. Patton.

Died.

BURROUGHS.—In Portsmouth, Va., on Wednesday, September 11th, Dr. R. B. Burroughs.

EDMONDS.—In Linwood, N. J., on Wednesday, September 18th, Dr. Samuel C. Edmonds, in the seventy-third year of his age.

EIGNUS.—In Kankakee, Ill., on Friday, September 20th, Dr. W. T. Eignus of the Insane Hospital Medical Staff.

IRELAND.—In Louisville, Ky., on Thursday, September 19th, Dr. J. A. Ireland, in the seventy-eighth year of his age.

LITTON.—In St. Louis, Mo., on Sunday, September 22d, Dr. Abram Litton, in the eighty-eighth year of his age.

McKNIGHT.—In Toledo, Ohio, on Sunday, September 22d, Dr. A. C. McKnight, of Washington, in the fifty-seventh year of his age.

MORRIS.—In Richmond, Va., on Tuesday, September 17th, Dr. William Morris, in the sixty-sixth year of his age.

NEWCOMB.—In Carleton, Mich., on Monday, September 16th, Dr. Darwin E. Newcomb.

STUBBS.—In Reading, Pa., on Sunday, September 22d, Dr. Clarence T. Stubbs, in the thirty-second year of his age.

Pith of Current Literature.

Medical News, September 21, 1901.

Disappearing Tumors. By Dr. A. S. Warthin and Dr. W. A. Spitzley.—The authors emphasize the following points of clinical importance: First, that in spite of skilful clinical observation, the ultimate behavior of a tumor is seldom to be determined except by microscopical examination, and that many seemingly malignant neoplasms are taken to be such when they are really but the outcome of an inflammatory condition. Secondly, that probably no true neoplasm, malignant in nature, ever disappeared except through retrograde changes induced in itself through infection of the tumor tissue, or through affections or infections of other parts of the body having, by reason of toxins, practically the same effect. Thirdly, that we must look to the inflammatory process, acute or chronic, for the explanation of the appearance and disappearance of these masses of tissue which before, and even during, exploration appear to be actual new growths.

The Dilatation of the Cervix Uteri in Obstetric Practice. By Dr. Henry J. Garrigues.—The author briefly reviews the means of dilating the cervix during labor. He lays particular stress on the value of manual dilatation, and he approves of the method of Dr. Philander A. Harris, by which the cervix is opened by pressure with the index finger and then dilated by lateral pressure exercised with the crossed thumb and fingers, using the flexor muscles.

The Pantherapist and Neotherapeutics. By Dr. C. H. Kermott.—The author pleads for greater harmony among the various "schools" of medicine.

A Case of Double Penis, Combined with Exstrophy of the Bladder and Showing Four Ureteral Orifices. By Dr. Carl Beck.—The author's case is unique.

A Case of Congenital Absence of Internal Genitals; Fusion of Kidneys; Single Ureter. By Dr. Allen J. Smith and Dr. William Gammon.

A Few Remarks on a Generally Unrecognized Ear Disease (Otitis Media Mucosa). By Dr. Henry A. Alderton.—The author refers to the unusual frequency, during the past winter, of exudative non-perforative otitis media. Because of the increased virulence of the causative nasopharyngeal inflammations, the type has inclined more to the mucous than to the serous form of exudative inflammation. The treatment *par excellence* consists of incision and evacuation of the tympanum, repeated if necessary, and always accompanied by regular Politzerization and conscientious treatment of the nasopharyngeal condition. Should the exudate persist in reforming, a solution of nitrate of silver—from one half to one grain to the ounce of boiled distilled water—acts favorably, both injected into the Eustachian tube and instilled into the tympanum through the incision.

The Local Treatment of Gonorrhœa. By Dr. E. O. Bardwell.

Medical Record, September 21, 1901.

Pathological Physiology of the Animal Heat Economy and Its Relation to the Modern Theories of Fever. By Dr. Isaac Levin.—The conclusions derived from the study of the pathology of the heat economy are as follows: Heat economy seems to resemble general metabolism inasmuch as it is the result of the joint work of many organs of the body; and fever, the most important pathological state of heat, is in most instances a special kind of intoxication by some substances not as yet well defined. Further work will have to show us the precise nature of these substances, and also decide the question whether there is some central apparatus conducting all the complicated works of the heat economy, and what the nature and office of such an apparatus are, if it does exist. The author believes that, while high temperature in general is certainly injurious to the organism, an ordinary febrile temperature does no harm to it, and, very probably, often does some good. He does not agree, therefore, with Liebermeister that every rise in temperature must be fought against and reduced.

Foreign Bodies of the Nose and Ear. By Dr. Percy Fridenberg.—In the nature of the subject there has been no occasion for the presentation of anything new or striking. The author, therefore, gives a *résumé* of well-established views and methods.

Some Ultimate Results of Gunshot Wounds Caused by Mauser Bullets During the Late Spanish-American War. By Dr. Medwin Leale.—The author reports fifteen cases in all. It is interesting to note that, in thirteen cases, owing to the great velocity, the rapid rotary action, the hardness of the outer shells, the shape and weight of the bullets, and the long ranges, most of the wounds healed rapidly without suppuration. The author's experience and that of others show that the change to the use of small-bore rifles has proved to be a great blessing in modern warfare.

A New Operative Procedure for Treating Inflammation of the Posterior Part of the Eye. By Dr. S. Busby Allen.—The author refers to the use of hot water, cold ice cloths, etc., in treating inflammation of the lids, cornea, iris, and ciliary body, as being among our most potent remedies. He hopes for like happy results from their application to the eye, and he proposes Tenon's capsule as offering a sure, easy, and familiar way for reaching the nerve and its head—the very heart of those troubles for which, at present, we can do little more than to be spectators. Experiments on rabbits seem to justify the author's hopes.

The Disadvantages of Copper Sulphate in Diseases of the Conjunctiva and Cornea. By Dr. Cornelius Williams.—The author asserts, as the result of his experience, that copper sulphate in ocular affections is harmful, and that any of its seeming good effects may be obtained by the use of safer and practically painless means. Trachoma is most successfully treated with weak solutions of silver nitrate, together with frequent irrigations with weak bichloride solution in normal salt.

Report of Two Cases of Ectopic Gestation; Operation on One at Term, with Delivery of Living Child, and on the Other at Six Weeks. By Dr. T. N. Rafferty and Dr. H. N. Rafferty.

Surgical Treatment of Ascites, Due to Cirrhosis of the Liver; Report of a Case. By Dr. Julius A. Jacobson.

Belladonna in Obstruction of the Bowels. By Dr. John W. S. McCullough.

Dermoid Tumor of the Lung. By Dr. H. Otto Sommers.

Boston Medical and Surgical Journal, September 19, 1901.

The Use of Gynæcology by the General Practitioner. (*Concluded from No. 11, p. 294*). By Dr. Edward Reynolds.

Movable Kidney, with Special Reference to Its Consequences and Its Ætiology; with the Report of Post-mortem Observations Made by the Writer in Some Cases of Movable Kidney. By Dr. Francis S. Walson.—The author points out that, while movable kidney is frequent in neurasthenic patients, and, in most instances, is not productive of serious injury, *sometimes* it results in much more serious consequences. These are (1) hydronephrosis and pyonephrosis; (2) fixation in an abnormal position of a previously movable kidney; and (3), in a few rare instances, gangrene of the organ produced by the occlusion of its blood vessels brought about by the rotation of the kidney upon its horizontal axis. Among the ætiological factors are (1) enteroptosis; (2); sudden wasting of the perirenal fat tissue; (3) increase in the size and weight of the kidney; (4) downward pressure upon the kidney an enlarged liver and by large pleuritic effusions; (5) a similar influence from tight lacing. As an immediately exciting cause, traumatism in the presence of any of the former conditions.

A New Factor in the Ætiology of Visceral Ptois: The Relation of the Modern Corset to this Factor; a Preliminary Communication. By Dr. Agnes C. Victor.—The author recapitulates the essential points of the helpful corset for visceral support: A straight front, made of several sections running from below obliquely upward and backward; hip gores; back gores; fit the abdomen first, and from below upward; then fit the chest, leaving the waist as it falls into place. There must be room in the back for an oblique pelvis. Not the least of the virtues of the straight front corset is that it tends to displace the waist line downward, making the back and the iliac bones bear the main weight of the skirts, and freeing the stomach and transverse colon and the upper front chest.

The Home (Sanitarium) Treatment versus the Climatic Treatment of Consumption. By Dr. Vincent Y. Bowditch.—The author is strongly in favor of the erection of sanatoria for the treatment and cure of consumption. As to the relative results to be obtained by this method in favorable or unfavorable climates, we are not in a position at present to judge fairly. The author

thinks that, in all probability, better results can be obtained by this form of treatment in the Western sections of our country.

Eosinophiles as Constituents of Pus. By Dr. Edward T. Williams.

Philadelphia Medical Journal, September 21, 1901.

The Deleterious Results Following Operations in Hypochondriasis, Performed for the Sake of Mental Impression. By Dr. A. Pick.—The author emphasizes the fact that an operation performed for its mental impression is not only futile, but like any other local procedure, is bound to lead to an intensification of the disease, because the increased attention directed to the *locus morbi* causes also an intensification and increased development of abnormal sensations. The author quotes Romberg to the effect that one of the principal indications in the treatment of hypochondriasis is "the *diversion* of the attention from the sensitive area." Cases are given in illustration.

Concerning the Treatment of the Apparently Unaffected, or at Most but Slightly Involved, Eye in Cases of Glaucoma. By Dr. G. E. de Schweinitz.—(1) In cases of acute glaucoma the apparently unaffected eye should be operated on so soon as the anterior chamber is restored in the opposite eye. (2) In cases of chronic congestive glaucoma the same line of advice applies, and the operation is to be urged if clear information can be obtained that the apparently unaffected eye has suffered attacks of nebulous or iridescent vision, associated with increased intraocular tension. (3) In cases of chronic simple glaucoma, if any periods, however temporary, of increased intraocular tension can be demonstrated, operation should be performed, even if central and peripheral vision are perfectly intact. Even when these are normal, examination with the perimeter may reveal a scotoma, and, in this case, operation should not be postponed. (4) In cases of absolute glaucoma the same line of advice expressed under the first and second recommendations is applicable.

Light and Radiance in the Treatment of Disease (Second Article). By Dr. George C. Hopkins.—The author considers in this article the treatment of pulmonary tuberculosis by the use of a fifty-ampère electric lamp with a twenty-inch condensing lens. The chest of the patient is bared and the light is concentrated to a circle from fifteen to twenty inches in diameter according to the tolerance of the patient. A blue glass screen is interposed to cut out some of the heat rays. Two cases are detailed. The author has treated ten cases in all. In every case cough, expectoration, temperature and sweating have been relieved within the first few days. The appetite also has rapidly improved. On the whole, the author believes there is much to be expected of this treatment in the future.

Discussion on the Therapeutic and Diagnostic Value of Tuberculin in Human Tuberculosis. By Dr. G. A. Heron.

American Medicine, September 21, 1901.

The Significance and Treatment of Floating Kidney in Women. By Dr. Henry D. Beyea.—The author believes that a large number of general physicians seem as yet to be unfamiliar with the great frequency of floating kidney, and that the suffering induced by it is being widely treated as indigestion, hysteria, neurasthenia, and frequently as uterine or ovarian disease or appendicular inflammation. The treatment is medical, mechanical, or surgical. The method of suturing which would seem most secure is that practised at the Johns Hopkins Hospital, and consists of a continuous suture, so introduced into the kidney structure as to describe a triangle and grasp a mass of parenchyma. To the author's mind the ideal principle is to avoid any direct injury to the kidney parenchyma or capsule through cicatricial change such as must occur in the suturing of the Senn and Deaver operation or any capsule splitting operation. The principle sought in the Harris operation is the correct one.

Wounds of the Thoracic Duct Occurring in the Neck. Report of Two Cases. Résumé of Seventeen Cases. By Dr. Dudley P. Allen and Dr. C. E. Briggs.—The increasing frequency of extensive dissections in the neck makes it desirable to consider means of avoiding injury to the thoracic duct. The authors suggest the ingestion of from four to six ounces of cream three hours before operation. This might be specially desirable in secondary operations undertaken for the purpose of locating the point of injury. The author, moreover, suggest that suture of the duct with fine silk or catgut be accomplished where possible; that all small discharging lymph radicles be ligated; that the ligating and clamping of lymphatic vessels of considerable size be avoided, unless the integrity of the thoracic duct itself has been demonstrated; that where the suture of the duct or large radicles is impossible, gauze packing, firmly and accurately applied, be used. Nutrition should be sustained on albuminous material until the repair of the duct is thought to be complete.

The Practical and Scientific Value of the Blood Examination to the Medical Man and Surgeon. By Dr. Robert N. Willson. (*Concluded.*)

The Therapeutic Value of Alcohol. By Dr. Leon N. Solomon.—The author demonstrates the variety of properties alcohol possesses and some of the multiform offices it performs, and his concluding thought is: In its proper, internal, therapeutic application, the utmost discriminating judgment and extraordinary care are necessary.

Journal of the American Medical Association, September 21, 1901.

A Method of Teaching Relational Anatomy. By Dr. C. M. Jackson.—An excellent illustrated article showing the advantages of studying anatomy by means of sections in various planes in the different regions of the body.

The Aim of Medical Education, and Its Relation to Research Work by Medical Students. By Dr. W. S. Christopher.—Original research has for its object the determining of new truths of a more or less general character. It may begin by hypo-

thesis subjected to verification by experiment and observation. A characteristic feature in research work is deliberation. Huxley says: "Give unqualified assent to no propositions but those the truth of which is so clear and distinct that they cannot be doubted." Less critical research work is unworthy of the name. Research, then, must often wait. But in medical diagnosis the problem is to determine the state of affairs in a given patient. The methods must be those peculiar to medical investigation, though often insufficient to afford a basis for positive conclusion. Nevertheless a conclusion must be made, for action is necessary. Whence, the tentative conclusion is common in diagnosis, and unlike that of original research, is one involving great responsibility. The "medical mode" of thought therefore, in accordance with the Logic of Medicine must be inculcated throughout the student's career. So far as research work trains observation, it is good, but it can be equally well trained on the pulse, tongue, facies and fæces as with the aid of balances and microtomes; so far as research work trains the judgment, it trains it in a bad direction for the young physician, establishing modes of thought that hamper rather than help. It is the function of the physician to practise medicine; it is, therefore, the duty of the medical college to train him for that work. Let us make physicians rather than scientists.

Necessity of Practical Knowledge of Dietetics, Hydrotherapy, and Physio-mechanical Therapeutics. The Need of Establishing Courses of Instruction in these Subjects in Our Medical Schools. By Dr. Fenton B. Turck.—The author supports his thesis by fifty-nine answers to a circular inquiry addressed to medical institutions in which one objected to them as an undergraduate study, two answered no, thirty-nine gave unqualified assent, and the rest replied that some of these subjects were being already taught.

The Seminar Method in Medical Teaching. By Dr. Bayard Holmes.

Medical Education. By Dr. J. R. Jones.—Abstract of the Address in Medicine delivered before the Canadian Medical Association, at Winnipeg, August 28th.

Lancet, September 14, 1901.

The Range of Physical Theories. By A. W. Rücker, D. Sc.

On the Changes Effected by Antityphoid Inoculation in the Bactericidal Power of the Blood, with Remarks on the Probable Significance of these Changes. By Dr. A. E. Wright.—In this paper the author continues his study of the bactericidal power of human blood, with special reference to the changes which supervene upon antityphoid inoculation. His observations show that where the quantum of antityphoid vaccine employed produces a well-marked reaction, decreased bactericidal power of the blood and increased susceptibility to typhoid infection may supervene in the period immediately subsequent to inoculation. Upon this negative phase there succeeds within three weeks a phase of increased bactericidal power and greater resistance to typhoid. Where the quantum of anti-typhoid vac-

cine employed produces a *very* severe reaction a similar phase of increased susceptibility to typhoid infection is produced, which may never be followed up by a phase of increased resistance. But when the quantum of vaccine employed is reduced to the point at which a marked reaction is avoided, a positive phase of increased resistance may be expected to supervene without the intervention of a negative phase of increased susceptibility.

The following practical conclusions are drawn:

1. The employment of unduly large doses of typhoid vaccine would appear to be always inadvisable, and in the presence of an epidemic of typhoid, even positively dangerous.
2. The employment of moderate doses of typhoid vaccine should be avoided in the actual presence of a typhoid epidemic. But such doses should be employed where an interval of several weeks is to elapse before exposure to infection, and where two successive inoculations cannot be carried out.
3. The employment of small doses of vaccine is the only appropriate form of inoculation in the actual presence of a typhoid epidemic. Such primary inoculations should in all cases be followed up by second inoculations with an increased dose of vaccine.
4. Where the blood of a patient who has recovered from typhoid fever possesses a low bactericidal power, and where further exposure to typhoid is contemplated, an increase of the bactericidal power by inoculation with vaccine is advisable.
5. Where the blood from a similar patient shows a high bactericidal power, it is useless to attempt to increase it by inoculation with anti-typhoid vaccine.
6. Wherever a doubt as to the efficacy of a particular antityphoid vaccine arises, the question may be decided by observing the effect exerted by the vaccine in question upon the bactericidal powers of the blood.

Tubal Gestation Sac Entirely Anterior to the Uterus; Operation; Recovery. By A. H. G. Doran, F. R. C. S.—The author reports a case of tubal gestation occurring in a woman, aged twenty-nine years, in which the sac was entirely anterior to the uterus. Another interesting feature of the case was the adhesion of an inflamed vermiform appendix to the tubal sac. Operation and removal of the tubal mole was followed by a speedy recovery without fever.

The Post Office and the Prevention of Tuberculosis. By C. H. Garland.—The author calls attention to the entire lack of organization for the prevention of tuberculosis among the employees of the English postal service, and describes the excellent work along the same line which has been done in France. He commends it highly and thinks that a similar system should be put into effect in England.

Some Points in the Pathology of Pernicious Anæmia. By Dr. W. Bain.—The author has carefully studied a case of pernicious anæmia, with special reference to the changes to be noted in the urine. The excretion of uric acid was found to be slightly below the normal average. Pathologically, the most important feature was the relative increase in the conjugated sulphates. The dark brown color of the urine in pernicious

anæmia is probably due to some undetermined derivative of hæmoglobin; it is not due to excess of urobilin or to "pathological urobilin," as has been so frequently stated. Taking into consideration the enormous diminution in the red cells, with, as a rule, a striking rise in the color index and increased deposit of iron in the outer zones of the liver lobules, and the absence of hæmoglobinuria, it appears an inevitable inference that pernicious anæmia is due to increased blood destruction taking place in the portal area. The facts that the conjugated sulphates are increased in pernicious anæmia and that the administration of chloralbacid has no effect upon the amount eliminated, indicate that the usual cause of increase (intestinal putrefaction) is not at work in this affection. The putrefactive proteid destruction is therefore occurring in some other area, possibly in the intestinal mucosa itself. The facts are at present too scanty to justify a definition of the actual cause of the hæmolysis, yet sufficient to suggest the inadvisability of restricting attention to the discovery of a purely hypothetical microbic agent.

British Medical Journal, September 14, 1901.

Sixty-ninth Annual Meeting of the British Medical Association.

Section of Tropical Diseases.

A Discussion of Stone in the Tropics. By Dr. P. J. Freyer and others.—The first speaker has had wide experience of stone in the bladder in both India and England. Some interesting features of contrast are: 1. The average age of the adult Europeans suffering from stone is nearly twelve years greater than the average age of the adult native of India suffering from the same disorder. This is due to the fact that the "expectation of life" in India is about ten years less than in England. 2. The average weight of calculi removed in England is 157 grains; in India 309 grains. 3. In England a very much larger proportion of cases are complicated with enlargement of the prostate; about one third of the whole.

Dust as a Vehicle for the Germ of Cerebro-spinal Fever. By W. J. Buchanan, M. B.—The arguments in favor of cerebro-spinal fever being a dust-borne disease are: 1. The organism of this disease in India has been shown to be the *diplococcus intracellularis* of Weischselbaum. 2. This organism offers considerable resistance to dessication. 3. Of sixty cases of the disease, fifty-seven came from forms of labor much exposed to dust. 4. The monthly distribution of the cases is in favor of a dust-borne origin. 5. The few cases occurring in the rainy months all came from forms of grain cleaning. 6 and 7. Not all barracks and wards are involved in an outbreak; the non-dusty ones escape. 8. There is no evidence of direct contagion. 9. Measures taken to prevent the formation and spread of dust have proved efficient in preventing the occurrence of the disease.

Four Cases of Liver Abscess Treated by Tapping by Trocar and Cannula and Siphon Drainage (Manson's Method). By J. Cantlie, F.R.C.S.

—The contentions of the author are: 1. That pus should be sought for early, the moment, in fact, that there is a suspicion of liver abscess. 2. That it is perfectly safe to search for deep-seated pus by the hollow needle of a syringe or an aspirator. 3. That it is unnecessary to expose the liver before aspiration. 4. Should an abscess be seen after laparotomy to bulge on the surface of the liver, it is farcical to suggest stitching it to the edges of the wound before opening. 5. To reach a liver abscess by way of the chest is an operation which can be only very rarely justifiable. But pus should never be sought for with a hollow needle unless the surgeon is prepared to operate at once with trocar and cannula should pus be found. The author has operated upon four patients with liver abscess in this manner; of these, three recovered and one died. The fatal case was, however, undertaken merely for purposes of relief, the patient being almost collapsed when seen.

A Discussion of Malaria and Its Prevention.

1. **Notes on Antimalarial Measures Now Being Taken in Lagos.** By Sir W. MacGregor.

2. **Note on the Habits of Europeans in India and Africa in Relation to Malaria.** By Ronald Ross, F. R. S.—The author calls attention to the fact that the life led by Europeans in tropical countries renders them not only always open to malarial infection, but also brings about a marked general deterioration of their bodies due to the incessant heat and discomforts in which they live. The neglect of the punkah, even more than the neglect of the mosquito net, leads to the unhealthiness of the tropics for Europeans. All comforts, such as ice machines, electric fans, etc., are in reality absolute necessities for healthy life in the tropics.

3. **The Prevention of Malaria in Hong Kong.** By J. M. Young, M. B.—The author's conclusions are: 1. Malaria, in every place examined, was invariably associated with anopheles breeding pools. 2. Where anopheles are found, there is fever. 3. In no case were the breeding pools farther than 150 yards from the infected houses. 4. The breeding pools were always localized and easily treated by surface drainage. 5. The only practical steps found effectual were by clearing the district of all shrubs, grass, etc., and then draining the breeding pools; to use a larvicide alone means simply a scattering of the adult mosquitoes to other pools.

4. **The Inoculation of Malaria by Anopheles.** By C. F. Fearnside, I. M. S.

5. **Notes on Cyprus Fever.** By Dr. G. A. Williamson.—1. There is no disease found in Cyprus, and there only, to which the name of "Cyprus Fever" may be given. 2. The forms of malarial fever met with most commonly in the island are those least fatal. 3. Febricula, the other fever so frequently met with, is not dangerous to life. The author therefore urges the abolition of the term "Cyprus Fever."

6. **Malarial and Filarial Diseases in Barbadoes, West Indies.** By G. C. Low, M. B.

Note on the Entrance of Ankylostoma Embryos into the Human Body by Means of the

Skin. By Dr. F. M. Sandwith.—The author suggests that the common form of entrance of ankylostoma embryos into the human body is through the hair follicles of the skin. A drop of water containing the embryos was allowed to dry upon the leg of a boy, one hour before the limb was amputated. After amputation the suspected area of skin was removed, and sections cut from it showed the hair follicles to be filled with the embryos which thus burrowed down into and through the skin. Proof that the embryos can work their way from the subcutaneous tissues to the intestines is of course wanting.

Causation of Enteric Fever in India. By Dr. A. Duncan.

Some Ophthalmic Complications of Plague. By F. P. Maynard, M. B.—The ophthalmic lesions met with by the author during an epidemic of plague in Patna, were not the result of lagophthalmus, but were rather the results of iritis and opacity of the media, apparently from interference with the nutrition of the eye. In the great majority of the cases, treatment seemed to have no effect. The author briefly reports twelve cases seen by him, giving the lesions and resultant effects in each.

Maladies of European Children in Hot Climates. By Dr. A. Crombie.—European children in India enjoy a certain relative degree of immunity from some of the diseases prevalent in childhood, especially as regards respiratory diseases and the eruptive fevers. But their death rate and the case mortality from all diseases, with the solitary exception of tubercle, are more than double those prevailing in England. Physical exhaustion, the effect of the climate, is the principal cause of the high mortality and suffering in illness.

Section of Pathology and Bacteriology.

Introductory Remarks by the President on Some Pathological Notes from South Africa. By Dr. J. W. Washbourn.

Discussion on Lymphadenoma. By Dr. J. M. Clarke and others.—Lymphatic enlargements may be (1) local, (2) generalized. The local forms may be divided into (a) a local benign growth, and (b) a malignant growth, variously called malignant lymphadenoma or lymphosarcoma. Many names have been given to generalized lymphadenoma (Hodgkin's disease, pseudo-leucæmia, adénie, etc.). The cases may be divided into acute and chronic. The cervical glands are usually first affected. The blood is normal in the early stages; later a secondary anæmia appears. The spleen is enlarged in most cases. The disease may run an acute and rapidly fatal course or it may remain localized for years and then become generalized and lead rapidly to death. The glands most frequently involved are those which are most readily infected through the skin or mucous membranes. The specific affection of the lymphoid tissue alone suggests the action of a toxine. There are attacks of fever with recurring exacerbations. The final stage of the disease with cachexia, often diarrhoea, hæmorrhages from mucous membranes, purpura, and

pyrexia, resembles the final stages of a septicæmic process. Arsenic is of service in many cases. The author considers lymphadenoma to be an infective disease, but that the organism or organisms which are the true cause of the disease have still to be discovered. Lymphadenoma and lymphatic leucæmia should be regarded as distinct diseases. The relationship of lymphatism (*status lymphaticus*) to lymphadenoma has not yet been determined.

Bacteriological Examination of the Blood. By Dr. J. O. Symes.—In the series of examinations here reported, microorganisms were detected in the blood in 29 per cent. of the cases, and the death rate among these was 77 per cent. The death rate of the 22 cases in which no organisms could be demonstrated was 31 per cent. The method used was the aseptic withdrawal of blood from an arm vein by means of a hypodermic syringe.

Note on the Arrangement of the Nissl Bodies. By Dr. J. J. Douglas.—In this article the author calls attention to the difference in the disposition of the chromophile substance in the large multipolar cells of the anterior horn, and in the cells of Clarke's column; and the seeming constancy of this disposition. (*End of report of meeting of B. M. A.*)

Observations on Blackwater Fever. By F. K. Kleine.—The author supports Koch's view that in the majority of cases of blackwater fever is the result of quinine poisoning in malarial patients. An imperfect quinine prophylaxis which does not perfectly protect against malaria, predisposes to blackwater fever, plasmodia and quinine uniting to act harmfully on the organism.

The Influence of Color Upon Anopheles. By Dr. G. H. F. Nuttall.—The author finds that dark blue is the most attractive color to *Anopheles maculipennis*, while the insects seem to have an aversion to light colors, especially yellow. This constitutes still another advantage of the khaki uniform.

A Further Note on the Biological Test for Blood and Its Importance in Zoological Classification. By G. H. F. Nuttall.—The author continues his observations on specific antisera as a test for blood, and requests that specimens of blood from dead or living animals, collected upon filter paper, be sent to him at Cambridge, England, for determination as to the animals from which they are taken.

Inoculation and the Incubation Stage in Plague. By Dr. W. B. Bannerman.—The author asserts that Haffkine's method of inoculation for plague is not only harmless under all circumstances, but that, even where the person inoculated is in the incubation stage of plague, the onset of the disease is not hastened or exaggerated thereby.

Albuminuria in Plague. By H. M. Corthorn, M. B.—The author holds that the quantity of albumin present in the urine in cases of plague is a certain guide to the gravity of the prognosis. Marked albuminuria presages a fatal outcome.

Journal des praticiens, August 24, 1901.

Spinal Anæsthesia by Epidural Injection.—M. F. Cathelin says that by epidural, rather than subarachnoid, injections, good surgical analgesia has been obtained. Especially useful have been the results in incontinence of urine. In several cases, after one injection of one cubic centimetre of a two-per-cent. solution of cocaine, continence returned in cases of vesical tuberculosis, paraplegia, and relaxation of the sphincter. In one case of tabetic vesical crises, lasting for six years, a total disappearance of the pain and regular urination were attained by a single injection. Iodoform may be thus injected in Pott's disease and mercurials in syphilis, while the harmlessness of the method and its ease of execution recommend it to the practitioner.

Latent Cardiopathies. By M. Kelsch. (*Continued.*)

On Arnica. By M. Liégeois.

Presse médicale, August 24, 1901.

Surgical Treatment of Hydatid Renal Cysts.—M. Albarran says that if an exploratory laparotomy has been performed, nephrotomy is to be done, with rare exceptions. If the lumbar incision has been made, in the absence of a definite diagnosis, the cyst should be opened. The capsule must be removed, if possible. If this is not feasible, and the kidney is still useful except in its diseased part, a resection of the organ should be performed. Nephrotomy may still have to be performed if resection cannot be satisfactorily done. Extirpation of the kidney is the proper operation, if the organ is useless.

Diagnosis and Treatment of Tonsillar Abscess. By E. J. Moure.

Gazette hebdomadaire de médecine et de chirurgie, September 1, 1901.

Nervous Pseudo-tympanites.—M. Kaplan says that three symptoms characterize this condition, distention of the abdomen, depression of the diaphragm, and an absence of gas. Hysterical phenomena accompany these signs. The condition differs from that of the true hysterical tympanites which is always accompanied by an abnormal collection of gas. A diagnosis includes its identification from tuberculous peritonitis and abdominal tumors. If necessary, an examination under anæsthesia will clear up the case. The prognosis is good, and the treatment is general as well as local—electricity, hydrotherapy, and tonics.

Treatment of Colitis in Children by Sodium Sulphate.—M. E. C. Arivagnet recommends this drug in the acute mucous and dysenteric colitis of children. Given in small doses, it causes a disappearance of the supersecretion. The first day 225 grains are given for the purgative effect, and on succeeding days, smaller doses, such as seventy-five grains to a child of from twelve to fourteen years of age. The drug should be administered for about eight days continuously. To disguise the taste, it may be given in simple syrup or in sweetened water. The rectal tenesmus is diminished, the number of stools decreases (except on the first day), blood disappears from the actions, and the mucus disappears.

Berliner klinische Wochenschrift, August 19, 1901.

Contribution to the Study of Tetany. By Professor A. Westphal.

Chemistry of the Alexines. By Dr. H. Buchner.

Color-blindness in Railroad Men. By Dr. W. Hochheim.

Tuberculous Toxines and Antitoxines.—Dr. L. Frenkel and Dr. O. Bronstein conclude from their experiments intended to confirm Maragliano's findings, that from a culture of tubercle bacilli several derivatives may be obtained by simple means. The most important of these are fluid and precipitated tuberculous toxine, aqueous tuberculin and its precipitate, and fat-free bacilli (bacilli digrassati). These substances have decided toxic properties which admit of accurate estimation. Injected into small animals, they kill them with characteristic symptoms. Immunity may be established by the administration of graduated doses, and the serum of these immunized animals possesses powerful antitoxic properties which can be demonstrated for each toxine.

Münchener medicinische Wochenschrift, August 20, 1901.

Two Cases of Diaphragmatic Suture. By Professor Carl Schlatter. (See *New York Medical Journal*, September 7, 1901, p. 464.)

Typical Albumosuria in Genuine Osteomalacia.—Dr. Georg Jochmann and Dr. O. Schumm report the case of a woman of thirty-seven who died after a six months' illness of osteomalacia of the spine, ribs, sternum, pelvis, and the long bones. The Bence-Jones body was found in the urine, and in the blood a substance was discovered at autopsy, which was found to be a den-tero-albumose. The authors assert that albumosuria is no aid in making a differential diagnosis between osteomalacia and a sarcomatosis of the skeleton.

The Origin of Lysin. By Dr. M. Ascoli and Dr. A. Riva.

A Case of Extreme Right Displacement of the Heart in Consequence of Right-sided Pulmonary Atrophy. By Dr. H. Lohsse.

Compression Thrombosis in Pericarditis. By Dr. Peter von Zezschwitz.

Tracheal Hæmoptysis.—Dr. G. Avellis reports such a case in which the source of the bleeding was found after a long search. The patient was constipated and by straining hard at stool had compressed the air in his lungs after a deep inspiration. On release of the inspired air, the mucous membrane, which had become congested, was relaxed. The frequent repetition of this act caused varicosities to form, which became the seat of the hæmorrhage.

Comparison of Systems of Inhalation. By Dr. A. Wassmuth.

Centralblatt für Gynäkologie, August 31, 1901.

Arterial Supply of the Ureters. By Dr. A. Feitel.

Pelvis Plana Osteomalacia.—Dr. F. A. Kehrer adds to the list of flat pelvis (simple, rhachitic and minor), that are due to osteomalacia. It appears in the first stage of the disease. It arises in one of two ways: the softening affects, in addition to the thorax, the vertebral column, especially the sacrum, avoiding the hip bone; or, it affects all portions of the pelvic bones simultaneously, but the change-producing elements work unequally upon the different portions of the pelvis.

Wiener klinische Wochenschrift, August 22, 1901.

Cardiac Death in Apparently Simple Cases of Superficial Ulceration.—Dr. Zuppinger reports three cases in children in whom sudden and unexpected death by cardiac failure appeared while the patients suffered only from superficial ulcerative processes. In all three, acute nephritis and myocarditis was found at autopsy. The author believes that the toxines which formed in the skin injured the heart muscle.

Atypical Psoriasis. By Dr. Albrecht Beyer.

Riforma medica, July 26 and 27, 1901.

A Contribution to the Conservative Operative Treatment of Uterine Myofibromas. By Dr. Ferdinando Gangitano.—In a case of uterine fibroids, in a woman aged thirty-five years, the author used the following method: The tumor was of the size of an adult's head, and was situated on the posterior aspect of the body of the uterus, pressing the latter organ downward. When the peritoneal cavity was opened through a median incision, the attachment of the tumor to the uterus could be distinctly made out by introducing a finger beneath the tumor. A conservative operation having been decided upon, the capsule of the tumor was incised, and the contents were enucleated by means of a bistoury handle, the fingers, and, where there were strong adhesions, a forceps. The hæmorrhage was arrested by tamponing by Miculicz's method, and the larger portion of the sac was excised. The remaining portion of the sac was sutured to the abdominal parietes (marsupialization). The post-operative stage was most favorable. During the first week there were slight elevations of temperature, but these subsided, and the patient was discharged cured at the end of thirty-five days. The tumor measured 45 centimetres in circumference, and weighed 1,960 grammes. The usual mode of operation, suture of the remains of the cavity after the excision of the sac, presents great technical difficulties, and it is not always possible, especially if there is much bleeding, to procure a perfect adjustment of the surfaces and a perfect healing. In this case the hæmorrhage was considerable, and the author recommends the use of Miculicz's tampon, which may be removed in a day or two, and of marsupialization of the remains of the sac. He admits, however, that the latter method must be employed only in exceptional cases, and that separate suturing of the sac should be regarded as the routine treatment. Marsupialization has the disadvantage of being followed by fixation of the uterus against the abdominal wall, but adhesions also follow the other method, and, after all, the operation of uterine

fixation is now practised with advantage to the patient so far as the condition of the uterus is concerned.

July 31, 1901.

On Hepatic Docimasia. By Dr. U. Rossi and A. Nedi.—In 1899 Lacassagne and Martin suggested, after a series of experimental researches, that the presence of glycogen and glucose in the liver might be used for distinguishing violent deaths from natural deaths. The method of examination which they devised was named by them *docimasia hepatica*. According to these authors, this test may be applied for various purposes in legal medicine. If the death of the subject was violent, the liver will contain both glucose and glycogen, but if death came on slowly, preceded by an agony, chemical analysis does not reveal the presence of saccharine substances in the liver. When the organ in question only contains glucose, and not glycogen, it means that for some reason the agony was interrupted and death came on suddenly. The authors have tested the method of Lacassagne and Martin experimentally and upon cadavers. They found that in experiments upon animals the observations of the two French writers could be confirmed as regarded glucose, but not as regarded glycogen. The former was found in all cases in rather abundant quantities in animals that had been killed by violent means. In four animals that died without agony, of which two had been killed by violent injuries to the head (stabs in the occipital region and decapitation), there was an abundance of both glucose and glycogen in the liver. In two others that had been killed by drowning there was a large quantity of glucose, but an absence of glycogen. On the other hand, in nine animals in which the agony lasted from two to eight or ten hours the relative quantity of glucose and glycogen in the liver varied, but both were present. In three cases in which the agony was prolonged the results were as follows: In one animal there were traces of glucose and of glycogen, in the second there were traces of glucose and absence of glycogen, and in the third both these substances were absent. In cadavers the presence or absence of glucose or glycogen could not serve to distinguish violent deaths from slow deaths, or slow deaths preceded by a stage of agony from those that came on slowly without any agony. Only variations in the quantity of these substances could furnish useful indications on the question of violence. The largest quantities of these substances were found in cadavers where death had been the most violent. They concluded that the amount of glycogen and glucose found in the liver after death depends, questions of diet being excluded, upon the acuteness of the morbid process that had caused death. It is considerably influenced by the length of the agony and somewhat less by the length of time which has elapsed since death when the cadavers were examined.

French, August 1, 1901, No. 16, New Style, 1901.

On Pentose in the Animal Organism, and on the Origin of Pentosuria. By Dr. N. P. Kravkoff (*concluded*).—The author, after having

found pentoses, *i. e.*, carbohydrates with five atoms of carbon in the molecule, in the muscular tissues of various animals, proceeded to look for this class of substances in the internal organs of the dog, the rabbit, the pike, the lobster, and the frog. The reaction for pentose was found to be positive in most of the organs examined, except in the spleen of the rabbit, where it was doubtful, and in the liver and spleen of the dog, in the spleen, the skin, and the blood of the frog, and in the spleen and swimming bladder of the pike, where it was negative. In the lobster, the muscles alone showed a reaction for pentose. The author concludes that pentoses are widely distributed in the animal organism, particularly in the muscular tissues, where the bulk of the pentoses of the body is stored. It is difficult to determine the particular group of proteids into whose composition pentose enters, and it is difficult to agree with the opinion of previous observers, who think that pentose enters into the composition of nuclealbumins. As a matter of fact, the organs which are richest in nuclein, such as the liver and the spleen, are the poorest in pentoses. The only nuclein which at present can be proved to contain pentose is that of the pancreas. In its capacity to form and to store pentose, the animal organism resembles the vegetable, and this is but one of the proofs of the essential similarity between the two kingdoms with which we meet as we progress in the study of physiological chemistry.

The next question is: Are pentoses formed physiologically in the body, along with glucose? The author does not attempt to solve this question, but offers some evidence in favor of the physiological formation of pentoses from proteids or from carbohydrates. If chopped rabbit's liver is allowed to remain at body temperature for several hours, in order to observe the post-mortem development of sugar, and if all the proteids are removed, so far as possible, by boiling the pieces in diluted acetic acid, the filtrate will contain glucose, maltose, and pentose. The sources of pentose, therefore, may be regarded as analogous to those of glucose in the liver, *i. e.*, proteids, and glycogen. It may be assumed, also, that pentosuria has an origin and a significance analogous to those of glycosuria. It is possible that under certain pathological conditions certain internal processes of ceretain cells are so changed that these cells begin to elaborate pentose, just as they do normally in lower organisms. In other words, these cells begin to live the life of cells belonging to a lower form of animals. The capacity of the organism to utilize pentoses for the development of energy is limited, and this fact must not be forgotten in considering pentosuria. Pentoses are also distinguished by a well-marked resistance to those influences which decompose and oxidize sugars under abnormal conditions of metabolism. Glycuronic acid, moreover, is closely allied chemically to pentose, and is excreted in increased quantities under the influence of poisons such as morphine, curare, etc. It may be assumed that pentoses and glycuronic acid have a common origin. Pentosuria is but a form of glycosuria, and diabetes is the result of intoxication, microbic or non-microbic.

Proceedings of Societies.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Twenty-seventh Annual Meeting, held at Put-in-Bay Island, Ohio, on Thursday, Friday, and Saturday, September 12, 13, and 14, 1901.

The President, Dr. A. H. CORDIER, of Kansas City, in the Chair.

The Assassination of President McKinley.—Dr. H. O. WALKER, of Detroit, offered the following resolution, which was unanimously adopted:

Resolved, That this association tenders to Matthew D. Mann and his competent confrères its congratulations on the prompt and masterly manner in which they have cared for the President, William McKinley.

The President's Address: Some Phases of Nephrolithiasis.—The PRESIDENT drew the following deductions: 1. Hæmorrhage from parenchymatous organs is in most instances easily controlled. 2. Nephrolithiasis is more prevalent than is generally supposed. 3. A stone having formed in the pelvis of the kidney, if too large to pass through the ureter, will sooner or later produce symptoms demanding its removal. 4. Suppuration in stone cases is, as a rule, a late process and should be prevented by early surgery. 5. A wound in a healthy kidney heals rapidly. 6. Obscure, persistent pains in the region of the kidneys, in a patient who has had a renal colic years before, should lead to an exploration of the kidney. 7. The operation of nephrolithotomy has a very low mortality. 8. The kidney should not be removed unless practically destroyed by the disease. 9. There exists a special cause for the development of stones in the right kidney. 10. With a carefully obtained clinical history, the diagnosis of stone in the kidney is usually easy. 11. At the time of operating, the ureter should be explored, that its potency may be assured. 12. Post-operative patience and faithful effort on the part of the surgeon will result in the saving of many organs; otherwise removal will be necessary.

Fractures.—Dr. E. B. SMITH, of Detroit, read a paper on this subject. He gave a résumé of the old and new methods in diagnosing fractures. He said that fractures in each stage presented certain definite pathological surgical conditions. The diagnosis, treatment, prognosis, and complications, with their medicolegal status, were dwelt upon at length.

Dr. CHARLES H. HUGHES, of St. Louis, emphasized the importance of head symptoms in cases of fracture.

Dr. A. M. HAYDEN, of Evansville, Ind., said a joint that had a fracture into it should be kept quiet or immobilized for at least four or five weeks, so that the fragments might become thoroughly united and healed before passive motion was resorted to.

Dr. W. T. STEWART, of Chicago, spoke of suturing the fragments, saying he had been disappointed in using the various methods recommended in textbooks and journal literature, and expressed the hope that some member would speak of immobilization of

parts in delayed union of fractures and in fractures of recent occurrence.

Dr. S. S. THORN, of Toledo, said that one cause of delayed union in fractures was malnutrition, the result of anæmia, and this anæmia was the result of applying bandages too tightly and the use of short splints, thereby causing constriction, which resulted in anæmia, starvation, and hence delayed union.

Dr. A. J. OCHSNER, of Chicago, mentioned another cause of non-union of bone, namely, the interposition of muscle or fascia between the fragments, and cited cases in point.

Dr. A. M. PHELPS, of New York, spoke of a third reason why union did not take place after a fracture of the thigh—the nutrient artery became ruptured, and thus nutrition was cut off. Treating fractures with coaptation splints was wrong. He favored extension (Buck's) and fixation in fractures of the femur. A patient with a fractured femur was put to bed, and Buck's extension apparatus kept applied for a week or ten days, until laceration of the soft parts had healed, after which a brace was applied, the patient got out of bed, was driven about in a carriage, and was fed well.

Floating Liver, with Report of a Case.—Dr. J. HENRY CARSTENS, of Detroit, read a paper in which he said that very few such cases had been reported. The condition was often associated with general ptosis of the abdominal viscera. His patient was a woman, aged forty, quite stout. A gradually developing tumor had been noticed, starting on the right side and growing downward. It was firm and non-fluctuating. On account of the distressing nervous symptoms, an exploratory abdominal section was done, and the right lobe of the liver found enlarged and hanging down to the pelvis. It could be replaced in the normal position, and was stitched there. Recovery took place, with disappearance of all the distressing symptoms.

Dr. WILLIS G. MACDONALD, of Albany, had seen a considerable group of such cases. Some years ago he showed the lobe of a floating liver with a gall-bladder and some gall-stones. He had seen two cases in which there was general ptosis of the liver, and in one of which, by change of position of the patient, it was quite possible to have the liver float down beyond the border-line of the umbilicus, and, changing the position of the patient back again, have it disappear beyond the border of the ribs.

A Preliminary Report on Sterilization of Rubber Gloves, etc., by Formaldehyde Gas, and on the Use of Mild Antiseptics Inside the Gloves.—Dr. A. GOLDSPOHN, of Chicago, in a paper thus entitled, said that in 1889 J. Geppert had pointed out the mistake of exposing germs in their culture media to any antiseptic, because the medium, absorbing the antiseptic, was spoiled for its purpose long before the germs were really dead, and failure of growth was then no proof of sterility. Since a number of health officers (not bacteriologists) had made tests involving this error, and had based on them rules for disinfection that were fallacious, the author had carried on a series of bacteriological tests to determine the minimum requirements for sterilizing rubber gloves with formic aldehyde. He used small pieces of surgeon's silk as germ-carriers, because the gas would evaporate from them. With his experiments he had determined that a small connection with a

chimney flue, to afford a circulation of the gas in the sterilizer, appeared to be necessary when the gas was generated by a lamp, and that three hours was the minimum time needed for certain sterilization in his apparatus of that construction. A cross-test was made by pouring culture material into the gloves afterward, and heating it. Sterilized boric-acid powder was used as a dusting powder inside the gloves, to make them slip on very easily. About half an ounce of 55-per-cent. alcohol was then poured into each glove. The fluid in the gloves, after operating one or more hours, had been tested by culture in many experiments, and found sterile except in one instance.

Infection from the *Bacillus Aerogenes Capsulatus*.—Dr. JULIUS H. JACOBSON, of Toledo, read a paper with this title in which, after detailing some experiments and narrating observations, he deduced the following conclusions: 1. Infection from the *Bacillus aerogenes capsulatus* occurs much more frequently than is recognized. 2. It dominates the whole field of pneumopathology (Welch). 3. Such terms as emphysematous gangrene, air embolism, and emphysematous cellulitis are misleading and vague, and should become obsolete. 4. Infection from this germ produces a rapid toxæmia; the formation of gas in infected areas, resulting in gangrene and death. 5. Its principal habitat is the soil and intestinal tract. 6. Owing to its wide distribution in the soil, the danger of infection in all traumatic cases should not be forgotten. 7. A probable diagnosis can often be made by the history, clinical course, and objective signs of the case. 8. A positive diagnosis can only be made by bacteriological examinations, cultural and animal inoculations. Simple stained specimens taken from the site of infection will often make the diagnosis.

Features Determining Permanency of Cure in Radical Operations for Hernia.—Dr. A. J. OCHSNER, of Chicago, followed with a paper thus entitled. The permanent success following kelotomy, he said, depended upon a comparatively small number of practical points which must be observed in order to secure satisfactory results regularly. 1. The wound must heal primarily, because suppuration resulted in an abundance of cicatricial tissue, and this was most unstable. 2. The stitches must not be drawn tight, in order to avoid pressure necrosis. 3. The edges of the wound to be united must be free from fat and other unstable tissues. 4. The wound should be supported by broad rubber adhesive plaster strips until it was healed. 5. The patient should be kept in bed from two to three weeks. 6. After the operation abnormal intra-abdominal pressure should be eliminated by avoiding constipation, etc. In inguinal hernia, the entire sac should be removed. It was especially important to remove all the loose tissue between the transversalis and the internal oblique muscle on one side and Poupart's ligament on the other. The upper portion of this canal should be closed with special care. In case of a long, thin omentum, this should be resected. In femoral hernia, the canal through which the sac protruded was a perfect ring, and consequently if the entire sac was removed this ring would invariably close, and there could be no recurrence. All meddlesome operations contem-

plating the closure of this ring caused a certain percentage of recurrences.

In ventral hernia following laparotomy, the original layers should be laid bare, and then the corresponding layers should be carefully united. The author preferred deep silkworm gut sutures, to be tied after each layer had been united separately with chromicized catgut sutures.

In umbilical hernia, the ingenious operation first described by Dr. W. J. Mayo, of Rochester, Minn., consisting of an overlapping of the edges of the hernial ring from above downward or from side to side for a distance of an inch and a half, had given complete satisfaction.

Severing of the Vas Deferens, and its Relation to the Neuro-psychopathic Constitution.—Dr. H. C. SHARP, of Jeffersonville, Ind., read a paper in which he discussed this subject under three heads: 1. The law of heredity, influencing the formation of the character of intellect and will, the controlling of the appetites and passions and all the moral impulses, and the pathological conditions to which the mental and physical life were subject. The chief manifestations of this diathesis were chorea, hysteria, hypochondriasis, inebriety, imbecility, criminality, and insanity, and it included in its subjects sometimes the most gifted, such as Burns, Coleridge, Dr. Quincey, and others. 2. The rapid proportional increase of this diathesis. 3. The severing of the vas deferens as the means of stamping out this diathesis. The author outlined the field of the operation, the preparation for it, and the method of operating.

Dr. A. J. OCHSNER had removed the vas deferens in a number of tuberculous cases since his first operative work on defectives and criminals, and in no case had there been any disturbance of the ability of the patient to enjoy sexual intercourse.

Morbid Conditions of the Upper Respiratory Tract Resulting from the Infectious Diseases.—Dr. CAROLUS M. COBB, of Boston, gave a résumé of the autopsies reported by Woffl, Pearce, and Zuckerkandl. These autopsies showed that the involvement of the nasal accessory sinuses during the course of fatal cases of diphtheria, scarlet fever, measles, and influenza was the rule rather than the exception. He then showed, from an analysis of 102 cases of nasal or post-nasal catarrh without nasal obstruction, that 69 per cent. of these cases could be traced directly to one or more attacks of the infectious diseases. He called attention to the danger to the ears of treatment, during the height of the primary disease, by means of douches and sprays, and drew attention to the following points: 1. The importance of the so-called catarrhal inflammation of the upper air tract, not only in relation to local disease, such as catarrhal inflammation of the middle ear, the eye, the larynx, and the bronchial mucous membrane, but to general systemic infection as well. 2. Nasal obstruction does not cause a catarrhal discharge *per se*. 3. The frequency with which the accessory sinuses are involved in the infectious diseases. 4. The neglect of the diagnosis of this involvement of the sinuses, either during the course of the primary disease or during convalescence. 5. The hypertrophy of the glandular tissue in the throat and nose following the infectious diseases. 6. The persistence of the Klebs-Loeffler bacilli in the secretions of the nose, which might be a

serious menace to the public. 7. The large percentage of the cases of catarrhal disease which could be traced to the infectious diseases. In the table given in the paper 69 per cent. of these cases could be directly traced to some one of them.

Dr. WILLIAM F. BARCLAY, of Pittsburgh, thought a great deal of harm was done by the neglect of conditions of the air passages following diphtheria, scarlet fever, and other diseases, and much good would be effected if the contents of Dr. Cobb's paper could be widely made known among general practitioners. While agreeing generally to all the author had said, he attached more importance to local in conjunction with general treatment.

Dr. J. HOMER COULTER, of Chicago, said the important point to be kept in mind was that constitutional treatment should never be neglected.

Dr. EMIL AMBERG, of Detroit, remarked that in affections of the ears it was better to let the pus escape to the outside than run the risk of its getting into the food, as frequently happened in the case of children.

Dr. JOHN NORTH, of Toledo, thought it a mistake to speak of catarrhal troubles as inflammatory. In fact, the ideas of the profession had undergone such a change in regard to inflammation that it would be well if all the text-books on the subject could be destroyed and some one were to write an entirely new work on it.

Dr. A. E. STERNE, of Indianapolis, considered that Dr. Cobb as a nose and throat specialist was to be commended for the broad view he had taken of the subject.

Dr. COBB said there was no finality in the conclusions which he had suggested. His principal object had been to encourage observation with the view of establishing the effects on the air passages produced by different diseases.

Acute Intestinal Auto-infection was the title of a paper by Dr. JOHN M. BATTEN, of Downingtown, Pa., who had been called to a man, fifty-six years old, on February 21, 1898. He had been suffering with exhaustion for several days, although neither his pulse nor his temperature was disturbed. The author ordered him to bed, thinking that rest in bed might be beneficial to him. Within forty-eight hours, on his own account, the patient took a dose of calomel, which still further prostrated him, so he had to be assisted back to bed. He noticed that the patient had had a gray, leaden complexion for several weeks preceding his first call. That gray or cachectic complexion was usually pathognomonic of intestinal auto-infection, although it might indicate malignant disease of the liver. In fact, it had been his opinion that it was malignant disease of the liver for several days after his first visit, before he could make a diagnosis of intestinal auto-infection, as there was a congestion or a thickening of the lower end of the stomach and of the upper end of the duodenum. The patient was corpulent, weighing 220 pounds, and lost forty pounds during the two months he was confined to bed. Previous to his ailment, the patient had been careless in securing regularity in the movement of his bowels for some months. The usual symptoms presented themselves, constipation, flatulence, borborygmus, urates and constituents of the bile in the urine, fever, headache, unpleasant dreams, and melancholia. The

treatment consisted of large daily doses of calomel till the bile flowed freely, then antiseptics internally, together with small doses of mercury, till an amelioration of the disease was effected, then the natural mineral waters, followed by vegetable tonics in connection with hot baths. For weak heart, with which he suffered, strychnine was prescribed. Nitrate of silver and small doses of mercury for the congestion of the lower end of the stomach and upper end of the duodenum, which was thought to exist. The diet was beef essence, but he did not exhibit a disposition to eat. His legs swelled in convalescence, and he suffered acute pain alternately in the knees. The patient in due time fully recovered his health, after a protracted stay at Mount Clemens, Michigan, whence he had gone as soon as he had got well enough to do so.

Dr. J. A. STUCKY, of Lexington, Ky., said the idea was becoming more and more prevalent that auto-intoxication from the intestines was due to a disturbance of metabolism, whatever that might mean, within the intestinal tract. Whatever the cause, the treatment seemed narrowed down to the one thing, "elimination."

Dr. I. N. LOVE, of New York, said that, while elimination was all-important when the auto-infection had been produced, it was at least equally necessary to guard against its production. Over-eating was the principal evil to avoid in this connection.

Dr. GEORGE D. KAHLO, of Indianapolis, insisted on the importance of giving the digestive organs absolute rest when auto-infection was found to exist. It was wonderful how long a person could live simply on air and water, and in cases of the kind so-called starvation was of the greatest efficacy.

Dr. WILLIAM BAILEY, of Louisville, thought a mistake made in modern times was to relieve the digestive organs too much of the functions which they were intended by Nature to discharge.

Dr. NORTH remarked that the regulation of the diet would be sufficient for all purposes if one could start far enough back. This, however, one could not do, for the mischief was already done before the patient presented himself. It was to be feared that even doctors did not regulate their diet to the extent that was desirable.

Dr. BARCLAY condemned the practice, now too common, of using a syringe daily to prevent constipation. While the cleaning out of the system by this means was of great use in an emergency, the habitual use of the syringe did as much harm as the habitual use of purgatives.

Asthma.—Dr. JOHN NORTH, of Toledo, in a paper on this subject, said that a great many theories had been advanced as to the ætiology and pathology of asthma; among them might be mentioned those of reflex neurosis, contraction of the bronchial tubes, nervous spasm, blood disease, irritation of the air-tubes, irritating humors, extension of bronchitis, vasomotor bronchitis, diathetic neurosis, neuroses of the pulmonary plexus, the uric-acid diathesis, the oxalic-acid dyscrasia, and excess of venous blood in the medulla, as a symptom of emphysema and bronchitis. Most of these theories contained a small grain of truth, but no one of them could account for the asthmatic paroxysm. Three factors were required for the production of asthma. These were called the "asthmatic tripod," as follows: 1. A vul-

nerable area of mucous membrane. 2. An abnormally sensitive nerve centre. 3. An external irritant or exciting cause. If all these three factors were present at any one time, there would be an attack of asthma. No two of them could produce an attack; all three were required. Remove one of them, and the attack of asthma would not return. The first factor for the production of asthma might be situated in the nose, nasopharynx, pharynx, larynx, or bronchial tubes. The various names given to the different varieties of asthma were derived from the locality of the vulnerable area of mucous membrane. The second factor might be either inherited or acquired. The neurotic element in asthma had been observed by all writers. Uric acid, oxalic acid, and the oxalates might produce abnormal nerve centres. The third factor was difficult to determine in some cases, as there might be a number of irritants and exciting causes. In the treatment of asthma, attention must be given to the three factors necessary to produce asthma. The treatment was divided into means of relieving the paroxysm of dyspnoea and treatment during the interval to prevent its recurrence. The relief of the paroxysm might be accomplished by remedies that relieved either of the three factors mentioned. The treatment during the interval must be applied to permanently relieve one or more of these factors. The treatment varied according to the conditions in each case. Asthma could be cured if treatment was scientifically instituted and carried out.

Dr. PORTON R. BENNETT, of Daytona, Florida, said he cured all cases of asthma that came to him by means of iodide of potassium and tincture of belladonna. Other speakers advocated the use of alkalies, but the majority adhered to the opinion that no one treatment was suitable for all cases, the causes of asthma being numerous and each calling for a different remedy.

(To be continued.)

Book Notices.

A Handbook of Materia Medica, Pharmacy, and Therapeutics. Including the Physiological Action of Drugs, the Special Therapeutics of Disease, Official and Practical Pharmacy, and Minute Directions for Prescription Writing. By SAMUEL O. L. POTTER, A. M., M. D., M. R. C. P. Lond., formerly Professor of the Principles and Practice of Medicine in the Cooper Medical College of San Francisco, etc. Eighth Edition, Revised and Enlarged. Philadelphia: P. Blakiston's Son & Company, 19001. Pp. xiii-17 to 950. [Price, \$5.]

This work is so firmly established in reputation, so widely read, and, in its earlier editions, has been so often reviewed in this journal that it needs no further praise and no extended criticism at this time. The eighth edition differs from the seventh in the replacement of more or less obsolete matter by modern text and the addition of paragraphs on the more recently prepared drugs in our rapidly growing therapeutic armamentarium, new articles in the very excellent section on practical therapeutics, and a careful revision of the entire text. The work em-

bodies much of the experience acquired by the author in the study of tropical diseases during his service as surgeon in the volunteer army in the Philippine campaign.

Clinical Lectures on Stricture of the Urethra and Enlargement of the Prostate. By P. J. FREYER, M. A., M. D., M. Ch., Surgeon to St. Peter's Hospital, London, etc. New York: William Wood & Company, 1901. Pp. 9 to 115.

This brochure comprises a series of lectures previously presented in the *Lancet* and in the *Clinical Journal*. The tritely told facts were delivered to post-graduates. The teaching, though sound, is rendered in very elementary fashion and is free from any controversial points, but it is at variance with some of the accepted teachings in America. Thus, the author deprecates the value of Otis's urethrometer and deprecates the use of Bangs's whalebone bougies.

Due regard for the principles of asepsis is everywhere apparent. A misleading statement, inconsistent with the ætiology of stricture, is that urethral fever differs in no way from malarial intermittent; surely the author knows of the value of the plasmodium in differentiating these two conditions. The opinion is given that thoroughly divided strictures are permanently cured.

The palliative treatment of enlarged prostate is mainly considered, and the newer operative interferences are barely touched upon.

BOOKS, ETC., RECEIVED.

Treizième congrès international de médecine. Comptes rendus. Publiés sous la direction de A. Chauffard, Secrétaire-Général. Comptes rendus des sections d'obstétrique et de gynécologie. Paris: Masson et cie, 1901.

A Manual of Determinative Bacteriology. By Frederick Victor G. Veck, M. D. Third Edition, Revised and Enlarged. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 5 to 329.

The American Illustrated Medical Dictionary. A New and Complete Dictionary of the Terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, and the Kindred Branches, with their Pronunciation, Derivation, and Definition, including much Collateral Information of an Encyclopædic Character. By W. A. Newman Dorland, A. M., M. D., Assistant Obstetrician to the University of Pennsylvania Hospital, etc. Second Edition, Revised. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 3 to 770. (Price, \$4.50.)

The Pathology and Treatment of Sexual Impotence. By D. Chester, Bacteriologist of the Delaware College Agricultural Experiment Station, etc. London and New York: The Macmillan Company, 1901. Pp. iv-401.

Miscellany.

On the Treatment of Pulmonary Tuberculosis with Tuberculin.—In the *Deutsche medicinische Wochenschrift* for June 20th there is an article on this subject by Dr. Goetsch, of Slawentzitz, with a note by Dr. Robert Koch.

The great hopes originally awakened by the discovery of tuberculin, says the author, were rudely shattered by the evidence which soon began to accumulate that the new remedy was not only of no value in the treatment of tuberculosis, but too dangerous a substance to trifle with from any point of

view. This unfavorable experience of the profession with Koch's discovery was due to its indiscriminate use, to the disregard of the temperature of the patient, to failure to weigh subjects during treatment, and to erroneous points of view in the use of the remedy. It was held that if the fever was increasing under injections of tuberculin, a larger dose might dissipate the temperature, as if the drug had an action in phthisis analogous to that of quinine in malarial fever. If the patient became sicker, the tuberculin was blamed. The author was told by colleagues during 1891, upon the occasion of consultations, that despite a prolonged course of tuberculin treatment the patients had become worse, although the doses of the remedy had been progressively increased. Under such circumstances there is no wonder that a panic developed among physicians and patients alike. No one could longer be found who was willing to submit himself to injections of tuberculin. The question of the use of the new remedy became the most burning issue which ever occurred in the practice of medicine.

From the very outset, Goetsch states, he felt that it was not wise to give injections of the tuberculin to subjects who were likely to be affected with fever at any moment, thus exposing them to still higher temperatures. He himself began with minimal doses and went ahead with the remedy very cautiously. For this reason he had no bad results during his first year, 1891, and had at the same time the satisfaction of a successful issue in his cases, the bacilli disappearing from the lungs in the course of the patient's restoration to health.

The diagnosis of tuberculosis was made whenever bacilli were found in the lungs or when, the entire appearance and condition of the patient having led to a presumption of tuberculosis, the diagnostic injection of tuberculin was followed by a reaction. From his extensive experience Goetsch pronounces a patient free from tuberculosis whenever the rapidly ascending series of fractional doses of 0.05 of a gramme fails to provoke a reaction.

In the first year nine patients were treated at the hospital at Slawentzitz. The smallness of the number of cases gave the author abundant opportunity to study the problem of tuberculin treatment in a most thorough manner. Since 1891 he has treated, all told, no fewer than 224 cases of tuberculosis, although in 1892, 1893, and 1894 he could obtain no chance to use the remedy, so great had become the prejudice against it in the minds of the laity, but the favorable permanent results obtained in 1891 were the occasion of the resumption of treatment in 1895; since those individuals who were cured in 1891 influenced others in time to seek the tuberculin treatment. Since 1895 the number of new patients has steadily increased, so that, during the year 1900, 110 patients were under treatment at the hospital.

Of the total number of 224 patients who have been treated by Goetsch, 12 were too far advanced for the tuberculin therapy, while 37 are still under treatment. Deducting these two classes of cases, the author has records of 175 patients who have been under the tuberculin treatment for over four weeks. Of this number, 125 may be regarded as cured. Of the remaining 50, the majority withdrew from treatment prematurely, hence they can be classed only as "improved."

Of the original 224 patients, 88 had bacilli in the sputum, one other had bacilli in the suppurating cervical glands, while the remaining 135 reacted promptly to tuberculin. The 125 patients discharged cured were under treatment for an average of 198 days, the minimum being 50 and the maximum 791 days. If we leave out of consideration tuberculosis of organs other than the lungs (bones, joints, lymph nodes, and skin), the average duration of treatment could be shortened to 143 days. The average increase in weight was 19 pounds, the extremes being 8 and 40 pounds. The extremely long duration of treatment in certain cases was due to the advanced stage of the disease; these patients recovered.

Most of the patients discharged cured kept in touch with the hospital, in order to be subjected periodically to examinations for bacilli, diagnostic injections of tuberculin, etc. Every patient under treatment had his case carefully recorded, and special tables were prepared which noted the weekly weight, the morning, noon, and evening temperature, and the size of the dose injected. The injections were, of course, aseptically performed, and there were no complaints as to local pain. As a general rule two injections were made each week. No person was subjected to the tuberculin injections unless it was intended for him to take the treatment throughout. Until the diagnosis was made, the new patients were isolated from subjects who were known to be tuberculous. In order to show beyond doubt that tuberculin was the sole agent in producing the beneficial result, the author abstained for a prolonged interval from using any other plan of treatment whatever, medicines, dietetic measures, etc., having been strictly prohibited. At the close of 1896, however, the author having become thoroughly convinced of the efficacy of the tuberculin, other measures were added to the regimen—diet, frictions, cold packs, etc.—without producing any considerable shortening in the average duration of treatment under tuberculin alone.

As a fixed principle in the employment of tuberculin, the author has never used it in the case of patients having a rise of temperature. Subjects having fever must be treated by rest in bed and cold packs until the temperature has become normal. If this result cannot be brought about the patient is not submitted to the tuberculin treatment.

If after a study of the temperature, sputum, state of the lungs, weight, etc., and especially the natural forces of the patient, the latter is decided to be eligible for the tuberculin treatment, this is begun on the third day of the sojourn in the hospital. The initial dose must be in harmony with the local condition of the lungs and the general state of the patient's resisting powers. As a rule this dose is 0.0001 of a gramme of the old tuberculin. If this amount produces a rise of temperature, the dose is reduced to 0.00001 of a gramme. Should this reduced dose be too large, recourse is had to the new tuberculin (T. R.), which is well borne in most cases in doses of 0.001 of a milligramme. This latter preparation of tuberculin has been found excellent as a preliminary to the use of the original tuberculin. As soon as we arrive at a dose of 0.1 of a milligramme of the new, we may substitute the old for it in doses of from 0.0001 to 0.001 of a gramme.

which are usually well borne. By gradually increasing the dose we may succeed in eventually giving the patient a full dose of the old preparation without producing a reaction. This maximum dose completes the cure, for by this time the bacilli and cough have disappeared; likewise, as a rule, the expectoration. The weight and physical condition of the lungs have become normal, and the patient once more relishes bodily exertion at his work. But such results can only be obtained without danger to the patient if a second general principle is enforced, viz., the dose should never be increased unless that previously given has passed off without a reaction.

Goetsch reproduces a certain number of clinical histories and specimens of his tabulations already referred to. Speaking of the latter, he states that they are valuable for illustrating the fact that the dose of tuberculin should never be increased until the certainty is apparent that the preceding dose has caused no reaction. He has never been able to cause the disappearance of bacilli with new tuberculin alone, although he has increased the dose as high as to 20 milligrammes of the active principle on numerous occasions. When these patients were treated later with old tuberculin, the bacilli promptly disappeared.

It is an unconditional requisite that on the day of injection, as well as the following day, the patient must be kept in bed. This is for the purpose of preventing reaction and may be regarded as the third of the author's fundamental principles.

The visible evidence of the action of tuberculin in tuberculosis of the skin is a state of marked redness and swelling of the infected area. In tuberculosis of the lymph ganglia almost every increase in the dose of the injection is attended by slight tumefaction of these structures, which lasts for several days. The glands gradually diminish in size until they entirely disappear. A similar swelling is seen in the tonsils and uvula when these structures are affected, so that extirpation may be required. Tuberculous subjects often state that they can feel the reaction in the lung tissues, and can sometimes even point out the affected area. Old hæmorrhagic foci are seldom stirred to activity by injections of tuberculin, and when loss of blood does occur it is usually slight. New foci of hæmoptysis have never been seen to follow the injections. The cough becomes loose. The sputum, at first increased, ultimately disappears. Night sweats disappear in the third or fourth week of treatment, and a sense of well-being supervenes soon after the first injections.

Dr. Koch's note is as follows: Most physicians are of the opinion that the treatment of pulmonary tuberculosis with specifics, especially tuberculin, is useless and extremely dangerous. This erroneous opinion came about through the fact that tuberculin was repeatedly used in cases which were not simple tuberculosis, but a complication of the latter with suppurative processes. In such cases the specific action of tuberculin cannot assert itself. All physicians who have had extensive experience with the tuberculin therapy, such as Spengler, Turban, Petruschky, Krause, Thorner, Heron, Rembold, and Bandelier, express themselves to the effect that when cases are limited to non-febrile subjects, the results are exceptionally good. There is also unanimity in the experience—which is also my own

—that all severe reaction should be avoided. Dr. Goetsch goes even further in this respect, in that he proscribes any reaction whatever, although he employs the largest possible doses. By following this principle he has secured strikingly good results, which I have had the opportunity to see personally during a recent visit to Slawentzitz. At my request he has published his material with a view of inciting others to repeat his experience.

Death Statistics of the United States.—The Census Bureau, on August 21st, made public the mortality statistics for the year 1901. W. A. King, chief of the Vital Statistics Division, says:

"The most important feature of the results presented is found in the decrease in the general death rate in the registration area of 1.8 per 1,000 of population, a decrease of nearly 10 per cent., and the decrease in the rates from the particular diseases to which the general decrease is due.

"The effect of the advances made in medical science and sanitation and in the preventive and restrictive measures enforced by the health authorities is still more strikingly shown in the comparative rate for the registration cities of the country taken together. In 1890 the death rate in 271 registration cities of 5,000 or more population was 21 per 1,000; in 1900 the rate was 18.6 per 1,000; in 341 cities of 8,000 population and upward, a reduction of 2.4 per 1,000. The gross population of the cities comprehended was 14,958,254 in 1890, and 21,660,631 in 1900.

The entire significance of these figures can be properly weighed only when the rates for the individual cities are considered in connection with known conditions of local improvement in sanitation and health regulations—factors which are not of a statistical nature and which were not developed by the inquiries in the schedules.

"The decrease in the general death rate, and in the rates due to diseases frequent in the early years of life, on one hand, and the increase in the rates due to those diseases occurring generally at advanced ages, on the other, mean also increased longevity.

"The average age at death in 1890 was 31.1 years; in 1900 it was 35.2 years.

"The total number of deaths reported in 1900 was 1,039,094; in 1890 it was 841,419. The increase was, therefore, 197,675, or 23.5 per cent. As the percentage of increase in the population was but 20.7, this indicates a more complete return of deaths than in 1890.

"The total deaths in the various States and Territories for 1900 are as follows: Alabama, 25,699; Arizona, 1223; Arkansas, 22,518; California, 22,506; Colorado, 7,428; Connecticut, 15,422; Delaware, 3,075; District of Columbia, 6,304; Florida, 6,482; Georgia, 26,941; Idaho, 1,242; Illinois, 61,229; Indiana, 33,586; Indian Territory, 6,286; Iowa, 19,573; Kansas, 16,261; Kentucky, 27,091; Louisiana, 20,955; Maine, 12,148; Maryland, 20,422; Massachusetts, 49,756; Michigan, 33,572; Minnesota, 17,005; Mississippi, 20,251; Missouri, 38,084; Montana, 2,188; Nebraska, 8,264; Nevada, 438; New Hampshire 7,400; New Jersey, 32,735; New Mexico, 2,674; New York, 130,268; North Carolina, 21,068; North Dakota, 2,287; Ohio, 53,-

362; Oklahoma, 3,181; Oregon, 3,396; Pennsylvania, 90,199; Rhode Island, 8,176; South Carolina, 17,166; South Dakota, 3,088; Tennessee, 30,572; Texas, 34,160; Utah, 3,079; Vermont, 5,829; Virginia, 25,252; Washington, 4,910; West Virginia, 9,588; Wisconsin, 24,928; Wyoming, 767.

"In the registration area the fifteen principal causes of death, with the rate per 100,000, was as follows:

"Pneumonia, 191.9; consumption, 190.5; heart disease, 134; diarrhoeal diseases, 85.1; kidney diseases, 83.7; apoplexy, 66.6; cancer, 60; old age, 54; bronchitis, 48.3; cholera infantum, 47.8; debility, 45.5; inflammation of brain and meningitis, 41.8; diphtheria, 34.4; typhoid, 33.8; and premature birth, 33.7. Death from all the principal diseases shows a decrease since 1890, the most notable being in consumption, which decreased 54.9 per 100,000."

The Theory of Obsession.—At the recent French Congress of Alienists and Neurologists, M. E.-L. Arnaud (*Gazette hebdomadaire de médecine et de chirurgie*, August 22d) said that both the principal theories of emotion, the intellectual and the physiological, had been applied to obsession. The intellectual theory neglected almost completely the organic symptoms but admitted all that came from above, that was to say, from ideation, of which the other symptoms were simple reactions. To this view it was objected that an idea only became an obsession in the presence of an essential preexisting trouble; the obsessed were morbid, in short, before the obsession took a precise form. Moreover, in certain obsessions, emotional symptoms preceded and heralded the appearance of the idea. On the other hand, the course of the obsession in its access, the absence of constant relations between the nature of the obsessing idea and the intensity of the distress, the variability of the idea (as in the case of panophobia) compared with the identity of the emotional symptoms, all accorded ill with the hypothesis that accorded to the idea a constantly preponderant part in the obsession.

Inversely, the physiological or emotional theory (Lange, E. James, Ribot, etc.) exaggerated the influence of vasomotor troubles and of emotional expression, to the detriment of the superior cerebral centres. It was by no means proved, said the author, that when we trembled we were always sad; it was necessary that there should always be a parallelism between the intensity of the emotion and its expression. In many cases it seemed evident that the emotion gave rise to the idea; much more, then, did this obtain in obsession, in which the intellectual element was more important than in simple emotion. The author thought that the essential rôle in the genesis of obsession was to be attributed to affection of volition. If one studied the state of the obsessed apart from their crises of anguish, one saw that these patients were all subjects of aboulia, that it was a matter of movements or ideas. The study of the voluntary movements in the obsessed was, in this respect, very instructive. These motor troubles were found in the *folie du doute* (*Zweifelsucht*), the type of intellectual obsessions, as well as in various phobias. It was the loss, or at least the considerable lessening, of the control of volition which allowed the formation of psychological systems, the

products of automatism, imposed on the consciousness and obsessing it. In short, morbid obsession was a very complex phenomenon, whose fundamental condition was a primitive generalized trouble, affecting the elements common to volition and intelligence; it was a permanent aboulia preexistent to the obsessions and preparing the way for them. The influence of ideas and of emotions made itself felt in the development, the orientation, and in the intensity of the obsession as well as in the appearance and return of the accesses. But obsession was, before all, an affection of the will.

The Impressions of a Victim of the Electric Current.—Andrea Broca (*Revue Scientifique*, May 13th; *Minerva*, July 21st) records his impressions when accidentally subjected, in the course of some experiments, to the current of a Ruhmkorff coil, giving an alternating current of 42 to the second and 110 volts. Broca was holding in his hand two large electrodes. He was thrown to the ground by a general spasmodic convulsion of the muscles after making a violent effort, which he found to be useless, to throw away the electrodes. He thought then of the experiments of Prévost and of Bartelli and said to himself, "It is an alternating current. My heart will stop. I am lost." Then he endeavored to cry out to his assistant, "Turchini, cut off the circuit," but he only succeeded in uttering an inarticulate cry.

The sensations experienced by Broca after being thrown to the ground are described thus: He seemed no longer to have either arms or hands, the walls of the chamber all seemed to incline themselves about forty-five degrees to the right and to assume a green tint; then he fainted.

After the current had been shut off and Broca had been raised, he experienced no pain of any kind; he was able to walk, as though suddenly, but it seemed to him as though he had only head and lower limbs, and was without arms or trunk. He attempted to move the arms, but they were completely paralyzed and the flexor muscles of the fingers were violently contracted. Turchini took his hand and he experienced a sensation of intense cold; Turchini pinched him strongly, but he had no sensation; in his hands and forearm was observed a marked hyperæmia.

After three or four minutes, Broca was able to move the flexor muscles of the arm; a quarter of an hour later he succeeded in moving also the fingers, and with great difficulty he was able to write a few words. The action of the interosseous muscles was not properly restored until some hours later. With the faculty of moving himself sensibility was also restored to Broca; as to the hyperæsthesia to cold, this remained for about half an hour longer. Finally he became able to walk a little in the laboratory, but suddenly he became worn out as though he had travelled a long distance; after some time he returned to his home and was able slowly to ascend the five easy steps. When indoors, he lay on the bed, and then, little by little, he was entirely restored.

Later phenomena. An hour and a half later he was seized with a violent palpitation of the heart; his pulse beat violently, stopped for two seconds, then set to beating forcibly and hurriedly; then ensued another long cessation, then the phenomena

recommenced and lasted for from half an hour to three quarters of an hour; finally, they ceased; but the cardiac arrhythmia was prolonged until 9 o'clock next morning, at which hour it ceased from time to time. The only sensation that Broca yet experienced was extreme lassitude, which disappeared entirely thirty-six hours after the accident.

Remarks. The paralysis may be explained, either by the action of the current on the nerve centres, or by the prostration occasioned by the spasm and by the direct action of the current on the tissues. Broca inclines to the second view, since the muscles of the various parts of the body regained their mobility later in proportion to the strength of the current's action upon them respectively.

As to the cardiac phenomena rectifying themselves an hour and a half after the accident, Broca supposes that they were due to the presence in the blood of toxines produced by the violent irritation occasioned by the passage of the current. He sought to verify this hypothesis by subjecting a dog to the same action; but the animal showed itself entirely refractory and endured the experiment many times for two seconds without giving any sign of distress.

The Dangers of Aniline as a Medicinal Agent.

—Dr. T. N. Kelynack (*Treatment*, July) points out that although aniline ($C_6H_5NH_2$, monophenylamine) has long been known to be powerfully poisonous, it has been frequently recommended as a medicinal agent. In phthisis, by inhalation (Kremianski); internally, as aniline sulphate, in phthisis, pulmonary emphysema and asthma; aniline dyes in inoperable malignant disease; for local anæsthesia in otological cases; in throat work and on mucous membranes generally (Gray); in parasitic skin affections (Neumin); chorea (Turnbull), etc. Now, Dr. St. Clair Thomson (*Lancet*, 1901, i, 1143) has recently called attention to the evil effects of the drug when used medicinally. A committee of medical men at Moscow, after investigating Kremianski's inhalation method for phthisis, condemned it. Sir Charles Cameron (*Dublin Journal of Medical Science*, 1891, i, 266) has described aniline poisoning due to the use of colored candies. Startin and other observers have called attention to the occurrence of cutaneous lesions from the use of aniline-dyed fabrics. Other bodies allied to aniline produce, also, similar effects. The author adds the following notes of aniline poisoning from his own observation:

A boy, aged fourteen, working at an aniline works, accidentally spilled some aniline on his hands and clothes. He was very pale, the lips were blue, he felt cold, complained of headache, and there was diarrhoea. Later he became faint, the pulse was weak, and there was distinct cardiac depression. The soiled clothes were removed, and the hands well cleansed from the aniline stains. He was then wrapped up in blankets, and a hot poultice applied over the cardiac region. Ether and ammonia were administered; brandy and opium were also given at first, but appeared to be prejudicial. The patient made a good recovery, although remaining somewhat anæmic for some time.

A gentleman who had had a long experience of aniline works as an analytical chemist, had for some

time been anæmic, which he attributed to aniline. He came home from the works feeling faint and sick and with a bad headache. Shortly afterward he had a fainting attack; looked pale, and felt tired and cold. His heart was feeble, and the pulse weak and soft. There was epigastric pain, vomiting, slight cough, and dyspnoea. He stated that one of his boots was torn underneath the sole, and that he had accidentally stepped into some aniline; and to the absorption of this by the skin he attributed the symptoms. Under ether, ammonia, and digitalis, hot applications to the back, epigastrium, and cardiac region, and absolute rest, he quickly improved, but the anæmia remained for some time.

These two cases go to show that rapid absorption may occur through the skin, although at the same time it is possible there may have been some introduction also by the respiratory tract.

A chemist who had been working with condensations of aniline for some months in large open vessels, developed symptoms of aniline poisoning, cyanosis, nervousness, impotency, and cardiac enfeeblement.

Detailed information of the physiological action of aniline may be found in *Die Fabriken der Aktien-Gesellschaft Farbwerke vorm. Meister, Lucius und Brüning zu Höchst a.M. in Sanitärer und Socialer Beziehung*. Von Sanitätsrat, Dr. Grandhomme. Frankfurt, 1896.

All the evidence thus available goes to show that aniline is an extremely dangerous agent, and its use in medicine, if ever desirable, can only be justified when this fact is carefully borne in mind.

Nerve Nostrums and their Dangers.—Dr. William P. Spratling, superintendent of the Craig Colony for Epileptics, Sonyea, N. Y., announces that he is preparing, by request of Dr. George F. Butler, chairman of the Section of Materia Medica, Pharmacy, and Therapeutics of the American Medical Association, a paper on Nerve Nostrums and their Dangers for the June, 1902, meeting of the American Medical Association, and would be glad to have physicians and others send him any samples or literature of such nostrums coming under their notice, or tell him of them and where they may be procured.

The Nutritive Value of Margarin.—Dr. Ben-tarelli (*Rivista d' Igiene e Sanità pubblica, Revista de medicina y cirugía prácticas* for April 28th) says that as regards its physical and chemical properties, margarin differs but little from butter. The organism absorbs from 93 to 96 per cent. of the margarin ingested and from 94 to 96 per cent. of the butter. But when margarin is used together with nitrogenous aliments it retards their absorption more than butter does. Its inferiority in this respect arises principally from the fact that it lacks the natural aroma of the latter.

The Production of Erysipelas by Pneumococci.—Neufeld (*Zeitschrift für Hygiene und Infektionskrankheiten*, Vol. xxxvi, fasc. 2; *Arte medica*, July 21st) has observed that besides the streptococcus, the pneumococcus possesses the faculty of inducing erysipelas in the rabbit's ear, but its intensity is different.

Original Communications.

THE LANE LECTURES
ON THE
SOCIAL ASPECTS OF DERMATOLOGY.

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LECTURE IV.

Delivered at the Cooper Medical College, San Francisco, September 3, 1901.

Diseases Caused by Microbes; Bacteria on the Skin; Impetigo Contagiosa; Boils; Carbuncle; Anthrax; the Need of Clinical Laboratories; Sycosis; Hygiene of the Barber's Shop; Premature Grayness of the Hair; Hair Dyes; Alopecia; Alopecia Areata; Acne; Vaccination Rashes; Parasitic Skin Affections Peculiar to the Tropics; the Chigoe; the Guinea Worm; Craw-Craw; Elephantiasis Arabum; Tinea Imbricata; Madura Foot; Aleppo Boil; "Spotted Sickness."

We have next to deal with parasitic agents of an altogether different class from those we have been considering. We pass now into the realm of the infinitely little. A learned divine of the seventeenth century wrote a book with the attractive title *Satan's Invisible World Displayed*. It is, I am sure, full of curious and abstruse lore, but I have never read it and if I had I should prefer to leave the subject to those whom it concerns professionally—the theologians. To us bacteriology has revealed an invisible world which has at least this connection with the Arch Enemy of mankind, that it is peopled with countless myriads of living things that, like Satan, go up and down the world seeking whom they may devour. The scholastics used to debate how many angels could dance on the point of a needle; to-day we are from time to time informed how many million microbes could rest on an area not much more extensive. Bacteria, as you know, are vegetable fungi, but apart from morphological differences the family of the *Schizomycetes* possess properties which make them from a biological point of view of infinitely greater importance than the *Hyphomycetes* and other fungi of which I have previously spoken. Not only have they the power of self-multiplication to a degree incalculably surpassing that possessed by the others, but they do not confine themselves to the surface of the skin, penetrating deeply into its substance and even invading the deeper structures and effecting a lodgment in internal organs. Microbes, moreover, have the power of producing toxins, and these poisonous sub-

stances can under favorable conditions reproduce themselves indefinitely and pervade the whole economy. Thus, as the author of *Hudibras* says in a satire on "modern critics,"

"The feeblest vernum can destroy
As sure as stoutest beasts of prey,
And only with their eyes and breath
Infect and poison men to death."

If for "eyes and breath" we read toxins, Samuel Butler has in this passage spoken the language of modern science.

BACTERIA ON THE SKIN.

The skin, as I have said, is even in health the haunt of numerous microbes; of what it may be when it is the seat of disease we gain some idea from the fact that Taenzer found no fewer than eighty species of bacteria in the crusts and discharge in a case of seborrhœic eczema. Of the bacteriological flora that finds a lodging on the human skin, the species that mainly concern us here are the pus-producing organisms. These, as you know, are the *Streptococcus* and the *Staphylococcus aureus*, *albus*, and *citreus*, which are all normally present on the skin. Harmless while the protective covering remains unbroken, the least scratch gives them an opportunity; and if circumstances are favorable—as, for instance, if the patient is of the so-called scrofulous constitution or if the vitality of the skin itself has become impaired from exposure to mechanical or chemical irritants—they set up inflammatory and suppurative processes which, under the influence of conditions of which little or nothing is known, may in their development follow the type of one or other of the recognized skin diseases. Pyococci may also play an important part by producing secondary lesions of a suppurative character which complicate or even overshadow the original disease. Examples of their action in this way have been given in connection with scabies and several of the other affections that have already been mentioned, and there is hardly a disease of the skin in which secondary infection from this cause does not take place.

Among the bacteria accidentally present on the skin, the most important are those of tubercle and leprosy. The consideration of the effects produced by these formidable diseases must be reserved for future lectures; here what may be called the "small deer" of skin parasites must engage our attention. I will therefore deal here with diseases that are caused by inoculation of microbes which produce only local effects. Of these the best known are impetigo, boils, carbuncles, anthrax, sycosis. All these affections are painful, and most of them disfiguring, while their infectivity gives them considerable importance from the social point of view.

IMPETIGO CONTAGIOSA.

Impetigo contagiosa, while it lasts, makes it impossible to describe the subject of it as a thing of beauty, but as a rule it yields readily to proper treatment. It is often, however, complicated by mixed infection, which may make its duration indefinite. The organisms found in association with it are *Staphylococcus aureus*, diplococci, and streptococci. The most important of these, according to Sabouraud and Neisser, are the streptococci, but all the organisms named may be combined in varying proportions. It is possible that the clinical varieties of the affection may correspond to the action of the several organisms, but as to this we have as yet no proof. Impetigo contagiosa is a frequent accompaniment of pediculosis, and staphylococci often find their way into the skin through punctures made by lice. It is important also to know that impetigo contagiosa often occurs secondarily to vaccinations, owing to the accidental inoculation of one or other of the organisms that have been named at the time of the operation. The disease, as its name imports, is contagious, and in schools it sometimes becomes a veritable scourge. In English public schools it is known by the name of "scrumpox" as the close contact, falls, scratches, and other accidents of football scrimmages afford special facilities for infection. The contagion may be conveyed by jerseys, towels, and other articles used by a boy suffering from the disease. Great care should therefore be taken in schools and households to prevent infection.

BOILS.

Of boils I need say little except to warn patients against the risk of auto-inoculation, which may be effected not only by the patient's own fingers but by the use of towels and sponges. Their purely local character is shown by the fact that they often arise in men in the most robust health. It is well known that rowing men are apt to suffer from boils on the gluteal region, especially since the introduction of sliding seats. The free perspiration and the friction make the skin vulnerable to the pus-producing microbes that are always, as it were, on the lookout for a weak spot. Boils in the axilla are very painful and disabling. On the face and neck they cause disfigurement which may be important to a young lady. Otherwise the social aspect of boils seems to be limited to their possible relation to the wearing of the high collars which at the present time is the distinguishing mark of our gilded youth. The friction caused by these articles of adornment on the skin of the neck is undoubtedly a predisposing cause of boils, and for the sake of comfort not less than of personal appearance I would suggest that young men of what I may call a furunculous habit should in this particular defy fashion.

CARBUNCLE.

The same remarks may be to some extent applied to carbuncle, but here we have to do with a much more serious condition, the predisposing cause of which is generally to be found in an unhealthy state of the constitution, especially glycosuria. The disease is one that I am sure none of my hearers would think of treating without the strictest aseptic precautions. As an illustration of the change that has come over professional opinion in regard to such matters I may mention a story related by the late Sir James Paget in a memorable essay entitled, I think, *Calamities of Surgery*.

In the early days of the last century one of the most prominent figures in English surgery was Sir William Blizard. When as a young man he started in practice in the city of London, he was consulted by a civic magnate who knew his family and wished, as he himself said, to give the young fellow a life. The magnate had a carbuncle on the neck which Blizard lanced, dismissing him with an assurance that it was nothing and that he would be well in a few days. Soon after reaching home, however, the patient had a shivering fit, cellulitis intervened, and death occurred on the third day. This disaster nearly ruined the young surgeon's career, and it was years before he had an opportunity of earning another fee.

ANTHRAX.

Malignant pustule, or anthrax, differs from the affections we have been considering in the fact that it is caused by a specific bacillus. The disease is interesting from an historical point of view, for it was the first in connection with which the organisms which we now know as bacteria were found. As long ago as 1850 they were seen in the blood of animals which had died of splenic fever by Rayer and Davaine. But it was not till 1863 that the latter observer felt himself in a position to state that the organism was a parasite and was the cause of anthrax. It took a good deal longer, however, for his teaching to gain general acceptance, and the story of the perverse ingenuity of wrong reasoning and blindness to facts with which it was opposed is an almost exact repetition of the obstinacy which so long hindered the recognition of the parasitic origin of scabies. Anthrax is further interesting as an example of the value of pathological research when it goes hand in hand with clinical observation. There has recently been in England much controversy of a heated character as to the connection of medical schools with hospitals. In reply to certain writers who, doubtless animated by the best motives, urged that hospitals should be solely used for the care of the sick poor and should not have their charitable character tainted by the suspicion of any

association with research, Sir Samuel Wilks, in an article published in our leading monthly review, *The Nineteenth Century and After*, gave some striking illustrations of the great advantages that a hospital might derive from a medical school attached to it. Among these is the following which may be quoted, as it has a direct relation to the disease we are now considering:

"Some years ago a very fatal malady was observed at Bradford, which soon began to be known as the woolsorter's disease. This was due to blood-poisoning owing to the introduction of a parasite attached to the foreign skins. About the same time there appeared a fatal form of boil among the tanners or fellmongers at Bermondsey. When these cases went to a neighboring hospital they underwent a rigid examination in the medical school laboratory, with the result that they were found to be due to a parasite of the same nature as was met with in the woolsorter's disease. This suggested the appropriate remedies and external treatment, resulting in the cure of most subsequent cases. I believe the hospital incurred no expenses on account of this necessary investigation. It would be interesting to know how any hospital would act under like circumstances if no medical school had been attached."

THE NEED OF CLINICAL LABORATORIES.

Much might be said as to the need of clinical laboratories in hospitals, but here I can only make a passing allusion to the subject. I know that you in this country are keenly alive to the inestimable value of the closest relation between practical medicine and scientific research. In England public opinion has still to be educated to a proper appreciation of the importance of this alliance, and I may add that the munificent millionaire is very rare among us and when he is met with he generally comes from America. To speak only of my own small corner of the domain of medicine, there can be no possible doubt that if every dermatological clinic had a properly equipped laboratory as a part of its installation, progress in our knowledge of skin diseases would advance more rapidly and more certainly than it has ever yet done. Before leaving the subject of anthrax I may remind you of a point in connection therewith which appears to me to show the folly of the opponents of scientific research in a particularly fierce light. Pasteur is still, as he was during his life, the object of the most rancorous hatred and the vilest calumny on the part of the antivivisectionists. Yet this man by the discovery of a virus protective against anthrax has saved an incalculable amount of suffering to animals. The larger relations of anthrax as a dangerous infecting disease hardly fall within the sphere of the dermatologist. I may, however, be allowed to insist on the necessity of

burning infected hides and the bodies of animals which have died of the disease. Burial does not destroy the bacilli, which, as Pasteur showed, are brought to the surface by earthworms, unless the body is interred at a considerable depth. Some alarm, I believe, is felt by certain of our sanitary authorities in England at what they consider to be the dangerous laxity of the Local Government Board in allowing such carcasses to be buried only a little below the surface.

SYCOSIS.

Sycosis, by which term I mean the microbic infection which attacks the hairy parts of the face and especially the chin, causes a good deal of pain as well as disfigurement, and, as it is contagious, it may in this way lead to loss of employment. As it is always very refractory to treatment and prone to relapses after cure, it may in certain cases be a serious disease. It may be acquired in the barber's shop from contaminated towels, shaving brushes, scissors and clippers, and from the tonsorial artist's hands, if they are not in a scientific sense pure. Such purity can of course be only relative. Among the many amiable sayings attributed to Dr. Thompson, formerly master of Trinity College, Cambridge, there is one relative to the work of a famous scholar which was submitted to him before publication. After reading the proof sheets Thompson returned them to the author with the encouraging remark that he thought he had purged the book of the "grosser errors" contained in it. It is only the "grosser" bacteriological impurities that we can hope to rid our hands of; not all the perfumes of Arabia—nor all the stench of the chemical laboratory—can sweeten them to aseptic perfection. Fortunately, the barber can do no harm unless his hands and brushes are actually tainted with infective material, and this can easily be guarded against.

HYGIENE OF THE BARBER'S SHOP.

It would be absurd to demand of barbers the minute ritual observances that are nowadays rightly required of surgeons. But the public has a right to demand that barbers should not only be strictly clean in their persons, dress, implements, and other paraphernalia of their trade, but further that they should use the recognized methods of disinfection of their hands and instruments before operating on a customer. Regular customers should each have their own shaving-cup and brushes. It would be well also if the floor, walls, and furniture of the shop were frequently cleansed with some harmless disinfectant.

Not only sycosis, but ringworm, favus, impetigo contagiosa, other pustular diseases, and possibly acne may be communicated by towels, etc. Syphilis

may be inoculated with an infected razor, and it is at least theoretically possible that lupus might be implanted in the same way. In some parts of Germany many barbers are bound by law to use antiseptic precautions in their operations. A proposal of similar legislation in France has excited a good deal of discussion, but I do not know if anything has actually been done. I believe that sanitary regulation of the barber's shop has been undertaken by some States of the American Union. In Michigan, I understand, the barber has to get a license after undergoing an examination before a special board before he can practise his profession. In England nothing of the kind has, as far as I know, been attempted, though I have seen the announcement "Antiseptic Shaving" over the shop-front of an enterprising barber in London. It would be well if the barber could be persuaded or compelled to remember the tradition of his calling. In former days he was a surgeon, and he might with advantage to the public and, I am sure, with profit to himself, use in his province of "chirurgical" art some small part of the precautions which the surgeon used in his operations.

In hospitals and other institutions the barber may be the means of spreading graver forms of infection, and the following outline of a scheme which has lately been adopted in St. Thomas's Hospital may therefore be of interest. I take the details from an article by Dr. Edmund White in the *St. Thomas's Hospital Gazette* for July, 1901. When the attendance of the barber is required in a ward, a requisition has to be addressed to the proper quarter by the Sister of the ward, who is required to indicate on a special form whether the patient is suffering (1) from typhoid, or (2) other infectious disorder, or (3) is surgically clean. This indication enables the barber to apply the regulations which have been devised for his guidance in these three possible cases. The barber is provided with six sets of utensils, comprising razor with zinc handle, hair-cutting scissors, and metal comb, each set contained in a metal box. Three of these sets are intended for use in Block 8 only, and will be marked respectively: No. 1, Operation Box; No. 2, Typhoid Box; No. 3, Toilet Box. The other three boxes will be similarly marked for use in the hospital, exclusive of Block 8. The barber wears long overalls with short sleeves, and is subjected to surveillance in the surgery before commencing work each morning, in order to secure that his hands, garments, and utensils are kept in proper condition. Cases to be prepared for operation must be treated first, and the set of utensils employed cleaned and sterilized between each case. For this purpose utensils and containing-box must be immersed in boiling water for five minutes, after which they are to be removed

and wiped on pieces of sterilized cloth, a fresh piece of cloth being employed each time. Separate sharpening appliances are used for the utensils employed in operating cases, in order to diminish as much as possible the risk of reinfection from this source. The barber is also directed, before commencing and after completing each case, to thoroughly scrub his hands with hot water and soap. All hair removed must be carefully collected and burned. The shaving brush for the production of lather in the conventional manner preparatory to shaving presents some difficulty in the formulation of a complete scheme of aseptic treatment. It appears impossible to insure the sterilization of any form of shaving-brush at present available without subjecting it to treatment which effects its partial or total destruction. Many experiments have been made in the hope of effecting the solution of this difficulty, either to find a brush that can be sterilized or to produce a substitute so cheap that it need only be employed for one operation. Up to the present these experiments have not yet led to any satisfactory result, but there is another alternative which is also the subject of experiment at the present time, viz., the use of a shaving-cream or paste which will obviate the use of the shaving-brush altogether. The following set of rules represent in outline the new regulations under which the barber will work:

1. Coat to be exchanged for long overalls with short sleeves before commencing work in the wards.
2. Operation cases to be attended to first.
3. Barber to be admitted to the wards between the hours of 8 a. m. and midday.
4. Separate utensils to be employed—
 1. For operation cases.
 2. For typhoid and other infectious cases.
 3. For toilet purposes.
5. Operation cases to be treated with utmost personal cleanliness, and the utensils to be cleaned and sterilized between each case.
6. Sterilization to imply immersion of utensils and box in boiling water for five minutes, after which they are to be removed and wiped on pieces of sterilized cloth reserved entirely for this purpose.
7. The barber shall, before commencing and after completion of his work, thoroughly scrub his hands in hot water and soap, and also after handling each patient. Finger nails shall be kept short.
8. No shaving-brush shall be used for operation or infectious cases, and in toilet cases only when supplied by the patient himself, and used on no other patient.
9. All hair to be carefully collected and burned as soon as possible after removal.

10. Utensils for toilet cases to be thoroughly cleansed between each patient, sterilized at least daily, and immediately after use if experience shows this to be necessary.

These regulations may justly be regarded as counsels of perfection. They may, however, serve a useful purpose as an ideal to be aimed at, though it may be impossible of attainment.

PREMATURE GRAYNESS OF THE HAIR.

Aseptic barbering leads us by a natural association of ideas to diseases of the hair. Premature baldness or grayness may, in these days when persons on whom the characters of age are written, however faintly, find it difficult to find employment, lead many to say, with the Prisoner of Chillon:

My hair is gray, though not with years,
Nor grew it white
In a single night,
As folk's has done from sudden fears.

Some dermatologists, notably Kaposi, deny the fact, but not a few cases of sudden blanching of the hair under the stress of emotional disturbance are recorded on authority which there is no reason to question. The hair of Ludovic Sforza is said to have become white in a few hours after he fell into the hands of Louis XII, and a similar occurrence is related of Saint-Vallier, the father of Diane de Portiers. The hair of Marie Antoinette is said to have become white after her recapture at Varennes. In modern times cases have been reported by Dr. Féré,¹ of the Bicêtre, Paris, Dr. L. Abbott Cantrell,² of Philadelphia, Dr. Moritz Schmidt, of Frankfurt,³ and many others. There is nothing intrinsically improbable in such narratives, for it is well known that intellectual work, anxiety, and neuralgia often cause partial grayness; and a great shock may well therefore produce complete discoloration of the hair.

HAIR DYES.

Our present concern with grayness of the hair is not so much the condition itself as the attempts to disguise it. It is the fashion to reprobate the use of hair dyes, but when they are employed, as they often are, to avoid starvation there is a pathos in them which should disarm ridicule. It is necessary to point out, however, that nearly all dyes are injurious. Many contain lead and are positively dangerous; others, such as hydrochloride of paraphenylene diamine, which is at present, I believe, fashionable in Paris, are apt to produce dermatitis of great severity, affecting not only the scalp but the face, and accompanied by conjunctivitis and swelling of

the eyelids. A remarkable case illustrating the ill effects that may follow the use of this dye was published not long ago by Dr. A. D. Newborn.⁴ Tisot⁵ considers that all hair dyes are dangerous, and suggests that the sale of them should be restricted by law. Paraphenylene diamine he looks upon as the most dangerous of all, and Brocq has proposed that it should be labelled as dangerous to persons who have suffered from eczema or whose skin is irritable.

ALOPECIA.

Alopecia is regarded by Sabouraud as a microbic disease, and he has described a microbacillus which sets up oily seborrhœa and thus leads through a series of changes to the death of the hair. It is certain that chronic dry seborrhœa of the head often precedes the loss of hair, but the microbic theory of baldness must be regarded as not proven. Alopecia may perhaps be prevented by timely treatment of the antecedent seborrhœa, but nothing short of a miracle can bring a second spring to the head bared either by the scythe of time or by the killing frost of early decay; and miracles, as Renan says, do not happen.

ALOPECIA AREATA.

A form of baldness of greater importance is alopecia areata, as, occurring in patches and destroying the eyebrows, eyelashes, whiskers, etc., as well as the scalp hair, it causes an almost repulsive disfigurement. The victim may, however, find comfort in the fact that sooner or later the hair will probably grow again. The affection is held by Sabouraud and others to be of microbic origin, by others as a neurosis. Judgment must be suspended till more decisive evidence is forthcoming. Those who maintain that the disease is microbic naturally believe it to be contagious, but of this, too, clear proof is wanting. At the Paris Académie de médecine the other day M. Hallopeau stated that since 1888, when a report was presented by M. Besnier, the contagiousness of alopecia areata was universally admitted. This is not the case. I do not myself believe it to be contagious, and my skepticism is shared by Kaposi, Pavloff, and others. Quite recently Jaquet presented a communication to the Académie de médecine in which he argued strongly against the theory of its contagiousness on the grounds that it often occurred in one member of a family without spreading to the others, and that it was not transmissible by inoculation. Hallopeau admits that the pathogenic agent is still unknown. He points, however, to the frequent occurrence of the disease in epidemics among soldiers and school children. Ja

¹*Progrès médical*, January 23, 1897.

²*Medical News*, July 27, 1895.

³*Virchow's Archiv*.

⁴*Journal of the American Medical Association*, May 18, 1900.

⁵*Lancet de Paris*, 1898.

quet, on the other hand, says the facts cited in support of the contagionist view can be explained by errors of diagnosis. It is possible that there may be two or more distinct forms of the disease, one contagious, the other not. For my own part, I can only say that I have sent many boys suffering from alopecia areata back to large public schools—often in the face of strong remonstrance from the masters—but in no single case, as far as I am aware, has the disease spread. I therefore fully sympathize with Dr. Du Castel, who, in the discussion at the Académie de médecine to which reference has been made, pleaded strongly for some relaxation of the ostracism to which “unhappy sufferers from areata” (*malades peladiques*) are at present subjected in France. Till we have much stronger evidence of contagiousness than has yet been brought forward, I think the isolation of patients a needless cruelty.

ACNE.

Returning to diseases which are known to be caused by micro-organisms, something must be said of acne. This is a disfiguring disease, and, from its association with the great increase of glandular activity that takes place at puberty, often leads to unfounded suspicious of indulgence in vicious habits. Its ætiology has recently formed the subject of investigation by several observers. The exciting cause is the presence of staphylococci (*albus* and *aureus*) in the follicle. It has been suggested that these organisms frequently gain admission through a lesion in the mucous membrane of the nose. In thirteen cases of acne examined by Sticker, a small ulcer was found on the septum; in that lesion were found cocci of precisely the same kind as those in the acne pustules. Investigations made in Neisser's clinic, however, failed to confirm Sticker's results.

The soil is prepared for the inoculation of organisms by a seborrhœic condition of the skin which is the result of the glandular activity to which allusion has just been made. The greasy secretion not only soaks the horny layer, but covers the surface with “fatty sweat.” The dilated gland ducts are filled with the same material mixed with epithelial cells and other *débris*, forming an excellent breeding-ground for bacteria. In addition to this, the skin as a whole is, according to Neisser, in a low condition in regard to nutrition, which manifests itself in anæmia of the tissues; and underlying all is a feebleness of constitution. Acne undoubtedly tends to place persons suffering from it at a social disadvantage; I may be allowed to quote a letter recently received from a patient which places this fact in a strong light:

“I have been suffering for some five or perhaps six years from facial acne in a most acute form, and have treated myself during that time with I might

say perfect regularity according to doctors' orders. Up to about twelve months ago I was a teacher, but getting an opportunity to enter a bank I left that profession to become a bank clerk. I have just lost this position, after about nine months, entirely owing to my facial trouble. I am at present at home and have been so now for two months undergoing treatment as prescribed, but find very little appreciable difference in my condition. The spots no sooner seem to die down than a fresh crop succeeds them. . . . Is it possible to cure my case? I am twenty years of age and am very desirous of assuming my independence again, but do not wish to try to enter employment again until my face is presentable. I hope you may not think me too presumptuous in thus writing for advice, but my trouble is so long-standing, and is such a drawback to my progress in the world, that I would do anything to get rid of it.”

I am pleased to say that this patient's face is now as presentable as need be wished.

Acne may wreck the lives of girls by condemning them to a forced spinsterhood. In these days, when women have so many fields of work open to them, a face in a chronic state of acne eruption might stand in the way of their getting employment. The affection is one of the physical penalties which women have to pay for the educational overpressure to which they are nowadays too often subjected. Acne is not a very tractable affection, but, fortunately, it tends to spontaneous cure with advancing age, though frequently it lasts many years. It may leave some amount of permanent deformity from scarring where pustulation has been extensive.

The diseases we have hitherto been considering present the distinctive feature that they are inoculable without causing systemic infection. As they are propagated by inoculation, they are theoretically preventable. In practice, however, it must be admitted that prevention is by no means easy; it can only be said in general terms that the person who is the subject of any of the diseases that have been enumerated—with the exception of acne, which for practical purposes may be regarded as non-contagious—is a possible focus of infection to those who may be brought into close contact with him. Every care should therefore be taken to reduce opportunities of contagion to a minimum. Actual contact should as far as possible be avoided, and in particular the patient should be enjoined to keep his hands and finger-nails clean; this he should do for his own sake as well as for that of others, because it is by autoinoculation that these affections acquire extensive distribution. All towels, dressings, pillow-covers and other bed linen, and all articles of clothing that touch the skin should be strictly preserved for his sole use. These are doubtless counsels of

perfection, and may indeed appear to some to be a sanitary rendering of "Much Ado About Nothing," but in hygiene nothing, however trivial it may appear, is really insignificant, and the great truth should never be lost sight of that a healthy skin is like a suit of armor without joints. It is our surest safeguard against the seeds of deadly infection which not only always hang around us, but which we often carry about us.

VACCINATION RASHES.

This appears to be a suitable place for touching on vaccination eruptions, which are so troublesome to all concerned when they occur and which give the antivaccinists the only solid ground they have for their opposition. They may be divided into two principal groups: 1. Eruptions due to pure vaccine inoculation. 2. Eruptions due to mixed inoculation—that is to say, to vaccine *plus* another virus. Some years ago I classified eruptions due to vaccination as follows:

Group I. Eruptions due to pure vaccine inoculation:

Division A. Secondary local inoculation of vaccine.

B. Eruptions following within the first three days before the development of vesicles.

Urticaria.

Erythema multiforme.

Vesicular and bullous eruptions.

C. Eruptions following after development of vesicles due to absorption of virus.

1. Roseola—like measles.

Erythema—like scarlet fever.

Purpura.

2. Generalized vaccinia.

D. Eruptions appearing as sequelæ of vaccination; eczema, psoriasis, urticaria, etc.

Group II. Eruptions due to mixed inoculation:

Division A. Introduced at time of vaccination.

Subdivision a. Producing local skin disease.

Contagious impetigo.

Erythema.

Subdivision b. Producing constitutional disease.

Syphilis.

Leprosy?

Tuberculosis?

B. Introduced not at time of vaccination, but subsequently, through the wound.

1. Erysipelas.
2. Cellulitis.
3. Furunculosis.
4. Gangrene.
5. Pyæmia.

The eruptions belonging to Group I must be reckoned as practically unavoidable, as for the most part they are due to idiosyncrasy. I am aware that this term, though it serves much the same purpose as that blessed word "Mesopotamia," which the legendary old lady found so comforting in an unintelligible sermon, is merely a cover for our ignorance, but in medical practice, however, the unknown has to be reckoned with as well as the known. All we can do is to prepare the minds of parents for the possible occurrences of such complications and to treat them *secundum artem* when they occur. The eruptions included in Group II, on the other hand, are preventable by using pure lymph with the strictest antiseptic precautions. There is no doubt that in the homes of the poor it is hardly possible that vaccination lesions should run an aseptic course. I hold strongly that it is the duty of a State which enforces vaccination to provide also for the supply of absolutely pure lymph, and further to exercise the strictest supervision over the whole process included in the term vaccination. My own preference is certainly for the use of glycerinated calf lymph, which entirely obviates the risk of the inoculation of syphilis. There is some evidence that tuberculosis may be transmitted by vaccination. In regard to leprosy, the case is more doubtful, but even if we accept all the instances that have been recorded by trustworthy observers—and they are very few—the risk of such a contingency must be regarded as almost a negligible quantity.

PARASITIC SKIN AFFECTIONS PECULIAR TO THE TROPICS.

Having now dealt with local inoculable diseases caused by animal, vegetable and microbial parasites as they occur in temperate climates, it will be well before passing to an altogether different region of pathology to pass briefly in review the affections belonging to the same categories peculiar to the tropics. I must confess that my experience of tropical dermatology is limited, and it may, indeed, appear presumptuous of me to attempt to discuss the subject at all in such an assembly.

Tropical regions may be called the paradise of parasites, but fortunately those of them that fall within my scope are but few. Of the animal parasites, the principal are the chigoe, the guinea worm, and the *Filaria sanguinis hominis*.

THE CHIGOE.

The chigoe—of which it may be said “by many names men called thee,” for it is known as “jigger,” “nigua,” and a multitude of local appellations, while the learned have given it the formidable designation of *Rhyncoprion penetrans*—must, I believe, be classed among the aborigines of this great continent. It was exported to Africa some thirty years ago and is now painfully familiar on the Congo coast and other parts. As happens in scabies, it is the female that is the aggressor. When impregnated, she bores most commonly under the toe-nail, but also into the skin of other parts of the lower extremity, the scrotum, the upper limb, and the back. Like the ostrich, which buries its head in the sand, the chigoe buries hers in the skin, and there she remains all the time she is in an interesting condition, and there she is delivered of her brood. The irritation caused by her is severe and gives rise to very painful inflammation, which if unchecked goes on to suppuration, extensive ulceration, and even gangrene.

THE GUINEA WORM.

The guinea worm, or *Dracunculus medinensis*, is found in Arabia, in the East and West Indies, in Brazil, and elsewhere. Here again we may say *dux femina facti*; it is the female that works the mischief. It is introduced into the human body in drinking-water or in bathing, and there larvæ are developed and become impregnated. The teeming mother then works her way through the tissues till she reaches the skin from within, which she penetrates, thus effecting her escape. The burrowings of the worm may give rise to pain and to inflammation and suppuration, sometimes accompanied by fever and delirium. Formidable complications and even death may be caused by the escape of the embryos into the tissues owing to rupture of an abscess caused by the presence of the parasite. It is all-important, therefore, that the worm should be discharged unbroken with her brood. She mostly emerges at the heel, sometimes at other spots. The difficulty in the treatment is to get the worm away entire; this is done by winding it very slowly and carefully round a match or a piece of rolled cardboard. In a case under my own treatment this process took twelve days to complete. The guinea worm has, I may add, been observed more frequently in England of late years than it had previously been.

CRAW-CRAW.

Craw-craw occurs chiefly in negroes on the west coast of Africa; it is caused by a filarial organism, the presence of which induces an itching eruption which has somewhat the appearance of scabies of old standing. The natives believe that the disease

is contagious and that it has an incubation period of three days. But Manson says that if it is a filarial disease it cannot be contagious and must have a much longer incubation stage.

ELEPHANTIASIS ARABUM.

Elephantiasis Arabum is caused by the presence of the *Filaria sanguinis hominis* in the lymphatic system. The presence of the embryos causes plugging of the lymph channels with consequent enlargement of the affected part, usually the lower limb or the scrotum or the mamma, sometimes reaching dimensions that may truly be called elephantine. A malarious climate is said to be a predisposing cause, and according to Manson, to whom nearly all our knowledge of the disease is due, where it is endemic its geographical distribution coincides with that of the mosquito, which is the intermediate host of the filaria. Now that a crusade against mosquitoes has been entered upon under the command of so competent a scientific leader as Major Ronald Ross, there is a hope that elephantiasis may be exterminated as well as malaria.

TINEA IMBRICATA.

Of vegetable parasites, mention need only be made of that which causes tinea imbricata, or Tokelau ringworm. The fungus resembles the trichophyton and, indeed, is regarded by Sabouraud as a large-spored trichophyte differing but little from the species found on animals in Europe.

MADURA FOOT.

Madura foot, which is endemic in some parts of India, is caused by a fungus closely allied to, if not identical with, the ray fungus, which is the cause of actinomycosis hominis. It occurs in two varieties, black and pink, the characteristic feature of the former being the presence of gunpowder-like particles which afterward collect into masses of considerable size; and of the latter of bodies resembling fish roe. In either case the growth of the fungus causes disintegration of the foot. As far as I know, the only case of this disease reported in America is that by Adami.⁶

ALEPPO BOIL.

Of tropical skin diseases caused by microbes, I need only refer to Aleppo boil and spotted sickness. The former, which is only a severe form of boil, is inoculable both in men and in animals, but the parasite which may be assumed to be the cause of it has not yet been discovered.

"SPOTTED SICKNESS."

Spotted sickness, pinta, or carate, is endemic in the tropical regions of America. It is so common among negroes that practically none escape. It is in all probability parasitic, though the micro-organism has not yet been found. In its native regions it is generally believed that the infective material is conveyed by mosquitoes. Though the disease does not threaten life, it was some years ago considered of sufficient importance by the government of Colombia to induce them to ask the physicians of that country to present a report on the subject. Segregation was advised, but I am not aware whether any steps in that direction were actually taken.

I have given a very cursory sketch of a subject on which it would not have been difficult to enlarge. But on the whole the local inoculable skin affections peculiar to the tropics may be regarded as annoyances rather than as dangers. The diseases just mentioned only exceptionally attack Europeans, and hence they do not form serious obstacles to colonization.

LARYNGOLOGY AND ITS PLACE IN MEDICAL EDUCATION.*

BY HENRY L. SWAIN, M. D.,

NEW HAVEN.

FELLOWS OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION: You have just listened to the warm words of welcome from President Hadley and have learned how all Yale welcomes you here to-day. And while it is gratifying to feel that it is the great university and that for which the name of Yale stands in the world of to-day, which has brought you here at this time, I trust that you will presently discover that New Haven has all the other attractions which any city of her size can boast. I make haste to assure you that the City of Elms, clad as you see her to-day in all her spring-time beauty, as well as this seat of learning, opens wide her doors, bidding you partake of all that is hers. Forget for the moment, gentlemen, the busy lives which you live at home and indulge yourselves with all the good things of science and all the relaxation and pleasure which the recreation here will give you if you give it but half the chance.

And now that you are most warmly welcomed to our hearth, it becomes necessary for your presiding officer to fulfil one of the duties and privileges of his office and inaugurate the scientific proceedings by a formal address.

The subject which naturally suggests itself is the

one for which we have gathered together. Our association exists for a definite purpose, and we yearly come from far and near not merely to grasp one another by the hand and receive that inspiration for new and better work which no one values more highly than I, and which can be obtained in no other way than by the free interchange of thought and idea, both in the formal meetings and in our quiet side talks after the day's business is over. We assemble ourselves for more than this personal gain and enjoyment. We come because we love this association and desire to perpetuate it in an ever-widening circle of usefulness, and by fostering it we also contribute our goodly share to make for laryngology a most worthy place among the sciences.

This, then, suggests our theme, Laryngology and its Place in Medical Education, and, furthermore, points out the first consideration, namely, the perpetuation of our association as an element in the development of the great science to which we have devoted our lives. What can we individually and as an association do toward this end? Whether as an association we have been a success or a failure, whether laryngology is on the uppermost level among the specialties, preeminent among them all for vigor, effectiveness, and high views, or stands low in the list, is not to be argued at this juncture. Whatever we are we have become by the work done by our predecessors and by our own present endeavors. Hence we can perhaps best judge of present and future needs by contemplating the work done in the past by the means then at command, and deduce from that what we can hope to accomplish by present resources and conditions. However much we may strive to glorify ourselves, we cannot forget that for all the opportunities we have to work and bring ourselves into yet greater prominence, it was our predecessors who, building on the work of former years, made our smaller or our greater endeavors possible. And, furthermore, we have to consider that what we, too, do is, when all is said, but the foundation upon which future generations must build. Hence can we be too careful in what we do? Ought we not at least once a year to pause and together contemplate the work done and see, so to speak, if by comparison it is up to standard? Have not the times so changed and the conditions of our present-day needs so altered the trend of events that new rules should be evolved for our greater growth? Are not the needs of a builder of to-day vastly different as he starts to erect his sky-scraper from those which even he needed twenty-two years ago? Would twenty years ago one great political party have accused the other of imperialism, and the other, finding itself facing a tremendous problem which came with the force and weight of the resistless progress of the great message to all people, "Liberty to all

*The president's address at the twenty-third annual meeting of the American Laryngological Association, held in New Haven on May 27, 28, and 29, 1901.

and for all," have been compelled to consider and enact new laws the results of which we can now only dream of and conjecture? Shall we as an association find no new lessons to learn and merely learn the old ones more perfectly? I think not.

When our specialty was young, when together with the surprising advances of modern medicine as a natural evolution our society came into being, there were in the country but comparatively few who devoted themselves to the exclusive practice of any specialty, much less our own. With the discovery of the laryngoscope, years before, many were attracted to the study of laryngology, interesting as it then was on account of its newness, and there began to be chronicled the many phases of the diseases of the larynx. Naturally these investigators desired to meet together to discuss and to compare their ideas, and so in 1878 there were banded together a certain number of gentlemen to form this association, the object of which was, as stated in the constitution, "the promotion of knowledge in all that relates to diseases of the upper air-passages." Fifty men seemed to represent the most progressive thought of the time. How well they planned is evident at this day, as we, profiting by their forethought, force of character, and knowledge, count ourselves fortunate in being numbered with them. They had, however, an enthusiasm, an egrossing desire, an inspiring ambition to keep their struggling plant well cared for. They fostered it by contributing to its needs their best endeavors. The workers of those days are, however, many of them not with us. During the past year another one of our founders has been taken from us, one who was always an active worker, whom we honored and highly esteemed, Dr. Rufus P. Lincoln. Seemingly capable of years of further usefulness, he suddenly succumbed to unsuspected disease and was wrested from our midst. Those who remain feel that, having borne the burden and heat of the day, perhaps they can leave the severer tasks to the newer blood, which by careful selection they have taken into partnership to do the work of the hour. We have their counsel and their help, but do we each and all of us work as hard, as earnestly, and as faithfully as did they? Is the interest of this association preeminent to all others? Have we that exclusive devotion which characterized their early endeavors? The question is one of personal responsibility. Each must answer for himself.

A danger which now lies and which must ever hereafter be before us is the outcome of the fact that, in the rush of progress, the tendency to specialize became too attractive as compared with the days of the beginning of this association. Many have been induced to become laryngologists, and, as nasal pathology has been understood, rhinologists. This

latter, rhinology, seems so easy, perhaps because the organs are more accessible, that in these latter days the ambitious soul has felt himself a full-fledged rhinologist after a six weeks' post-graduate course, licensed, as one has said, to destroy mucous membrane wherever found. It became necessary, therefore, for our association to recognize the fact that amid the throngs of devotees to the head-mirror there were many justly preeminent, and fifty seemed a small number to put down as representing even the best; or, to put it in another way, there were more than fifty eligible to the association. We let down the bars, and have since numbered ourselves constitutionally at seventy-five, and now do we not find that number full small? Whether danger lies, then, in being too exclusive, or in the fact that our numbers, belonging to two or three special societies, may falter in their allegiance, or if they keep pace with all, that they must of necessity divide the energies which they might have put into one, are questions which we should consider and concerning which, when your secretary, I have often thought. If the personal enthusiasm does not exist, who shall evolve it for us? Have we not to exert ourselves each and all and keep up an enthusiastic interest in the welfare of the association? If we are to hand down to our followers as great a heritage of growth and expansion as we have received, must we not work a little harder? It is not sufficient to merely live up to the letter of the law and read a paper once in three years. Such lukewarmness on our part never will stand the tide of competition, never keep our standard away above and ahead of other organizations. We want the best papers and the enthusiastic presence of every fellow ever year, and not once in three years.

What has kept our association absolutely preeminent in the land is the careful selection of the candidates for fellowship, but it was left so largely in the hands of the council and more especially its executive officer, namely, the secretary, that many of us lost the interest which we could and ought to have had. During my first year of secretaryship I was appalled when I contemplated how much you trusted to that officer's judgment and advice. My predecessors were among the very best men the association has ever had. You remember them—Leferts, Delavan, Knight—large-minded men, of broad culture and of wide reputation, who did their work well and unerringly. My successor is all that could be desired in efficiency and tact, and the immediate future is assured. But I know he feels as did I, and I am sure that I do not detract one jot or tittle from the honor and respect in which you hold those who preceded me in office, if I say to you that one of the greatest needs that this association at the present moment has is that we all, individually and

collectively, should take more personal interest in the management of its affairs. To this end the by-law which comes up to-morrow seems most pertinent.

It is only human to be more interested in an affair of your own creation than in the work of some one else. So from now on, if the proposed by-law is accepted, we cannot put upon the secretary or the council the sole responsibility of the selection of the fellows, nor can we fail to have the chance to interest ourselves personally in their election. By the present amendment we all shall have, present or absent, the responsibility resting upon ourselves if ever anybody is elected who is not deserving or is not desired by the majority of the members of the association. Furthermore, the council will, in the list which they send to you, have merely endeavored to go over the names of all the men in the country and select from them those seemingly best fitted for the honor. If these lists from which they select do not contain all the names that they should, the responsibility again rests with each of us individually for not nominating to the council those whom we know to be eligible in every way to be co-workers and associates with ourselves.

If you stop to think for a moment you will readily see how much more the council needs our advice than formerly, when you consider how impossible it would be for any three or four men of the association to know intimately all those engaged in our particular line of work.

Now, if by this or any other means we, my fellow-members, keep up to its highest pitch the spirit of enthusiasm for our association, the new men coming in will partake of it and there will never be a chance to raise a question but that we have the best work of every man.

If I have wearied you with this appeal, which is so personal in its application, pardon the zeal which provokes it, for it is the outcome of a strong desire to keep our association in the future, as in the past, second to none.

In passing, perhaps a word should be said, lest in speaking as I have about this, our own association, I have left the impression that our sister organizations were in any way inimical to us, for this they certainly are not. Just as I fully believe that the ultimate good of mankind is being subserved by the dispensation of the consolations of religion by all the various creeds which make up the present-day faith, so I also think the great movement toward a wider and broader knowledge in all branches of medicine is being, in a way, promoted by each and every medical society. It would, therefore, be stultifying ourselves were we in the least to imply that the work of the greater and more useful laryngology was being done by others with any less sincerity of

purpose than by ourselves, as would be the case were we to leave the imputation that they sought in the least to add to themselves by detracting from us. Nor in wishing that we might do more and better work does it signify anything more than to hope thereby to stimulate endeavor, and thus emulating each other we should all work harmoniously together for the one grand aim, to learn all we can and contribute to the great work of all disciples of Æsculapius, to lessen suffering, to alleviate pain, to ward off disease, and, in short, to make the healing art more of the great force it should be in the world, free from all charlatanry and mercenary ambitions, the noblest of all callings.

And now, gentlemen, while much more might be said in the line of suggestion as regards the great work of our association. I have one point more at heart which I should like to ask you to consider for a short moment with me.

We have been considering the weal of our association in the light of contributing as it has done in the past to the growth and broadening out of laryngological science. We contribute to it in another way which is suggested by the fact that we meet under the shadow of a great educational institution, and that almost all if not all of us have been or are teachers. In the broad sense of the motto which is on our programme, *docendo discimus*; we surely can all be so classed. So let us, glancing for a moment at the past of medical education, get a glimpse of what the relationship of laryngology should be to the medical education of to-day.

Within the last twenty-two years the problem of medical education has assumed great proportions *pari passu* with the strides of the art and science of medicine. In those earlier days the best schools gave two courses of a part of a year each, and at the end gave the applicant his diploma provided he seemed worthy. However, this did not signify very much, for in all the States any one could hang out the sign of doctor, and no one would inquire whether he had a diploma or not, an example of the most wonderfully incomprehensible carelessness or foolhardiness on the part of the American people that could be chronicled. It was left for the medical schools themselves to first improve what a diploma stood for before the public would listen for a moment to passing any laws which would in the least control the practice of medicine. Now, in most States—in our own, I am sorry to say, only after much effort—no one can practise without a license, which to the public mind means that a certain prescribed course of study has been followed out. When they see a sign in going into a strange city they feel that the State guarantees them something in the way of knowledge. But are they usually satisfied therewith? The past has guaranteed them nothing and

they are suspicious. They will even ask a stranger in the street passing by who the best doctor for such and such a trouble is. That implies specializing, but the main implication is that they want not only an M. D., but a good one. Still they accept the lay interpretation, and the wonder is that we are as well qualified as physicians as we are, for the general public has not only never helped us to improve ourselves, but has resisted our best endeavors in the way of good legislation.

If we had waited for their assistance, we should still have the old duplicate two-session course of study. But with that spirit of high endeavor which must always signalize the work of the true physician medical men sought in every way to improve themselves, and gradually the medical schools lengthened their courses until now the best require four years and advise a hospital post-graduate course.

With the lengthened course new problems have suggested themselves about the curriculum. How to divide the courses? Shall each student take every course? Is the old method of continued long courses in three or four subjects throughout a year or more better, or should not the student take concentrated courses, putting all the thought upon one or at the most two subjects, for a shorter length of time? What shall be done with the multiplying specialties? Shall each student be compelled to take every one of these? These questions interest us now to-day in common with all other medical educators, and, while we are chiefly interested in the teaching of one specialty, we must look at the whole problem in order to fitly estimate the value of the individual parts.

(To be concluded.)

THE INFLUENCE OF CLIMATE UPON NERVOUS DISEASES, CONSIDERED FROM A PHYSIOLOGICAL STANDPOINT.*

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That a more accurate understanding of the effect of meteorological conditions in a given place and at different altitudes is needed, since these do most positively affect the human economy, however difficult of determination is their mode of action, every physiologist and scientific physician realizes. The effect of continued sameness of atmospheric pressure, moisture, winds, and of the chemical products carried in the air, becomes a more or less natural

condition in the environment of the individual living in a particular locality. Thus, through continued ages, the different races are undoubtedly modified mentally, morally, and physically, by the climate in which they reside, so that the effects of environment on a particular race are much regulated by climatic conditions, *e. g.*, the stunted people upon the plateau of Thibet and our robust Western cow-boy living in the lower open plains. Thus, conditions of stature and the proportional brain power, associated with physical strength and agility, are an important item in the evolution of high types so that the happy mean between the extremes of dwarfism and gigantism, always abnormal states, is left for our sifting, to determine, if possible, the scientific relation of the individual to his environment in health or disease. We contend that it is just here where failure to interpret the cause and the result resident in climatological conditions of the earth, must be got through a study of a large number of racial and individual statistics. Not until such extended observations are made, will the study of climatology be truly of scientific benefit to mankind.

It shall be the endeavor in this paper to collate the physiological and physical effects known to exist or to result respectively from certain diseases of the nervous system, which we shall urge as a basis for study. And, even back of this, the whole process of modification of the nervous system through climatological influences must, it seems to me, be placed upon a nutritional basis, therefore, as to the effect upon blood pressure allowing more or less healthy circulation, to the carrying off of waste products through the proper metabolism of the nerve centres, and, finally, to the elimination of waste products in proper amount, so that there should be no imbalance whatever in the healthy organism.

The effects of decreased atmospheric pressure permitting a freer circulation in the surface of the body is, to my mind, an important physiological and physical fact for us to use as a basis for studying the effects of altitude upon disease, knowing the pathological nature of the malady (as tabes); secondly, the effect of placing the body in a vacuum jar under decreased atmospheric pressure produces the same results, in a measure, as those experienced in the ascent of a mountain; and, thirdly, the beneficial influence of massage in hurrying the blood stream to the surface, which, therefore, produces better nutrition, as shown by experiments of Mitchell—these are all three important observations, which lead to the same conclusion, namely, that reduced atmospheric pressure causing a *vis a fronte*, as it were, is similar in its results upon the human body to the *vis a tergo* produced by the manipulator during massage.

*Read before the American Climatological Association, at Niagara Falls, June 1, 1901.

In the *Archives des sciences physiques et naturelles* for December, 1900, M. Jaquet takes a different view of the effects of altitude upon nutrition, and concludes that the chief, if not the only, factor in the action of altitudes, is diminution of pressure, which acts by chemical modification of the blood. He says that the temperature is without evident effect upon the blood and that light plays no more active part. This author contends that the diminution of pressure obtained through laboratory experimentation in placing the body under lessened atmospheric pressure, is *exactly* similar in results to that in the case of a person ascending a high mountain. His contention is that more nitrogen is admitted to the blood through the atmosphere under such lowered atmospheric pressure. The writer, while admitting this, feels perfectly sure that nutrition is also bettered by the fact that the nitrogen of the proteid foods already existing in the blood is given freer circulation to the periphery of the body, and that thereby better nutrition is transmitted to the tissues. So that, probably, we have, therefore, a double mode of chemical action in regard to the same element, nitrogen: first, that coming in excess from the atmosphere at lowered pressure; secondly, the freer circulation, as indicated, of the nitrogen produced from within. We also feel certain, from clinical experience at least, that purity of the air and the intenser sunlight of the heights do much to improve bodily metabolism; and are, therefore, active adjuncts. The effect of winds alone, seems to me to act in the following fashion; not from any chemical change produced in the body, but by reflex action upon the peripheral nervous system causing increased excitability of the general bodily functions.

Hence, in *neurasthenia*, where we have a typical condition of irritable weakness prevailing, high winds are to be avoided, and altitudes above 2,000 feet should also be eschewed, for the reason that we hasten metabolic processes too rapidly by such means, and therefore tend to the physiological overwork of the central nervous system. This is also witnessed to by the palpitation of the heart occurring in nervous or well people at heights, and due, undoubtedly, to the lessened peripheral pressure. I have considered elsewhere the effects of climatology on *neurasthenia*, concerning which the foregoing paragraph is now given in possible explanation of the facts recorded in that paper.¹ *Hysterical subjects* will generally be found to do badly at great altitudes, for the same reason of increased excitability caused by over activity in the superficial circulation; and insomnia in them will be more pronounced at heights due, perhaps, to the increased vigor of circulation in the membranes of the brain² (vasomotor

tone). Climates in which there is continual prevalence of fogs, with low atmospheric pressure, are also bad for the neurasthenic and hysterical, for the same reason of reduced pressure, as well as of the psychic depression upon the individual and the liability to "catching cold" in this moist atmosphere.

Melancholia, on the other hand, needs great increase of circulation and metabolism, to effect proper functioning of the body, in the carrying to and from the tissues products for assimilation, and in a better combustion of by-products with an equally free elimination of the waste matter of catabolism. I have seen subjects of melancholia greatly improved by going to the mountains, where the climatic conditions were not different from those of lowlands, other than in obtaining reduced atmospheric pressure, in the purer air, and in the intenser sunlight—a trio of meteorological states, active, to my mind, in the order given. High winds will be stimulating to the melancholic or to the hypochondriacal patient and will tend to benefit him; so, also, with the graver forms of insanity of these types. It may not be expecting too much to hope that, some day, municipal aid will be given to sanatoria where the subjects of exaltation of the mental aberration may be sent to lesser altitudes for benefit; and those with excitation of the depressive emotions may be sent to altitudes perhaps several thousand feet above sea level.

Chorea is a disease most surely made worse by high winds and increase of altitude beyond a happy mean of a few hundred feet, and is ill affected for the reason already given. Thus, while the freer interchange of nitrogen gas from the atmosphere to the blood is desirable in many cases in internal medicine, as in phthisis, still, as pointed out in this paper, among *nervous* diseases, where the central nervous system is at fault, we do have types of cases in which it is better to be conservative in the use of this very valuable chemical element for the proper nutrition of the body.

Insomnia.—I wish to lay special stress on that annoying symptom, insomnia, as influenced by circulation besides the neurone motility theory, which would also account for sleeplessness. If we consider that the dendrites are in particular activity in such cases, we must still, it seems to me, go back to the old theory of hyperæmia being the original ætiological factor in any case, and this would also uphold the neuronic theory; since excess of blood would tend to greater tonicity of the neurones, and thus a retraction of the protoplasmic mass such as is necessitated for the production of sleep would not so readily occur. That palsy of the vasomotor system is the fundamental condition permitting persisting insomnia, we must admit. So that whatever will tend to restore vasomotor tone to the sympa-

¹Climatology of Neurasthenia, *Medical News*, Jan. 26, 1901.

²*Philadelphia Medical Journal*, May 25, 1901.

thetic nervous system must be good treatment for sleeplessness. The effect of the warm bath given at night will be explained, as to its action for good in insomnia, by the fact that the blood vessels of the extremities are thus dilated, permitting of a better equalization of blood pressure and of relief to the congested meninges; so, too, the other hydrotherapeutic procedure of the cold douche to the spine in the morning, which produces reaction to the nervous system, favors an equilibration of circulation. The use of massage is also well known to influence insomnia favorably. If these measures, together with a reasonable use of the milder hypnotic drugs, do not avail, my experience has been that a change of scene, and particularly of latitude and altitude, will be the paramount measure for affording relief to the sufferer.

There is nothing better than the quiet *ensemble* of a sea voyage in these cases, not a little of the benefit of which arises from the soothing effect of the salt air, as well as from its influence upon metabolism; and, finally, from the low level and consequent great atmospheric pressure, which tends to prevent the circulation in the periphery of the body, and consequently in the great sinuses of the brain. If the patient is at the seashore, the ill effects of high winds from week to week have made evident by my own cases, in which previous benefit had resulted from this descent from the mountainous country. This is shown in the instance of B. H., a man, aged fifty-seven years, from the interior of Pennsylvania, who improved as to the insomnia immediately upon his return from Atlantic City, in April, 1901, where high winds were prevailing. This man immediately began to rest well at night on returning to Philadelphia. There was no psychic element in the case as to this symptom, I should declare, because of the fact that the patient persisted in going to the shore for a week and was not at all fond of the Quaker City.

In an experience with *idiopathic epilepsy*, I have found that patients living at a great altitude are very apt to be benefited by coming to the sea level. A patient under my own care, a young woman from the mountain district of Luzerne county, Pa., it occurs to me, was helped in the reduction of her attacks by coming to Philadelphia; taking into account, also, the benefit frequently occurring by mere change alone, in this enigmatic disease.

Organic Diseases of the Nervous System.—In these affections we cannot hope for great benefit from any climatic conditions in the alleviation of the pathological state, but the insidious action of a properly maintained circulation in these disabled individuals must have great weight in favorably affecting, or not, the underlying organic change. Many of the harassing symptoms, as the pain of *tabes*, for

example, are frequently, to my mind, due to the impeded circulation about the sensory tracts or nerve roots. This can be in some measure helped in other ways than by the mechanical means at our disposal, *e. g.*, massage; as by placing the patient in a condition of dry atmosphere, and especially where there are currents of air actively moving; and thus favoring circulation as well as influencing other reflex action by the winds stimulating the sensory nerve and, therefore, the insensible, though ever acting, afferent impulse. The change of altitude is again important in diseases of the *central* nervous system. A case in question, one of specific disease of the cord coming under the care of Dr. S. Weir Mitchell, which I had the opportunity to study and report, was greatly benefited, as to pain paroxysms, by passing to an altitude of 6,000 feet, whither the patient went as a ranchman in the far West, from the low damp country of the coast of southern California. An ataxic patient of my own, I have seen benefited by a sojourn in the mountains in Colorado, the particular relief being to his pain and in the general upbuilding of the system, due, I take it, to a hastening of the peripheral circulation, since his cardiac action was always weak, and drugs given to stimulate the heart invariably produced *præcordial* distress, while nitroglycerin caused an annoying cyanosis.

In *chronic peripheral neuritis*, the patient does better in a dry climate with little or no wind, and at a lesser altitude where the tendency would be to favor the blood current toward the interior of the body.

In a general way, then, it may be said, we know very little about the effect of climate upon organic changes in the nervous system; but, reasoning by analogy, it would seem that the foregoing statements might be correct, from a physical and physiological point of view, as to conditions tending toward possible betterment, at least, of some of the symptoms. I propose to make record of cases in the future, particularly as to this whole subject, feeling amply repaid for the meagre personal observation which it has been my privilege to note. Erythromelalgia would be a typical example to my mind, as would Raynaud's disease, and also conditions of morbid blushing, where a great altitude would be distinctly harmful to the patient. In fact, I have seen an instance of the latter distressing malady in a case treated electrically for Dr. John H. Musser, in which the man was made distinctly worse by a trip to the inland country of New Brunswick.

Conclusions.

The influence of climate upon nervous disease is the open sesame for fruitful study. Functional diseases are more particularly affected by climate. Or-

ganic diseases, it will no doubt be found, are especially influenced by meteorological conditions as yet not definitely known to the physician, but in each type, the few gleanings of clinical facts at our command seem to place the said therapeutic climatic results as principally dependent on states of atmospheric pressure and the consequent nutritional improvement produced thereby. The great altitudes favor circulation of the blood in the periphery of the body, and assist nutrition, both by aiding the absorption of nitrogen from the air at low barometric pressure, and also by producing a much more active circulation of the blood, and therefore of its proteids containing nitrogen received from food products of digestion, thus doubly fortifying nutrition in some cases, as neurasthenia; therefore the trophic function may advance too rapidly by the patient's ascending great heights. So that a great altitude is not good for the neurasthenic, who must appropriate nutriment slowly on account of the weakened central nervous system. Insomnia is benefited by lesser altitudes, while chorea, hysteria, and most of the functional maladies, are likewise favored by a sojourn at the sea level, provided other meteorological conditions are good, such as equable temperature, heat, and the non-prevalence of atmospheric moisture. Melancholia and depressive diseases are helped by high winds with moderate heat, to aid in general, bodily metabolism. In organic disease depending upon central or peripheral lesion, perverted function, as pain and sluggish circulation, will be helped by altitude; a greater altitude being desirable for diseases of the central nervous system, a lesser altitude being the desideratum in the cases of peripheral diseases, as in neuritis and vasomotor palsies, exemplified in Raynaud's disease, exophthalmic goitre, and allied affections.

The whole subject of the effect of climate upon nervous disease must obey definite laws in physics and physiology, even if we have not as yet proved it, just as the law of gravity existed before it came to be known as a law by the observation of Sir Isaac Newton, who should be a great exemplar to the physician in carrying out the maxim of Descartes, one of our own guild, "*Cogito, ergo sum*"—I think, therefore, I am.

1407 LOCUST STREET.

Orange, N. J., Has a Woman City Health Inspector.—Miss Elizabeth M. Devine, of 53 Essex Avenue, Orange, N. J., has been appointed a city health inspector by the board of health. She is the only woman health inspector in New Jersey. Her appointment was brought about through the efforts of the women's societies of the community, who will pay Miss Devine's salary. The city authorities will pay a nominal salary, \$1 a year.

WAS THE EPIDEMIC THAT RAGED IN ATHENS, B. C. 430, GENUINE BUBONIC PLAGUE?

By HENRY M. FISHER, M. D.,

PHILADELPHIA.

Surgeon-General Wyman, of the U. S. Marine-Hospital Service, in his very interesting paper on Bubonic Plague,¹ recently published, alludes to the above-mentioned epidemic as one of the well-known historical epidemics of the disease.

The question at the head of this paper has, however, been answered negatively by most of the modern authors I have had an opportunity of consulting. One English writer of the middle of the last century enters into an elaborate argument to prove that the epidemic was really one of measles. In most treatises on the subject, this terrible visitation which, it is estimated, carried off one third of the population of Athens, either is not mentioned at all, or, if mentioned, serious doubts are cast upon it as a genuine plague epidemic.

While it must be admitted that the clinical picture of the disease, as given by Thucydides, is meagre and unsatisfactory, I think a careful analysis of what he does tell us about it should suffice to make the affirmative evidence very strong.

Allowance must, of course, be made for the very elementary pathology of the period, and for the fact that Thucydides was not himself a medical man. In the following I have tried to gather together the chief points in his description which seem to justify the conclusion that the *Loimos* that he describes was really bubonic plague. And, first, as to its origin. He tells us that it was rumored that it came from Ethiopia, beyond Egypt, and it is, I think, reasonable to suppose that Southern Arabia may have been intended. This part of the world has been known from time immemorial to have been one of the chief breeding-places of the plague. *Secondly*, as to mode of propagation. Common rumor had it that the Peloponnesians had poisoned the cisterns of rain water used for drinking purposes, in the Piræus. It is probable that the cisterns were really infected, not by their enemies, Archidamus and his Peloponnesian troops, but by the poor peasants who had swarmed to the Piræus to escape the marauding bands. Crowded into huts or sleeping in the open air, without proper nourishment, and probably ignorant of the most elementary principles of sanitation, these unfortunates must have very soon polluted their water supply, and the infectious germs, once brought in by some Egyptian sailors or refugees, found in the Piræus a most fertile soil and most favorable conditions for further reproduction and growth.

¹The Bubonic Plague, Washington, 1900.

It may be said that other diseases, such as Asiatic cholera or typhus might have been spread in the same way. But it was soon found that the disease was in the highest degree contagious. Physicians and those who attended the sick were the first to succumb to it. Further, of those attacked, very few recovered.

He does not give any figures, but, judging from what he says, I think it fair to conclude that fully ninety per cent. of those attacked died.

If this is so, the probability of the disease having been bubonic plague is much increased, as none of the other epidemic diseases that have devastated communities in historic times have shown such a percentage of mortality as this. In one place, Thucydides speaks of death following inevitably upon an attack of the disease, but as he had had it himself and had recovered, and, as he speaks of those who had recovered nursing the sick, he evidently did not mean to be understood quite literally.

Thirdly, in his brief description of the disease, as he had observed it, he calls attention to the lividity of the hue of the skin covered with small pustules and ulcers *ὀγκυταίαι μικραὶ καὶ ὀλίγαι ἐξηθήκει*.

Now, it is the use of this word *έλκος* in this connection that has proved a stumbling block to many in accepting the Athenian *Loimos* of B. C. 430 as a genuine epidemic of Asiatic plague. But, while the word is used by Hippocrates in the sense of an external ulceration, other writers apparently use it in the sense of a concealed abscess or boil. What could be more natural than for Thucydides to describe in this way the characteristic buboes, which so often break down and suppurate?

Certainly, he would not have been likely to have applied these terms to the petechiæ of typhus.

Fourthly, the few patients who survived often developed, during convalescence, gangrene of the fingers and toes and of the external genitals, and often became blind.

Now, while the development of bed sores is common after typhoid and other severe forms of fever, gangrene of the extremities is not a common complication of any acute disease other than bubonic plague, so far as I have been able to discover.

Fifthly and lastly. The disease was transmitted to the lower animals. Thucydides remarks that birds and beasts of prey that fed upon the many unburied bodies of the victims of the epidemic inevitably died very soon. He does not tell us, it is true, that they conveyed the disease to man.

Now, I believe that there is no known disease to which men are subject, that is so easily conveyed to the lower animals by contact with the bodies of those who are ill, or who have died of the disease, as bubonic plague.

317 SOUTH TWELFTH STREET.

ACUTE AMYGDALITIS: ITS TREATMENT BY THE LOCAL APPLICATION OF TINCTURE OF IODINE.

By SAMUEL FLOERSHEIM, M. D.,

NEW YORK.

The general practitioner is sometimes confronted with cases of acute catarrhal and follicular amygdalitis, with marked swelling of one or both tonsils, which has resisted all efforts at relief from the usual throat remedies.

The treatment of these cases worries the established practitioner and they are extremely discouraging to the beginner. For some time these cases had caused me considerable anxiety. All my efforts to formulate a prescription to give relief were fruitless. Some of the patients would go to specialists, others sought dispensaries and hospitals, and I became almost despondent.

At length I was called into see a patient suffering from a very severe attack of acute amygdalitis, in which the administration of the usual throat remedies was of no avail. The parts were intensely inflamed and swollen, and as my continuing to prescribe the same remedies would probably have been followed by the same result, I determined, at the urgent pleading of the patient for some relief, to try heroic measures, for better or worse. I applied quite profusely to the inflamed area, with a camel's hair brush, the official tincture of iodine. The patient stated that it burned a good deal, but I advised her to "hold it out" for two minutes, after which time she gargled a few times with warm water, when the burning ceased. The result of the application was marvellous, and no happier woman could then be found. I then proceeded to try the same procedure in other cases of acute amygdalitis, also with happy results.

The method of application is simply to saturate a long camel's hair brush with the tincture of iodine, and rapidly brush over the inflamed area, *i.e.*, tonsils, pharynx, uvula, fauces, etc. Should the patient experience intense burning after two minutes, a gargle of plain warm water suffices to relieve the condition. If the patient does not experience the burning, I usually apply the remedy a second time, from three to four minutes after the first application.

The results, in my hands, have been marvellous. Patients who had considerable pain were relieved and those who could not sleep, eat, or drink, were also relieved within five minutes.

In sixty-eight cases of acute catarrhal and follicular amygdalitis treated by this method within the past two years, I can only report the most gratifying results. Relief from the distressing symptoms was observed within five minutes after the application of the remedy to the inflamed area in every case ob-

served. The intense redness and swelling also became considerably decreased within five minutes. The remedy is the most powerful antiphlogistic in acute inflammatory conditions of the throat that I am acquainted with.

When the inflamed area, after twenty-four hours, had shown much improvement with a tendency toward a rapid cure, the application of the tincture of iodine was not repeated. In some of the cases nothing else was done; in others, the usual throat remedies appropriate to the disease were prescribed. When the drug has been applied very early in the disease, I have succeeded in aborting an apparently intense amygdalitis. In acute pharyngitis and uvulitis the tincture of iodine also acts admirably. In suppurating or phlegmonous amygdalitis the application of the tincture of iodine has given relief to the intense pain, partially reduced the swelling, and has apparently hastened the rupture of the abscess. Six cases have been thus far so treated by me.

In reviewing the literature I fail to find any mention of the use of the tincture of iodine in acute catarrhal or follicular amygdalitis. The most striking of the sixty-eight cases of acute amygdalitis are detailed below:

CASE I.—The patient, a man, aged twenty-three years, developed an acute attack of amygdalitis. He was unable to swallow and complained of intense pain in the throat and head. At times he became delirious. The groans of the patient were pitiable and he pleadingly begged for some relief. The picture of intense suffering could not be adequately described. The left tonsil was intensely inflamed and swollen, filling the left side of the throat and touching the uvula. The right tonsil was also inflamed, but to a less degree. The pharynx and soft palate were also inflamed.

With some difficulty the tincture of iodine was profusely applied to both tonsils (but more to the left one), pharynx, and soft palate. A second application of the drug was made in three minutes.

Five minutes after the first application the patient exclaimed "Relief has at last come." Before I had made my retreat (twelve minutes later), the patient had drunk some hot milk and was in a sound and restful sleep, the first sleep that he had had for three days. No other treatment was employed and the patient made a rapid and uneventful recovery.

CASE II.—The patient, a boy, aged four years, was suddenly taken sick, and complained of a little pain in his throat. His temperature was 105.7° F., the pulse was 153, and the respirations were 56. There were delirium and extreme restlessness. His throat, and both tonsils, were only moderately inflamed; and there were quite marked dulness, small mucous râles, and diminished respiratory murmur and expansion over the whole anterior portion of the right lung. The diagnosis of acute amygdalitis and pulmonary congestion with threatening pneumonia was confirmed by Dr. Per Hebert. The tincture of iodine was painted rapidly over the entire surface of his throat, a gargle of warm water allowed after three minutes, and a fever mixture prescribed.

Early next day, expecting my little patient to have a well-developed lobar pneumonia, I found him, to my great surprise, sitting in a large chair crying to be given something to eat and allowed to run around the house as usual. His temperature, *per rectum*, was 100.6° F., pulse 93, and respirations 26. The dulness, mucous râles, and other signs of pulmonary congestion, had completely disappeared. No other treatment was prescribed and the boy made a very rapid recovery. Probably the application of the tincture of iodine, in aborting the attack of acute amygdalitis, relieved the pulmonary congestion.

CASE III.—The patient, a woman, aged thirty-two years, had a severe attack of acute amygdalitis, which was treated by five or six physicians with no relief whatever. She despaired of ever being relieved of her illness.

The application of the tincture of iodine was followed by marked relief soon after the patient left the office. The application was repeated twenty-four hours later. Other throat remedies were prescribed, but the good results obtained, the patient states, were "due to that marvellous swabbing medicine in the dark bottle." I am strongly inclined to think so likewise.

Conclusions.

1. The tincture of iodine is the most powerful antiphlogistic in inflammations of the throat.
2. Its action is very rapid, relief being often experienced within five minutes.
3. It has relieved the intense inflammation completely when all other throat remedies had absolutely failed to benefit.
4. Its use in sixty-eight cases of acute amygdalitis has been followed by marked benefit in every case.
5. The method of application is simple.

218 EAST FORTY-SIXTH STREET.

REVIEW OF A FEW CASES OF WOUNDS CAUSED BY BULLETS FROM REVOLVERS OF MODERATELY LARGE CALIBRE.

By J. HOBART EGBERT, A. M., M. D., PH. D.,

SURGEON TO THE NEW YORK AND HONDURAS ROSARIO MINING
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SAN JUANCITO, HONDURAS, CENTRAL AMERICA

In a Central American mining camp, where revolvers are more commonly worn than shoes, much opportunity is afforded the surgeon for observing the consequences resulting from wounds to the body produced by projectiles from this class of arms, and also—incidentally—more opportunity to treat these and other classes of wounds than the contract surgeon really appreciates.

It should also be stated that while there is constantly here maintained a large and up-to-date stock of drugs, surgical appliances, and dressings, we have here no beds for the care and nursing of the

sick and injured, no nurses—in a word, no other hospital facilities than the “out-patient” department comprised in the “*botica*,” or place where the medical and surgical supplies are kept, and where “*el médico*” treats, single-handed, but otherwise in truly “dispensary” manner, from 50 to 125 patients daily—combining in one the occupations of physician, surgeon, dentist, and pharmacist. Lacking a hospital, we are, of course, without an appointed operating-room, and, while we believe the results of our surgical work here do not require any defense, it might be said that operations performed and the after-treatment conducted in Central American huts, amid filth and a dearth of proper food and nursing, certainly might be more advantageously performed elsewhere, especially, when the surgeon is usually without assistants, except such as he may temporarily coerce into service from laboratory, machine-shop, or office. Nevertheless, we have here performed all sorts of surgical operations—including amputations, resections, and even laparotomies—with, as already stated, results that need no defense. Perhaps the general outdoor life of the people fortifies them for surgical tolerance, while our equable mountain climate and the unquestionable free ventilation of their dwellings may compensate in large degree for filthy surroundings and general unsanitary habits; but it might be added that these same do not prevent them from falling easy victims to pneumonia.

WOUNDS INVOLVING THE STOMACH.

CASE I.—In the evening of June 21st, a native lad, seventeen years of age, while handling his revolver—a cheap Smith & Wesson model of 0.38 calibre—accidentally shot himself. Entering just below the inferior margin of the costal cartilage of the eighth rib, an inch and a half to the left of the median line and almost on a level with the apex of the ensiform cartilage of the sternum, the bullet coursed outward, backward, and slightly downward, penetrating the anterior wall of the stomach and passing out between the tenth and eleventh ribs in the lateral space included between vertical lines drawn from the anterior and posterior margins of the axilla to the crest of the ilium. That the stomach was involved was shown by blood vomited by the patient during the first twenty-four hours after the injury, as well as by the apparent course of the bullet. As these natives are almost constantly eating fruit, sugar-cane, or something else when not sleeping or occupied with special labor, their stomachs must usually be more or less dilated. That the spleen was not involved seemed apparent from its not having undergone perceptible enlargement or inflammation, although this individual must have been blessed with a much smaller “bazo” than many of the natives of Central America, for the ball must have passed directly over and in close proximity to this gland, considering its normal relations. At all events, the patient made a good recovery in four weeks’ time. The treatment consisted in first cleansing the external wounds, dusting with iodo-

form, and “semi-sealing” with sterile cotton and adhesive plaster. Morphine was administered hypodermically to quiet the stomach and allay general irritation. During the first forty-eight hours no food was allowed by the mouth, and nutritive enemata were given. After forty-eight hours small amounts of milk and beef-tea (from the extract) were taken by the mouth, and this diet was adhered to for two weeks and then gradually extended. The external wounds were daily cleansed by injecting with bichloride solution, and good drainage was maintained at the posterior opening by lightly packing with iodoform gauze. Aside from a temperature ranging from 101° to 103° F. during the first seventy-two hours, recovery was uneventful.

CASE II.—In one of the main *calles* of our *pueblo*, about noon on April 22d, one miner shot another miner, firing, in rapid succession, five shots from an ordinary 0.38 calibre revolver, the shooting being distinctly heard by the writer. Only two of the bullets, however, reached their mark, one passing through the tip of the thumb of left hand, and another—or, possibly, the same one—entering the abdomen between the seventh and eighth ribs, three and a half inches to the left of the linea alba, and passing obliquely backward toward the posterior median line of the body, punctured the stomach, and, apparently, after involving the abdominal aorta, lodged in the spinal column. The man died within fifteen minutes after receiving the injury, death evidently occurring from extensive internal hemorrhage, as evinced by convulsive respiration and failure of the radial pulse before death.

The abdomen was not opened after death, but the course of the bullet was quite definitely determined by the introduction of a long bullet probe. That the stomach was punctured was readily shown by the extraction of acid gastric mucus through the external wound.

WOUNDS OF THE THIGH.

The two following cases are presented conjointly, not because, as it so happened, they were inflicted during the same week, but because they show how two injuries inflicted by very similar projectiles and involving apparently the same region, may have quite different consequences.

CASE III.—While affiliating with a group of native men, women, and children in *la casa* of a native workman who early that morning had been struck in the anterior parietal region of the head with a bar of iron wielded by a fellow workman, and who then lay on his couch unconscious and breathing Honduras air for the last few hours of his life—a circumstance here considered as demanding a roomful of sympathizers, most of whom drink all the *aguardiente* they can get—one native, who was decidedly in the state here known as “*bolo*,” drew an ordinary 0.38 calibre revolver and flourished it with a statement that he was going to shoot somebody. An associate, also more or less drunk, grabbed the wrist of the would-be assassin and (so declared the principals in the case, the natives in the room, as usual, seeing nothing of the affair!) a struggle for the weapon ensued, in which the owner of the revolver discharged it, sending the ball through the right thigh of the other “gentleman.”

The ball entered the anterior aspect of the thigh, a trifle outside of the median line, three inches and a half below the groin, and, passing backward, inward, and slightly downward, made its exit just below the inner aspect of the tuberosity of the ischium, and, having spent its force, was found by the writer in the pantaloons of the injured.

Naturally, from a consideration of its apparent course, there was a question as to whether the ball had cut the femoral artery or its congener the *profunda*, or had touched the femur, although it was evident that the latter had not sustained complete fracture, nor did the bullet show evidence of having encountered much resistance in its passage through the thigh. There was very little hæmorrhage from the anterior opening, although there was rather profuse bleeding from the posterior—evidently from branches of the long saphenous vein.

It was soon evident that the large arteries had escaped injury and that the projectile had passed to the inner side of femur, although both artery and bone must have been greatly endangered. The hæmorrhage from the posterior wound was controlled by plugging with gauze, and the after-treatment consisted in cleansing, free drainage, and the application of aseptic pads of gauze and cotton. The patient made an uneventful recovery, remaining in bed less than two weeks.

CASE IV.—While engaged in some midnight orgy, a native shoemaker was shot by a neighbor, the weapon used being a 0.38 calibre "long" Colt revolver. The bullet first passed through a wooden door an inch thick and then, entering the left thigh on its anterior aspect, six inches below the anterior superior spine of the ilium, coursed backward and made its exit from the posterior part of thigh on about the same horizontal plane with the point of entrance and in a vertical line drawn from the os calcis to the external aspect of the tuberosity of the ischium. The ball passed directly through the femur, causing a complete comminuted fracture and carrying a number of pieces of bone into the posterior wound, one of these being an inch and a half long and half an inch in its greatest width.

As the femoral artery had escaped direct injury, active operative measures were not immediately instituted. The wound was cleansed, all fragments of bone that could be reached were removed from the posterior aperture, and hæmorrhage was controlled. Lateral splints were applied, the entire leg was enveloped in cotton and bandaged from toes to groin, and moderate extension and cold-water irrigation were maintained. Although there was some tendency to swelling, causing undue pressure and necessitating loosening of the dressings, this passed off in a few days and the limb was treated on conservative principles for about two weeks, when pain and swelling again setting in demanded more active measures. The limb was opened from behind by a vertical incision following the outward course of the bullet, down to the bone. A few small fragments of bone were there encountered and one large, pointed, spiculum of bone, suspended at one end by periosteum was found driven into the flesh where the ball had left the bone. This latter, together with all other fragments, was removed—care being taken to preserve the periosteum. The ends of the bone were found quite well approximated and processes of re-

pair were going on. Gauze drainage was applied, the external wound was sutured, the limb was re-bandaged, the lateral splints were again applied, and moderate extension was maintained as before. The external wound healed without suppuration. The patient was kept in bed for six weeks, at the end of which time it was found that satisfactory union had taken place. There is scarcely perceptible shortening of the leg and there is excellent mobility in all the joints.

WOUNDS OF THE HEAD AND NECK.

CASE V.—On Monday morning, August 5th, while very drunk, T. B., about twenty-five years of age, was shot in the neck with a revolver of 0.38 calibre, the ball entering the right side on a level with the thyroid cartilage, just anterior to the common carotid artery, and, passing transversely backward and to the left, penetrating the right section of the thyroid body, touching, but not opening, the posterior walls of the trachea, passing through the œsophagus in front of the seventh cervical vertebra, and, going through the scalmi and the upper border of the trapezius on the left side, went out at the back of the neck about an inch and a half behind the left lateral line. The injury inflicted upon the tissues of the neck was certainly extensive. At the point of entrance there was very little hæmorrhage, nor was there any considerable bleeding into the œsophagus, but profuse hæmorrhage occurred from the point of exit—evidently resulting from injury to the posterior external jugular vein—which, after completely saturating the clothing of the entire left side of the body, was easily checked. Besides arresting hæmorrhage, cleansing the wound as far as was practicable, and covering the orifices with iodoform gauze, the entire neck was lightly enveloped in cotton and kept moistened with an opium lotion. But, in spite of all precautions, very active inflammation rapidly set in, the temperature advanced to 103.2° F. and the pulse to 120 at the end of forty-eight hours, deglutition became more and more difficult, respiration was more and more embarrassed, and the patient died at midnight of August 8th, about sixty-four hours after the receipt of the injury.

The writer has not had an opportunity to acquaint himself with the revelations of recent military statistics regarding the fatality of this class of bullet wounds, but he does recall that in a former edition of Wyeth's *Surgery* the following assertion is made: "A missile traversing the tissues of the neck laterally, and in front of the vertebral column, is apt to inflict fatal injury."

CASE VI.—One Central American, twenty-three years of age, having a score to settle with a neighbor, got his Winchester and began pumping lead at No. 2 at a moderate range. No. 2 was hit in the left arm and in the right side before he could take any active part in the shooting, and, although suffering from a considerable flesh wound of the left arm and a lesser one of the right side, he succeeded in drawing his 0.38 calibre revolver and in sending a ball at No. 1, which struck the latter just as he was in the act of firing another

shot. Fortunately for No. 1, the bullet from No. 2's revolver was projected a mere trifle too low to do him very serious injury, for as he stood with left arm extended and hand upon the fore-end of the rifle to support it, the bullet from No. 2's revolver first encountered his left wrist, touched the radius enough to lessen its force, but not with sufficient directness to break the bone, and lodged in his cheek, from which it was extracted by the writer. The wound in the wrist was clean, but of importance in that the bone had been grooved. That in the cheek was both deep and rather wide, as the ball had evidently ricocheted somewhat upon the radius. However, with free drainage, effected by iodoform gauze, and syringings with bichloride solution, both healed satisfactorily; that of the face quite readily, that of the wrist in about three weeks.

A consideration of the injuries inflicted by the rifle does not fall within the province of this report, but, though bloody and painful, both involved only soft tissues and were soon healed.

THE MARINE-HOSPITAL SERVICE'S YELLOW FEVER INSTITUTE.

We are indebted to Surgeon-General Walter Wyman for advance proofs of the following important announcement:

TREASURY DEPARTMENT,
OFFICE OF SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
WASHINGTON, D. C., September 13, 1901.

The Honorable, the Secretary of the Treasury:

SIR: I have to invite your attention to the subject of yellow fever, and to the discussions which have been published in the medical journals and in the daily press during the past few months regarding its transmission. The subject is one with which the U. S. Marine-Hospital Service, through legal responsibility, has been intimately associated since its reorganization in 1871, the publications of this Service being the chief residuary of the statistics and other facts pertaining to this disease. The annual reports are largely devoted to this subject. In 1889 a volume was published entitled *Yellow Fever, its Nature, Diagnosis, Treatment, and Prophylaxis, and Quarantine Regulations relating thereto*, consisting of contributions by medical officers intimately acquainted with the disease, either by scientific or clinical work. A volume was published in the same year containing a report of a commission of medical officers detailed by authority of the President to investigate the cause of yellow fever. The Service, through its national quarantine stations and cooperation with State and local stations, has many times prevented the introduction and, by its detention camps, the spread of the disease.

Within the last year a medical commission of the United States Army, operating in Cuba, has made a report, showing that the mosquito conveys yellow fever and declaring that this is the only method by which the disease is conveyed to man and that it is a particular species of mosquito only which thus transmits it. In their conclusions, it is stated that the cause of the disease is unknown. Based upon their findings, demands have already been made upon the Bureau for certain modifications of the quarantine

regulations, which, for the present season, the Bureau, with its deemed justifiable conservatism, has declined to make, but the matter will undoubtedly again be urged during the next season and it is incumbent upon the Bureau to have definite scientific grounds upon which either to modify its present regulations or to maintain them. On the one hand the Bureau has no desire to perform unnecessary labor, nor to impose unnecessary restrictions upon commerce, its traditional policy being to maintain a scientific quarantine and to impose no restraints upon travel or commerce not demanded in the light of science and experience. On the other hand the Bureau cannot, in the interest of commerce, remove time-honored measures without definite justification therefor.

Since the announcement of the findings of the above-mentioned army commission, the Service has continued the prosecution of its inquiries concerning this disease with special reference to the findings of this commission. This has been done not only in the hygienic laboratory, but by special orders transmitted to the officers assigned in April to the several fruit ports of Central America, to the medical officers in Cuba and Porto Rico, and to those at the southern quarantine stations of the United States. A number of reports have been received and published in the *Public Health Reports* containing facts of interest on the subject. To estimate these facts at their full value, to collect additional facts, and to give direction to future investigation, it has become necessary to devise a plan for a complete study of the subject in all its phases. This duty is incumbent on the U. S. Marine-Hospital Service by reason of the quarantine law of 1893, which provides for making the necessary quarantine regulations against this disease.

Section 4 of this law also requires—

That the Secretary of the Treasury shall also obtain, through all sources accessible, including State and municipal sanitary authorities throughout the United States, weekly reports of the sanitary condition of ports and places within the United States, and shall prepare, publish, and transmit to collectors of customs and to State and municipal health officers and other sanitarians weekly abstracts of the consular sanitary reports and other pertinent information received by him, and shall also, as far as he may be able, by means of the voluntary cooperation of State and municipal authorities, of public associations, and private persons, procure information relating to the climatic and other conditions affecting the public health. . . .

That public health work of this character is incumbent upon the Service is further shown by the act of Congress approved March 6, 1901, in which an appropriation is made for a new building for hygienic laboratory, U. S. Marine-Hospital Service, the function of this laboratory, as stated in the law, being for the investigation under the Surgeon-General of contagious diseases and matters relating to the public health.

Moreover, Congress has provided a fund for the prevention of epidemic diseases which may well be applied to this investigation, as there is no epidemic disease of greater importance as affecting the United States than this one.

In view of the foregoing facts, I have prepared and submit herewith a plan for the organization of a yellow fever institute in the U. S. Marine-Hospital Service, whose object will be to collect all facts concerning yellow fever, to designate the specific lines of investigation to be made, and to make the investigations. The members of this institute are to be the medical officers of the U. S. Marine-Hospital Service, and others specially qualified. They will be assigned for duty to one of four sections, each section having a special list of topics for consideration. Each of the four sections will be under the direction of one of the medical officers on duty in this Bureau and said Bureau officers, with the director of the hygienic laboratory, the Surgeon-General, and a secretary, will constitute an executive board, which is to have general oversight of all the investigations. This furnishes a convenient method of administration, as the machinery of the institute will be readily operated in the Bureau, while the actual work will be carried on by members at various places.

At present the Service work on yellow fever is being conducted by a limited number of officers working on more or less independent lines. The institute provides for observation and experiment by a large number of workers in accordance with a general system—in fact, organizing and coordinating the work that has been going on and which is to be done.

The stimulus to the members will be not only the scientific interest in the subject, but the publication of their contributions in the shape of bulletins as often as it seems advisable to the board; and with the Department facilities and necessary funds for incidental expenses, it is believed that the organization will meet with a degree of success warranting its existence.

To illustrate the workings of the commission, in addition to the scheme of organization, there is enclosed a series of topics proposed for investigation in each of the four sections. Respectfully,

WALTER WYMAN,

Supervising Surgeon-General U. S. M.-H. S.

Approved September 25, 1901.

O. L. SPALDING, Acting Secretary.

Organization—Yellow Fever Institute—U. S. Marine-Hospital Service.

Object.—The object of the institute is to collect all facts concerning yellow fever; to designate the specific lines of inquiries to be made, and to make them.

Officers.—The Surgeon-General of the U. S. Marine-Hospital Service, ex-officio, chairman of the institute; secretary, the medical officer in charge of the bureau division of scientific research.

An executive board to consist of the chairman and secretary, the director of the hygienic laboratory, and the medical officers in charge of the following bureau divisions, viz., division of domestic quarantine, division of foreign quarantine, and division of sanitary reports and statistics.

Duties of the Executive Board.—To direct the investigations, correlate the reports, and supervise publications.

Members.—Every medical officer of the U. S. Marine-Hospital Service and others specially qualified.

Sections.—A. History and Statistics. B. Ætiology. C. Transmission. D. Quarantine and Treatment.

Each section will be presided over by one member of the executive board. The chairman of each section will organize the work of the section, subject to the approval of the executive board. He shall direct operations and receive and classify its reports.

Members of the institute will be assigned to the class or classes for which they express a preference. These assignments, so far as medical officers of the U. S. Marine-Hospital Service are concerned, will be made with the approval of the Surgeon-General, and their duties under the direction of the section chairman shall not conflict with the regular duties and regulations of the U. S. Marine-Hospital Service.

Publication of the reports received from members will be made from time to time as determined upon by the executive board.

SECTION A.—HISTORY AND STATISTICS.

[Chairman of section. Surgeon in charge of Bureau division sanitary reports and statistics.]

Topics.—1. The early history of the disease. 2. Relation to the slave trade. 3. History of recent epidemics (since 1850). 4. Relation to modern sanitation, especially paving, drainage, etc., in cities. 5. Why did not New Orleans have it in early times while Boston did? 6. Mortality statistics. 7. Maps showing yellow fever zones. 8. Maps showing the infectible territory in the United States.

SECTION B.—ÆTIOLOGY.

[Chairman of section. The director of the hygienic laboratory.]

Topics.—1. The cause of the disease.

SECTION C.—TRANSMISSION.

[Chairman of section. Surgeon in charge of Bureau division of domestic quarantine.]

Topics.—1. The transmission of the disease by the mosquito. 2. Can any other mosquito than the *Stegomyia fasciata* carry the infection? 3. Is the progeny of the mosquito also infected? 4. How many generations? 5. Can the mosquito become infected by any other means than by sucking the blood of a patient sick with the disease? 6. Can the mosquito become infected by contact with the dried blood discharges or other infected materials upon fomites? 7. Can the disease be transmitted by any other means than through the mosquito? 8. Can the disease be conveyed by fomites, or through the air, soil, or water? 9. The geographical distribution of *Stegomyia fasciata* in relation to the disease. 10. Is the immunity enjoyed by certain localities due to the absence of this variety of mosquito? 11. A study of the life and habits of the stegomyia and allied species, especially with a view to their extermination.

SECTION D.—QUARANTINE AND TREATMENT.

[Chairman of section. Surgeon in charge Bureau division of foreign quarantine.]

Topics.—1. Is disinfection of baggage necessary to prevent the spread of the disease? 2. Is any treatment of baggage necessary? 3. Mosquitoes in baggage, in merchandise, in cars, in ships. 4. Treatment of the patient. 5. Guards against mosquito bites. 6. Immunity of individuals, of races. 7. Individual prophylaxis. 8. Communal prophylaxis—sanitation.

Therapeutical Notes.

Picric Acid in Small-pox.—J. F. Romero (*Cronica Medica Mexicana*, August 1st; *Clinical Journal*, September 18th), says that in 162 cases of small-pox, 46 recovered without noticeable scars, and 101 without a single trace of pitting. All had been treated with picric acid applied as a lotion or in a salve, and pitting occurred in only 15 cases. The picric acid probably acts, he says, by destroying the pyogenic germs that may find their way into the pustules. In a number of cases the confluent pustules covered the exposed parts of the body and the legs, but under the picric acid they subsided without a trace. In many instances he noted the coincidence that other members of the family failed to contract the small-pox from patients duly treated with picric acid. His formula for the lotion is 2 grammes of picric acid in 15 grammes of alcohol and 185 grammes of water.

The Treatment of the Vomiting of Pregnancy.—Professor C. Cristeanu, of the University of Bucharest, in a paper specially translated for the *Medical Press and Circular*, for September 18th, gives the following treatment, which has proved successful in his hands in three cases of simple vomiting of pregnancy, though it failed in cases in which the vomiting was due to other causes than the pregnancy itself:

Mixture of chloroform, water, cocaine, and twenty drops of tincture of belladonna, gargles with Vichy water, warm baths, friction of the skin with aromatized alcohol, and *one drachm of carbonate of lithium* in a mixture given internally each day. Seven days afterward the vomiting ceased and the ptialism also. After ten days the patient left the hospital.

The Chronic Diarrhœas of Childhood.—Dr. J. Park West (*International Medical Magazine*, July) gives the following formula:

℞ Ammonium chloride. . . . from 1 to 1½ drachm;
Fluid extract of senna. 2 drachms,
Fluid extract of xanthoxylum. . . . 6 "
Fluid extract of licorice. . . from 4 to 6 "
Distilled water. . . enough to make 3 ounces.

M. A teaspoonful every four hours for a child two years old. It is essential that a recent preparation of xanthoxylum be used.

Cocoa-nut Water as a Diuretic is said by Dr. Francis J. Shepherd (*Montreal Medical Journal*, August) to be much recommended in Cuba. It is only used when clear and limpid in the green cocoa-nut.

The Treatment of Phlebitis.—M. Edgar Herz (*Journal des praticiens*, August 10th) has obtained good results from the following ointment:

℞ Ichthyol. 150 grains;
Lanoline, } of each. 750 "
Vaseline, }

M.

When the phlebitis is of gouty origin he uses the following:

℞ Powdered colchicum seeds. 15 grains;
Syrup of marshmallow. 45 "
Extract of digitalis. 6 "

M.

Make into twenty pills. One may be taken daily.

Calcium Chloride for Menorrhagia.—According to the *Journal de médecine de Paris* for August 4th, Lafond prescribes calcium chloride in daily amounts of from 22½ to 30 grains *per os*, using the following formula:

℞ Calcium chloride. 135 grains;;
Syrup. 2 ounces;
Water. 6 "

M. A soup-spoonful of this mixture may be taken twice a day for about eight days. It is advantageous to prescribe it about a week before the expected period. The pills of M. Dalché, the formula for which follows, may be prescribed concurrently for three or four days before the period and continued throughout the flow, three being taken daily:

℞ Ergotine. 1½ grain;
Quinine sulphate. 0.30 of a grain;
Powdered digitalis. 0.15 "
Powdered cola. a sufficiency.

M. To make one pill.

For Cholera Infantum.—Dr. W. Blair Stewart (*International Medical Magazine*, July) recommends the following in cases complicated with nausea and vomiting:

℞ Calomel. 1/10th of a grain;
Powder of ipecac and opium 1/10th "
Bismuth subgallate. 1 grain.

M. ft. pulv. One such powder to be taken every half hour or hour.

At the same time apply a mustard plaster (mustard, one part; flour, four parts, mixed with tepid water and white of egg) over the epigastric region, and keep it there as long as it can be borne. Keep the child absolutely quiet and strictly avoid food, water, and liquids. A small piece of ice may be placed in the mouth, or, if the child is too young, the ice may be wrapped in a cloth and the child permitted to suck it. If vomiting still continues, teaspoonful doses of cold lime water may be found to relieve, but, if this fails, the stomach should be washed out directly, or indirectly by forcing the child to drink a large quantity of hot water to which has been added bicarbonate of sodium (from 20 grains to ½ a drachm). Usually this will either be promptly vomited or retained, and will quiet the patient.

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THE CASE OF THE LATE PRESIDENT
MCKINLEY.

As we go to press, the "official" report of the case has not yet been received. Though it is to be regretted, we can well understand that the delay is unavoidable. Nothing from a responsible source has yet been published that conflicts with the account that we printed in our issues for September 14th and 21st, and nothing that adds to it any material information. For that painstaking and graphic report we shall ever feel indebted to the writer, an eminent physician of Buffalo. We have to acknowledge also the courtesy of the editor of the *Buffalo Medical Journal* in sending us advance proofs of that journal's articles on the subject, to be published in its October issue.

In our Buffalo contemporary there comes first a brief but graphic account of the operation, written by Dr. John Parmenter, professor of anatomy and clinical surgery in the University of Buffalo. Then there is a more elaborate account of the assassination, the operation, and the subsequent progress of the case by Dr. Nelson W. Wilson, the sanitary officer of the Pan-American Exposition, who acted as recorder during the operation. Dr. Wilson's thrilling narrative is illustrated with excellent portraits of several of the surgeons connected with the case and with a number of other pictures.

Editorially, our contemporary refrains from commenting on the professional aspects of the case. "We cannot be personal," it says, "or make invidious distinctions here, but to all the surgeons and physicians who served in the President's case our gratitude is tendered. Each played his part well; all share the honor of having used a combined skill and judgment rarely equalled and never excelled, and none should

be exalted or belittled above or below a common meed of praise that each alike is entitled to receive." It administers the following dignified rebuke to carping commentators: "We leave the long-distance critics a clear field for the exercise of their talents. Buffalo is too deeply grieved that she has become even the innocent cause of the President's death to pay heed to idle or unkind remarks concerning the physicians who so creditably performed their parts, and who did all that human skill could do to save a life so precious to the nation."

The comments of our British contemporaries have begun to reach us, and they are most gratifying, attesting as they do the profound respect in which Mr. McKinley was held in the United Kingdom, as well as here, and the conviction that nothing was left undone that could possibly have contributed to averting the fatal issue. The *Lancet* for September 21st says: "In no part of the body are sinister surprises more likely to be met with than in the abdomen. Patients who have progressed, and are progressing, most favorably cannot be considered to be out of danger until they have ceased to be patients. The dangers and pitfalls are many. Great as is our knowledge to-day of the injuries of the abdomen, many as are the resources of the surgeon, skilful as may be his operations, yet there are elements in any case of abdominal injury which may render in vain all his knowledge, his resources, and his skill."

The *Medical Press and Circular*, in its issue for September 18th, suggests that the fatal result "appears to have been due to uræmia, precipitated, in all probability, by a laceration of one organ caused by the bullet." As we have already said, we attribute very little importance to the wound of the kidney, and we will add now that the history of the case does not, to us, point to the existence of uræmia. We must refrain from further comment till the "official" report is received.

THE MARINE-HOSPITAL SERVICE'S YELLOW
FEVER INSTITUTE.

The United States Marine-Hospital Service, while performing satisfactorily and creditably its specific duties, some of its individual officers having occasionally had to face indignity and malignant criticism, has certainly done in the past all that could reasonably have been expected of any branch of the public service in the advancement of the science and

art of medicine, and it may, we are confident, be depended upon to keep on in the good work. As an earnest of this, we have only to call attention to an extract from the *Public Health Reports*, published elsewhere in this issue of the *Journal*, relating to the Service's Yellow Fever Institute. The establishment of the institute will, we feel sure, hasten materially the day of our mastery over a disease that has repeatedly paralyzed commerce and social intercourse in extensive districts of our country for weeks and months together. If this forecast is borne out, it is not unlikely, we learn, that the same method will be adopted in the investigation of such other destructive infectious diseases as tuberculosis, typhoid fever, malarial disease, etc.

We learn that competent observers among medical men who are not in official life will be freely invited to cooperate with members of the corps who are assigned to duty in the work of the institute, the idea being to make the working and consulting body as large as is consistent with the retention of sufficient central control to prevent the enrollment of any unworthy person and of those who might simply seek for enrollment for the sake of being considered as attached to the Service in this indirect way. In addition to physicians, moreover, our consuls all over the world will, it is expected, aid in the work of the institute. A more effective form of "collective investigation" it would be difficult to imagine. We are sure that the plan will commend itself warmly to the medical profession of the entire country. We look to it confidently to cut short the days of the "shotgun quarantine."

THE MISTLETOE IN MEDICINE.

The European mistletoe, *Viscum album*, has long been credited with diverse medicinal properties. The ancients, according to Pliny, prescribed it as a remedy for sterility and employed its glue (bird-lime) as a maturant, as a discutient, and as an emollient. Not many decades ago the young branches figured among the drugs in common use in the treatment of epilepsy. In more recent years the plant has been employed as a remedy for amenorrhœa and more particularly as a uterine hæmostatic and as an oxytocic, being thought to act somewhat like ergot, although inducing intermittent rather than tonic contraction of the muscular fibres of the uterus. It is generally considered inferior to ergot, and we

imagine it is now but little used for any medicinal effect. Whatever virtues it may have seem also to be possessed by the American mistletoe, *Viscum (Pharadendron) flavescens*.

Apparently, however, a new medicinal property has been discovered in the mistletoe by M. Deguy, who began his investigations four years ago in the hospital service of M. Huchard and that of M. Labadie-Lagrave (*Journal des praticiens*, June 22d). It is in cases of albuminuria that M. Deguy thinks he has found the plant useful. He gives daily one or two claret glasses of a filtered infusion of the plant in white wine, or the powder in daily amounts of from fifteen to thirty grains, but he prefers the extract made into pills, with the addition of a little tannin, each pill containing a grain and a half of the extract, and five or six pills to be taken daily. When, under the influence of a milk diet, he says, the percentage of albumin in the urine has been brought as low as that diet is capable of rendering it, a still further reduction is attainable by the use of mistletoe. Moreover, if the drug is employed concurrently with the milk diet from the outset, the diminution of the amount of albumin voided with the urine seems to be hastened. This impression he has acquired from comparative observations of different attacks in the same patients. He warns the reader, however, not to infer that mistletoe is a remedy of remarkable powers (*un médicament héroïque et providentiel*); it is simply one from which some good effect may be expected and one that is not at all dangerous. To do away with the structural changes in the kidney on which grave albuminuria depends is doubtless beyond the power of drugs, but this fact should not forbid the employment of palliatives, and it is to be hoped that M. Deguy's trials of mistletoe may be extensively repeated.

A SPECIAL FORM OF CHRONIC INFANTILE DYSPEPSIA.

In our issue for January 12th, on page 77, we gave an abstract of an article, by E. Weill and M. Péhu, on a gastric "syndrome" observed in nurslings, published in the *Lyon médical* for December 9, 1900. The affection is characterized by vomiting occurring regularly in from fifteen minutes to half an hour after nursing. The vomiting is easy, and the vomited matter has no odor and shows no sign of fermentation. Save for a moderate loss of flesh, the

vomiting is practically the sole symptom. There is no intestinal disturbance and there are no signs of poisoning with material absorbed from the digestive tract. The child's appetite is normal or even exaggerated.

We doubt if many of our readers will think that there is anything new in this "syndrome"—a particularly inappropriate name, it seems to us, for an affection manifested by one symptom only—and perhaps the authors do not mean to imply that it is new; but we think it of interest to note the explanation of the trouble given by an anonymous writer of a "*revue générale*" which appeared in the January number of the *Revue mensuelle des maladies de l'enfance*. It appears that Weill and Péhu ascertained that the process of digestion was much slower than natural; at the end of two hours and a half, three hours, and even four hours they were able to withdraw from the stomach an abundance of coagulated milk, whereas, says the *Revue's* writer, the stomach is normally almost completely empty at the end of an hour and a half. Moreover, the gastric acidity attendant on digestion was maintained for a much longer period than is normal, although the presence of free hydrochloric acid does not seem to have played a leading part in the phenomena.

Starting with these facts, the commentator propounds the following theory: Gastric retention is directly dependent on abnormal slowness of digestion. The digestive process being prolonged, from whatever cause, the pylorus remains closed, and there is almost complete stagnation of the gastric contents. When next the child nurses, the stomach is so full that it cannot contain all the milk swallowed, and a portion of it is rejected. Possibly the sensitiveness of the gastric mucous membrane peculiar to the nursling contributes to the muscular act of vomiting and to the spasmodic closure of the pyloric orifice. There is neither apepsia nor hypopepsia; the digestion is abnormal only in its slowness. The contents of the stomach do not ferment, the vomited material has no butyric odor, and the child is in no wise poisoned by the leucomaines which might be generated in the course of a digestion truly insufficient from the chemical point of view. The closure and spasm of the pylorus are only partial; a certain amount of chyme passes into the intestine, where it undergoes a normal transfor-

mation, and there is no diarrhœa. But only a portion of the milk ingested reaches the intestine and is assimilated; hence the child loses flesh.

In their two cases Weill and Péhu promptly achieved excellent results by washing out the stomach with tepid water before each nursing and by directing that the child be allowed to nurse only once in about three hours. But, says the *Revue's* writer, lavage of the stomach is not always acceptable to the family, and on this account Weill and Péhu recommend alkalies and narcotics as substitutes in certain cases. They add that warm wraps have a salutary effect.

PRECIPITATE LABOR.

Most of the text-books of midwifery pay some attention to the subject of precipitate labor, but we do not remember to have met with a systematic consideration of it in any of them. Recently, however, it has been studied quite thoroughly by J. Bayer (*Sammlung klinischer Vorträge*, n. F., No. 289; *Centralblatt für Gynäkologie*, August 31st). According to his investigations, while syphilis, pulmonary consumption, febrile intestinal catarrh, and chronic bronchial catarrh are predisposing causes, other conditions go hand in hand with them. The foetus need not be particularly small. Precipitate labor is more frequent in multiparæ than in primiparæ, which is not to be wondered at, but, curiously enough, it is found to be the commonest of all in second confinements. In primiparæ, although relatively infrequent, it is still far from rare, and its occurrence is thought by the author to be connected with the illegitimate character of many first pregnancies. Among the exciting causes are rapid escape of the liquor amnii and undue shortness of the umbilical cord, the latter condition leading to traction upon the placenta and thus heightening the energy of the uterine contractions. The size of the mother's pelvis as compared with that of the child's body is of self-evident significance as a cause. Precipitate delivery is often followed by fainting, and the mother's life is imperilled by the hæmorrhage consequent on the associated uterine relaxation, and hæmorrhage is further favored by traction on the placenta giving rise to its partial or total separation. Injuries to the soft parts are extraordinarily common, and the puerperal period is attended with fever, but it is often normal if hands or instruments have not been inserted into the genital canal.

The Virchow Dinner, to celebrate in New York the eightieth birthday of the veteran pathologist by his pupils, friends, and admirers, will take place on Saturday, October 12th. under the chairmanship of Dr. William Osler, of Baltimore.

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general, during the week ending September 28, 1901:

Smallpox—United States.

California....	San Francisco..	Sept. 1-15..	4 cases.
District of Columbia....	Washington....	Sept. 14-21..	9 cases.
Massachusetts....	Boston.....	Sept. 14-21..	9 cases.
Michigan.....	Detroit.....	Sept. 14-21..	1 case.
New Jersey.....	Newark.....	Sept. 14-21..	16 cases.
New York.....	Elmira.....	Sept. 14-21..	2 cases.
"	New York.....	Sept. 14-21..	3 cases.
Pennsylvania....	Lebanon.....	Sept. 8-15..	5 cases.
"	Philadelphia....	Sept. 14-21..	38 cases.
Wisconsin.....	Green Bay....	Sept. 15-22..	1 case.

Smallpox—Foreign.

Belgium.....	Antwerp.....	Aug. 31-Sept. 7.	4 cases.
"	Ghent.....	Aug. 31-Sept. 7.	1 death.
Brazil.....	Rio de Janeiro..	Aug. 4-18..	114 deaths.
Colombia.....	Panama.....	Sept. 9-16..	12 cases.
Egypt.....	Cairo.....	Aug. 26-Sept. 7.	1 death.
France.....	Paris.....	Aug. 24-Sept. 7.	10 deaths.
Gt. Britain.....	Edinburgh.....	Aug. 31-Sept. 7.	1 case.
"	London.....	Aug. 31-Sept. 7.	22 cases.
India.....	Bombay.....	Aug. 20-27..	8 deaths.
"	Calcutta.....	Aug. 18-24..	1 death.
"	Madras.....	Aug. 10-23..	2 deaths.
Italy.....	Naples.....	Aug. 24-Sept. 7.	19 deaths.
Nova Scotia....	Halifax.....	Sept. 14-21..	26 deaths.
Russia.....	Moscow.....	Aug. 24-31..	9 cases.
"	St. Petersburg..	Aug. 24-31..	1 death.
Spain.....	Madrid.....	June 17-July 15.	4 cases.
"	Malaga.....	Aug. 31-Sept. 7.	6 deaths.
"	Valencia.....	Sept. 3-10..	5 deaths.

Yellow Fever.

Brazil.....	Rio de Janeiro..	Aug. 4-18..	2 deaths.
Costa Rica....	Port Limon....	Aug. 1-Sept. 14	6 deaths.
Cuba.....	Havana.....	Sept. 7-14..	12 cases.
Mexico.....	Merida.....	Aug. 24-31..	1 case.
"	Progreso.....	Aug. 24-31..	Several cases.

Cholera.

India.....	Bombay.....	Aug. 1-27..	4 deaths.
"	Calcutta.....	Aug. 18-24..	10 deaths.
"	Madras.....	Aug. 10-23..	201 deaths.
Japan.....	Yokohama.....	Aug. 18-24..	1 case.
Straits Settlements.	Singapore.....	July 27-Aug. 3..	1 case.

Plague—United States.

California....	San Francisco..	Aug. 29-Sept. 20	4 cases.
			2 deaths.

Plague—Foreign.

China.....	Hongkong.....	Aug. 3-10..	10 cases.
India.....	Bombay.....	Aug. 20-27..	12 deaths.
"	Calcutta.....	Aug. 18-24..	203 deaths.
"	Karachi.....	Aug. 11-25..	32 deaths.
			8 cases.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending September 28, 1901:

DISEASES.	Week end'g Sept. 21		Week end'g Sept. 28	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever....	122	21	170	24
Scarlet fever....	65	2	64	4
Cerebro-spinal meningitis....	11	3	11	3
Measles.....	50	1	37	3
Diphtheria and croup.....	155	29	134	21
Small-pox.....	3	1	5	2
Tuberculosis.....	283	159	255	139
Chicken-pox.....	5	0	5	0

Society Meetings for the Coming Week:

MONDAY, October 7th.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vermont, Medical Association; Providence, Rhode Island,

Medical Association; Hartford, Connecticut, Medical Society; South Pittsburgh, Pennsylvania, Medical Society; Chicago Medical Society.

TUESDAY, October 8th.—New York Academy of Medicine (Section in Genito-urinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark (private) and Trenton, N. J., Medical Associations; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club of Richmond, Kentucky; Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, October 9th.—New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Massachusetts, Medical Association (private); Philadelphia County Medical Society.

THURSDAY, October 10th.—Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Massachusetts, Medical Club (private); Pathological Society of Philadelphia.

FRIDAY, October 11th.—New York Academy of Medicine (Section in Neurology); Yorkville Medical Association, New York (private) Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y. (anniversary).

SATURDAY, October 12th.—Obstetrical Society of Boston (private).

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending September 28, 1901:

ASSERSON, F. A., Assistant Surgeon. Detached from the Naval Hospital, Cavité, and ordered to the *General Alava*.

ASSERSON, F. A., Assistant Surgeon, and **BACKUS, J. W.,** Assistant Surgeon. Ordered to the Naval Hospital, Cavité, P. I.

BACKUS, J. W., Assistant Surgeon. Detached from the Naval Hospital, Cavité, P. I., and ordered to the *Brooklyn*.

BEBE, D. G., Assistant Surgeon. Detached from the *Marietta*, and ordered home to wait orders, when vessel is put out of commission.

BELL, W. L., Assistant Surgeon. Detached from the *Celtic* and ordered to the Naval Hospital, Cavité, P. I.

BURR, C. R., Assistant Surgeon. Resignation accepted to take effect September 25.

GROW, E. J., Assistant Surgeon. Detached from the *Castine*, when put out of commission, and ordered home to wait orders.

PECK, A. E., Assistant Surgeon. Ordered to the *Manila*.

SHIPP, E. M., Passed Assistant Surgeon. Detached from the Naval Hospital, Cavité, and ordered to the *Celtic*.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending September 28, 1901:

EBERT, RUDOLPH G., Major and Surgeon, will report at Vancouver Barracks, Wash., to relieve Lieut. Col. Joseph B. Girard, deputy surgeon general, from duty as surgeon at Vancouver Barracks only.

GRAY, WILLIAM W., Major and Surgeon, is granted leave of absence for one month.

HARTNETT, EUGENE H., First Lieut. and Asst. Surgeon, is assigned as a member of the board of the Army Building, New York City, for the examination of First Lieu-

tenants of the line of the army, with a view to their detail for duty in the Ordnance Department, vice First Lieutenant Allie W. Williams, Asst. Surgeon, relieved.

HODSON, F. A., Contract Surgeon, is granted leave of absence for twenty-one days.

PHELAN, HENRY DU R., Captain and Asst. Surgeon U. S. V., recently appointed, will proceed to Manila, P. I., for duty.

RICHARDSON, GEORGE H., Contract Surgeon, will proceed to Fort Apache, Ariz., for duty.

STAFFORD, H. EUGENE, Captain and Asst. Surgeon U. S. V. His resignation has been accepted.

WHITE, J. SAMUEL, Contract Surgeon, will proceed to Fort Assiniboine for duty.

A Medical Board to consist of Major William P. Kendall, (Surgeon); Captain Edward L. Munson, (Assistant Surgeon), and Contract Surgeon William C. Le Compte, is appointed to meet at the call of the senior officer thereof, at Fort Porter, to determine the physical fitness of such persons as may be ordered before it for appointment as Lieutenants in the Army.

MORHART, FREDERICK H., Captain and Assistant Surgeon U. S. V., on account of physical disability, has been honorably discharged.

GREENWELL, SAMUEL A., Contract Surgeon, is relieved from duty at Fort Clark, and will proceed to his home and report to the Surgeon General of the army for annulment of contract.

An Examination for the Position of Assistant Surgeon at the Freedmen's Hospital, Washington, D. C., will be held under the U. S. Civil Service Commission on October 29-30, 1901, in any city in the United States where postal free delivery has been established.

The examination will consist of the subjects mentioned below, which will be weighted as follows:

1. Letter-writing.	5
2. Anatomy and physiology.	10
3. Surgery and surgical pathology.	20
4. Chemistry, materia medica, and therapeutics.	10
5. Bacteriology and hygiene.	15
6. Theory and practice of medicine and general pathology.	25
7. Obstetrics and gynæcology.	15
Total.	100

The examination will be divided as follows: First day, first four subjects; second day, remaining subjects.

Age limit, twenty years or over. From the eligibles resulting from this examination it is expected that certification will be made to positions of assistant surgeon at the Freedmen's Hospital, Washington, D. C., at a salary of from \$1,000 to \$1,500 *per annum*, and to other similar vacancies as they may occur.

This examination is open to all citizens of the United States who comply with the requirements, without regard to race or to political or religious affiliations. All such citizens are invited to apply; but attention is drawn to the fact that the Freedmen's Hospital is an institution for the treatment of colored patients, and it is understood to be the practice of the department to appoint only colored persons to positions therein. Applicants will be examined, graded, and certified with entire impartiality and wholly without regard to any consideration save their ability as shown by the grade they attain in the examination. Persons who desire to compete should at once apply to the U. S. Civil Service Commission,

Washington, D. C., for application forms 304 and 375, which should be properly executed and promptly forwarded to the commission.

An Examination for the Position of Physician in the Indian Service, under the U. S. Civil Service Commission, will be held at various places throughout the United States, on October 22d, for the position of physician in the Indian service. The examination will consist of the subjects mentioned below, which will be weighted as follows:

1. Letter-writing.	5
2. Anatomy and physiology.	15
3. Chemistry, materia medica, and therapeutics.	10
4. General pathology and theory and practice of medicine.	25
5. Surgery.	20
6. Bacteriology and hygiene.	10
7. Obstetrics and gynæcology.	15
Total.	100

Information relative to the subjects and scope of the examination may be found in Section 125 of the *Manual of Examinations*, revised to January 1, 1901.

Age limit, twenty-five to fifty-five years. From the eligibles resulting from this examination it is expected that certification will be made to the position of physician in the Indian service, at White Earth agency, Minnesota, at a salary of \$900 per annum, and to other similar vacancies as they may occur. This examination is open to all citizens of the United States who comply with the requirements and desire to enter the service. All such persons are invited to apply, and applicants will be examined, graded, and certified with entire impartiality and wholly without regard to any consideration, save their ability as shown by the grade attained in the examination. Preference may be given to residents of the Indian service district in which the vacancy exists. Persons who desire to compete should at once apply to the U. S. Civil Service Commission, Washington, D. C., for application forms 304 and 375, which should be properly executed and filed with the commission prior to the hour of closing business on October 12, 1901.

Changes of Address.—Dr. Louis Heitzmann, to No. 110 West Seventy-eighth Street, New York city; Dr. Percy Fridenberg, to No. 114 West One Hundred and Twenty-sixth Street, New York city; Dr. A. Friedman, to No. 4 West Ninety-second Street, New York city; Dr. John F. Whitmyer, to No. 130 West Seventieth Street, New York city; Dr. George Schoeps, to No. 206 West One Hundred and Twenty-second Street, New York city; Dr. William Shannon, to No. 130 West Eighty-first Street, New York city; Dr. J. A. Kerrigan, to No. 886 St. Nicholas Avenue, New York city; Dr. J. C. Roper, to No. 204 West Seventieth Street, New York city; Dr. Frank Fielder, to No. 2 West Eighty-second Street, New York city.

The Medical Society of the State of New York will hold a semi-annual meeting in New York on Tuesday and Wednesday, October 15th and 16th. The proceedings will be strictly scientific.

A Ship's Surgeon to Celebrate His 500th Trip Across the Atlantic.—Dr. Lloyd Parker, of the American Line steamship *St. Louis*, when that liner sailed on September 25th, began his five hundredth trip across the Atlantic. On his arrival at Southampton he will celebrate the completion of five hundred trips between Europe and America by a dinner, at which he will entertain his fellow officers of the *St. Louis* and other friends, at the Southeastern Hotel, Southampton. Except that for six months of the Spanish War he, with many others of the officers and crew of the *St. Louis* and other American liners, served the United States against Spain, Dr. Lloyd has been continuously in the service of the company that is now the American Line for twenty-one years. Dr. Lloyd estimates that he has travelled 1,600,000 miles as a ship's surgeon.

Illinois Physicians Advance their Rates for Professional Services.—The physicians of Bloomington and McLean county, Ill., have entered into an agreement to advance the fees for professional services. The fee for day calls is now \$2 instead of \$1.50, and for night calls \$4 instead of \$3. The physicians affirm that they lose thousands of dollars annually from those who will not pay bills and also from the care of the poor whom they do not expect to pay. The scale, they say, is on a par with that in effect in other cities in the State, and the new list of prices is no more than patients in other cities pay. The McLean County Medical Society, which includes nearly all of the country physicians, has endorsed the advance and it is believed that all will adopt the new rate.

Governor Odell Seeks Greater Economy in the Maintenance of New York State Hospitals.—Ever since Governor Odell started upon his tour of investigation of the State hospitals for the insane there have been rumors that he had been much impressed by evidence of extravagance in their management. The governor himself has had nothing to say on the subject since last winter, when he stated, after studying the workings of the State Commission in Lunacy, that he thought the State could save about three quarters of a million dollars a year in caring for the insane. More economy than usual has been practised during the current year, and the commission rather prides itself upon the fact that the *per-capita* cost is decreasing and that there is a decided falling off in the expenditures for buildings, as the new State hospitals necessitated by the change from the county to the State-care plan are being completed. Without finding any fault with the economy thus far practised, the governor, it is understood, inclines to the belief that money spent for theatres in ten of the eleven State hospitals and for the erection of expensive separate buildings for the officers could be saved without impairing the quality of the service.

A Surgeon Appointed Adjutant-General to the State of New York.—Dr. Nelson Herrick Henry, of New York, will be the next adjutant-general of the New York State National Guard. Since the death of General Edward M. Hoffman, of Elmira, last spring, this office has been filled by As-

sistant Adjutant-General Frederick Phisterer, who will give way to the new appointee on January 1st, when Dr. Henry's term as assemblyman expires. This is the first time in the history of the State that a surgeon has been made adjutant-general to the governor. Dr. Henry first entered the State service as an assistant surgeon with the rank of first lieutenant, Twelfth Regiment, March 16, 1883. By June 23, 1888, he had been promoted to surgeon and major. On June 23, 1893, he was made assistant surgeon-general, S. N. Y., with the rank of colonel, and was honorably discharged on April 25, 1895. At the outbreak of the Spanish-American war, Dr. Henry was made surgeon of the National Guard with the rank of colonel, and, later, major and chief surgeon of division, United States volunteers. At the close of 1898 Dr. Henry went back again to the staff of Major-General Roe.

Professor Freer, of the University of Michigan, to be on the Philippine Board of Health.—Professor Paul C. Freer, of the general chemical laboratory of the University of Michigan, recently granted leave of absence for one year with the privilege of more, has left for the Philippines, where he will take supervision of a branch of the department of health which the government has established there. By action of the civil commission of the Philippine Islands, a government board of health has been established, with a commissioner of public health at its head. This board is to take charge of, and to execute the laws relating to, the public health of the islands, and is to make a special study of tropical diseases prevalent there. Special attention will be paid to the study of typhoid, malaria, dysentery, and plague, as the death rate in the islands from these diseases is higher than from any other, and the improvement of the existing sanitary conditions among the natives will be undertaken.

The American Public Health Association.—The twentieth annual meeting of the American Public Health Association was formally opened at Buffalo on September 17th. The principal address of the first morning session was that of Dr. Stephen Smith, of New York, the first president of the association, who spoke of the work which had been accomplished and the plans now under way. The rest of the session was devoted to the reports of officers and committees and the transaction of routine business. On motion of one of the delegates, the chairman was authorized to appoint a committee to draw up resolutions on the death of President McKinley. Dr. Liceaga, the director of sanitation in Mexico, paid an eloquent tribute to the late President. The election of officers resulted as follows: President, Dr. Henry D. Holton, of Brattleboro, Vt.; first vice-president, Dr. Walter Reed, U. S. army; second vice-president, Dr. Jesus Chico, of Guanajuato, Mexico; secretary, Dr. Charles O. Probst, of Columbus, Ohio; treasurer, Dr. Frank W. Wright, of New Haven, Conn.; members of the executive committee (to serve for two years), Dr. Gardiner I. Swartz, of Providence, R. I.; Dr. W. C. Gorgas, of Havana, Cuba; Dr. J. C. Schrader, of Iowa; member of the executive committee (to serve for one year), Dr. Fernando Lopez, of Mexico.

The American Academy of Railway Surgeons held its annual business meeting in Chicago on September 13th. The following officers were elected: President, Dr. A. S. Jonas, chief surgeon Union Pacific, Omaha; first vice-president, Dr. L. Sexton, Illinois Central, New Orleans; second vice-president, Dr. W. H. German, Chicago, Rock Island and Pacific, Morgan Park, Ill.; secretary and treasurer, Dr. T. B. Lacy, Chicago and Northwestern, Council Bluffs; editor, Dr. R. Howey Reed, Union Pacific, Rock Springs, Wyo.; member of executive board for four years, Dr. C. D. Evans, Union Pacific Railway, Columbus, Neb. The organization will hold its next annual meeting at Kansas City.

The Association of Hospital Superintendents.—The third annual convention of the Association of Hospital Superintendents took place at the Murray Hill Hotel, New York, on September 10th and 11th. Randolph Guggenheimer, president of the Municipal Council, on behalf of the city, welcomed the delegates, and while in the city they were officially entertained by Dr. D. T. Duryea, of the Kings County Hospital. John W. Keller, commissioner of charities, in an address referred to the refuges for the ill in this city as the finest in the western hemisphere. Dr. C. Irving Fisher, superintendent of the Presbyterian Hospital, discussed The Possibilities of a Hospital Superintendent's Personal Influence, and Dr. John Fehrenbach, of the Cincinnati Hospital, spoke of The Non-Resident Indigent Patient. He advocated national and State legislation to prevent the transportation of poor sufferers from one place to another in order to shift responsibility and expense.

The officers elected to serve during the ensuing year are Dr. J. T. Duryea, Kings County Hospital, president; Dr. Charles O'Reilly, Toronto General Hospital, vice-president; A. D. Shaw, Harper Hospital, Detroit, treasurer; Dr. D. T. Test, Pennsylvania Hospital, Philadelphia, secretary.

Among the cities represented at the conference were Philadelphia, Pittsburgh, Reading, and Hazleton, Pa.; Newark and Elizabeth, N. J.; Cleveland, Ohio; Atlanta, Ga.; Detroit, Mich., and Toronto, Canada.

Small-pox.—The small-pox scare in Boston has resulted in an order that all of the 6,000 employees of the Boston Elevated Railway Company shall be examined and vaccinated, if necessary. The company bears the expense of the work, which it will take three or four weeks to perform. A similar examination was made in 1894. The boards of health of the different municipalities in Essex county, outside of Newark, N. J., are considering the erection of an isolation hospital to be centrally located and to be used by the communities jointly. The Vailsburg Board of Health has taken the initiative and issued a public call for a general conference. It is estimated that a suitable structure can be erected for \$25,000.

Boston Physician Appointed a Captain in the British Army.—Interesting news was recently received in Boston by relatives of Dr. Frank E.

Rhodes, a popular young physician of that city. Dr. Rhodes left for South Africa some time ago and on his arrival there joined the British army as surgeon, and was recently given the rank of captain. His appointment as captain was signalized by a banquet tendered to him at Volksrust, where he is now stationed, by General Buller. Captain Rhodes was the guest of honor and was highly complimented by his British fellow-officers for his meritorious services. The late Adelbert Hay, son of Secretary of State Hay, and one time consul at Pretoria, was a close personal friend of Captain Rhodes, and it is said that through him the captain obtained his appointment. Captain Rhodes is reported to be working very hard and the report must be well founded, as he has about 3,000 soldiers to prescribe for. His health is good and he enjoys his surroundings. He does not expect to return to Boston for at least three years.

How a Chicago Surgeon Intends to Obtain Photographs for Illustrating Medical Work.—Dr. L. C. H. E. Zeigler, a surgeon of Chicago, promises to give \$50 each to all persons up to the number of 400 who will sign a contract bequeathing their bodies for a few moments' use under his knife and in front of his camera. Dr. Zeigler's extraordinary offer was made public through an advertisement. The physician says he has made an important surgical discovery in a method of operating painlessly and without the use of anesthetics. To set forth his discovery to the medical world he is writing a book. He needs 400 half-tone illustrations in the volume to show the practical applications of his theory. Having found it impossible to obtain satisfactory photographs of actual operations on living subjects, he says he intends to go through the motions on dead bodies, so the poses, incisions, and methods may be accurately displayed.

English Appreciation of the Skill of the Late President McKinley's Surgeons.—Sir James Crichton Browne, M. D., speaking at a large public banquet in London on September 26th, referred to a touching allusion made by the chairman, Mr. Morgan, M. P., to the death of President McKinley, and said that he was confident that he was expressing the unanimous opinion of the British medical profession when he declared that the surgeons who attended the late President of the United States showed the utmost skill at every stage and did everything possible to alleviate the sufferings and prolong the life of their illustrious patient. "American and British yachts may compete for victory," exclaimed Sir James, "but between American and British surgeons there is no rivalry, only mutual respect and good will."

The First Egyptian Congress of Medicine, which will be held at Cairo on December 10th, 11th, 12th, 13th, and 14th, under the patronage of his Highness the Khedive, has issued the following preliminary programme: Honorary presidents, Dr. Abate Pacha, Dr. Pinching, Dr. Ruffer; president, Dr. Ibrahim Pacha Hassan; secretary general, Dr. Voronoff; presidents of sections: Medical Sciences, Dr. Comanos Pacha; Surgical Sciences, Dr. H. Milton;

Ophthalmology, Dr. Mohamed Bey Eloui. Other sections will be created in due course.

Special attention will be paid to affections common in Egypt, bilharzia, ankylostoma duodenale, bilious fever, abscess of the liver, etc.

The following communications have been promised up to date: Abscess of the liver, by Dr. Cartoulis, Dr. Voronoff, Dr. Colloridi, Dr. Comanos Pacha, Dr. Legrand; Alcoholism and its Progress in Egypt, Dr. de Becker; Ankylostoma Duodenale, Dr. Loos, Dr. Ruffer, Dr. Sandwith; Bilharzia, hæmatobia, Dr. Goebel, Dr. H. Milton, Dr. Colloridi, Dr. Trekaki; Cardiopathy in Egypt, Dr. de Semo; Causes of Cecites in Egypt, Dr. A. Osborne; Dysentery, Dr. Cartoulis, Dr. Hess Bey, Dr. Crendiro-poulo, Dr. Engel Bey; Prophylaxis and Means of Combatting Epidemics, Dr. Bitter; Eunuchism (physiological notes), Dr. Abbate Pacha; Paludal Fevers, Dr. Dreyer, Dr. Fornario; Filariasis in Egypt, Dr. Madden; Haschisch Insanity, Dr. Warnock; Granular Conjunctivitis in Egypt, Dr. Lakah, Dr. Sameh Bey; Granular Conjunctivitis Among School Pupils, Dr. Eloui Bey; Herniæ in Egypt, Dr. Latis; Hydrocele in Egypt and Its Treatment, Dr. Colloridi; Medicine in Egypt and Among the Arabs, Dr. Eid; Medicine in Ethiopia, Dr. N. Parissis; Myxœdema in Egypt, Dr. Brossard; So-called Egyptian Ophthalmia, Dr. Démétriadès, Dr. Voilas, Dr. Sameh Bey; Purulent Ophthalmitis, Dr. Lakah; Plague, Dr. Gotschlich; Tuberculosis in Egypt, Dr. Ibrahim Pach Hassan, Dr. Eid, Dr. Sandwith.

Professor Alwin v. Coler, Surgeon-General, of the general staff of the German army, died on August 1st in Berlin, at the age of seventy. Professor von Coler was born in Gröningen in 1831. He entered the army in 1856, after passing through the academy for military physicians. He received his degree of M. D. in 1857, and in 1863 was appointed assistant surgeon and staff surgeon. He served during 1864 and in 1866 through the wars with Schleswig-Holstein and Bohemia, performing distinguished services in the medical corps. He was transferred to the Prussian medical corps in 1867 and in 1868 was nominated to the newly established medical department of the ministry of war. During the Franco-Prussian war he served as division surgeon of the first division. Was made a general staff surgeon in 1874, and took an active part in the reorganization of the military and sanitary departments of the German army, which took place in 1875. In 1889 he was nominated chief surgeon of the general staff of the army and chief of the sanitary corps. In this year he took an active part in a congress of hygiene and demography at Vienna. In 1889 he was created a member of the Superior Medical Privy Council, and in 1891 was given the rank of lieutenant-general with the title of Excellency. In 1892 he was nominated honorary professor by the University of Berlin. Professor von Coler was not only a distinguished scientist, but was an organizer of remarkable ability, and his services in the organization and administration of the military and sanitary departments of the army of a million men put into the field by Germany showed talent of the very highest order.

Births, Marriages, and Deaths.

Born.

PROBASCO.—To Dr. and Mrs. E. B. Probasco, Glens Falls, N. Y., on September 19th, 1901, a daughter.

Married.

AUSTIN—SALISBURY.—In Kansas City, Mo., on Thursday, September 19th, Dr. Robert Emmett Austin and Miss Lilian Salisbury.

BARHAM—RAYMOND.—In San Rafael, Cal., on Saturday, September 25th, Dr. Joseph H. Stapp, of Kansas City, and Miss Helen Raymond, of San Francisco.

BAUGHMAN—BALL.—In Georgetown, D. C., Wednesday, September 18th, Dr. Jacob S. Baughman, of Burlington, Iowa, and Miss Nannie Randolph Ball.

BLASUCCI—BRIGIDA.—In Italy, Dr. Ernesto S. L. Blasucci, of New York City, and Miss Maria Brigida, of Naples, Italy.

CONKLIN—WALLACE.—In Penn Yan, N. Y., on Tuesday, September 24th, Dr. W. L. Conklin, of Rochester, and Miss Agnes Wallace.

FITZGERALD—WINZELL.—In Salt Lake City, Utah, on Thursday, September 19th, Mr. Maitland J. Fitzgerald, of Lansboro, Minn., and Dr. Agnes Winzell, of San Francisco, Cal.

HARDEN—Dwyer.—In Newport News, Md., on Tuesday, September 24th, Dr. Albert S. Harden, of Baltimore, and Miss Josephine W. Dwyer.

JOHNSON—OLIVER.—In Shields, Pa., on Saturday, October 5th, Dr. Loren Bascom Tabor Johnson and Miss Frances Mary Oliver.

MOLZ—SHEA.—In St. Louis, Mo., on Tuesday, September 24th, Dr. Charles O. Molz, of Bedford, Ind., and Miss Marguerite Shea.

MCCHESNEY—GREER.—In Washington, D. C., on Wednesday, October 2d, Dr. James Willard McChesney and Miss Nellie Greer.

NEUMANN—VON LYNCKER.—In Brooklyn, N. Y., on Wednesday, September 18th, Dr. William F. Neumann, of New York, and Miss Ada A. von Lyncker.

STAPP—CHILES.—In Fort Osage, Mo., on Wednesday, September 25th, Dr. Joseph H. Strapp, of Kansas City, and Miss Emma S. Chiles.

Died.

EIGNUS.—In Kankakee, Ill., on Friday, September 20th, Dr. W. T. Eignus, of the insane hospital medical staff.

GILBERT.—In Sioux Falls, S. D., on Thursday, September 26th, Dr. F. R. M. Gilbert, in the seventy-ninth year of his age.

GRAY.—In Oak Park, Chicago, on Saturday, September 28th, Dr. W. C. Gray, in the seventy-first year of his age.

GUIBOR.—In Topeka, Kansas, Dr. C. H. Guibor, in the sixtieth year of his age.

MACNUTT.—In Philadelphia, on Saturday, September 28th, Dr. John S. MacNutt.

McKOWEN.—In Clinton, La., on Thursday, September 19th, Dr. John C. McKowen, of Jackson, La.

MORSE.—In Clinton, Mass., on Tuesday, September 24th, Dr. George M. Morse, in the eighty-first year of his age.

PRATT.—In Ottawa, Ont., Canada, on Thursday, September 19th, Dr. W. F. Pratt, in the thirty-fifth year of his age.

PURCELL.—In Sykesville, Md., on Tuesday, September 24th, Rev. James Bryan Purcell, M. D., rector of Old Trinity Church, Sykesville.

SHIVELEY.—In Philadelphia, on Saturday, September 28th, Dr. George Shiveley, in the seventy-third year of his age.

SHUTE.—In Jeffersonville, N. Y., on Sunday, September 29th, Dr. Percy J. Shute.

TREXLER.—In Kutztown, Pa., on Wednesday, September 25th, Dr. J. S. Trexler, in the seventy-first year of his age.

WHITEHORNE.—In Schenectady, N. Y., on Sunday, September 29th, Dr. Henry Whitehorne, aged eighty-six years.

Pith of Current Literature.

Medical Record, September 28, 1901.

A Matter of Interest in Blood Structure Study. By Dr. Woodbridge Hall Birchmore.—The author has contributed an article of great interest to the specialist. The blood-spreads under consideration were made from blood, still fluid, which had been effused into the great lymph space between the deep muscles of the neck of a turkey, consequent upon the cutting of the carotid artery by way of the mouth. The unusual condition of the nuclei of the red blood corpuscles is of special interest.

Report of a Case of Intracranial Tumor; Operation; Recovery. By Dr. William M. Leszynsky.—In this case a diagnosis was made of intracranial tumor of slow growth involving the leg and arm centres in the cortex of the right hemisphere. The operation by Dr. Glass is recorded in the following article.

Operative Procedure for Tumor of the Brain. By Dr. James H. Glass.—The case is recorded as an additional instance in which an intracranial has been accurately localized and successfully removed. The operation was performed two years ago, and the patient is now following his daily occupation as an accountant, the present condition of partial hemiplegia being the result of the destruction of brain tissue previous to the removal of the growth. A noteworthy feature in the case was the entire absence of headache or vomiting during the course of the disease.

The Prophylaxis of Tuberculosis. By Dr. Joseph Kucher.—The author regrets that the present edicts of boards of health confirm the public and many physicians in their preconceived ideas that it is more important to avoid the dangers of infection than to observe the most necessary hygienic precautions. He lays stress upon the importance of convincing the public: (1) That the tubercle bacillus is ubiquitous and that we cannot escape it. (2) That the bacillus is harmless until it finds a congenial soil. The same is true of some other bacteria. It was shown, some time ago, that ordinary bacteria in the blood circulation of animals affect the heart valves only when these are already injured. (3) That the human body offers a congenial soil when its vitality is undermined by one or the other of the many causes that are deleterious to health. (4) That there is no better, surer, and easier preventive against consumption than to keep the body proof against the tubercle bacillus.

The Home Management of Epilepsy. By Dr. R. H. Porter.—The author points out that, in the treatment of epilepsy, one of the greatest dangers to be feared is that from an unfavorable environment, and it is therefore important that each and every member of the family earnestly and persistently cooperate to make and maintain all the conditions, both mental and physical, most favorable for the recovery of the patient. The patient should be taught to cultivate moderation in diet and in all things, and he should be told to conduct his mind into proper channels and to repress his

morbid thoughts. The author speaks of the importance of those about the patient aiding him by an intelligent and active combination of their psychic powers to promote his recovery.

On the Origin of Retroversioflexio Uteri and its Pathological Dignity. By Dr. Samuel W. Bandler.—The author asserts that (1) Retroversioflexio *per se* is not a pathological condition. (2) The majority of retrodeviations are of congenital origin. (3) Where retroversioflexio without peritoneal, tubal, or ovarian complications, causes symptoms, an hysteroptosis must be taken into consideration, always bearing in mind the possibility of other physical states. (4) Prolapsus vaginæ and cystocele, while often associated with retrodeviations, are independent affections. (5) Where retroversioflexio is accompanied by severe local symptoms, these, if not due to peritoneal, tubal, or ovarian complications, may be corrected in the vast majority of cases without surgical treatment.

Treatment of Typhoid Fever. By Dr. Basil M. Taylor.

Medical News, September 28, 1901.

A Contribution to the Surgical Relief of Cancer of the Rectum: Revision of the Statistics to Date, with Special Reference to Sacral Extirpation. By Dr. Frank Le Moyne Hupp.—This is a statistical article of value and should be read in its entirety to be appreciated.

The Problems of Physiology and Pathology. By Dr. Martin H. Fischer.—The author believes that with the close of the nineteenth century the curtain has practically fallen upon cellular physiology and cellular pathology. The new century has to busy itself with a molecular physiology and a molecular pathology. Physical chemistry will take a more important place, and the study of enzymes will answer many questions. We must no longer assume the existence of a vital force. Physical chemistry has added a third form of matter, the electrically charged atoms and groups of atoms called "ions." A fourth form of matter—the "electrons"—dates from the discovery of the Röntgen rays. In the face of the fact that the physicist has not yet determined the constitution of matter, it is irrational to expect the physiologist to be acquainted with the constitution of living matter.

Intratracheal Injections in Bronchial and Pulmonary Troubles. By Dr. Willis S. Anderson.—From his own experience with this method the author concludes that, though it is of no advantage in acute bronchitis, at least during the congestive stage, it is of distinct advantage in subacute and chronic bronchitis, and of positive benefit in bronchiectasis. It is valuable in pulmonary tuberculosis, relieving many of the symptoms, especially those due to secondary infection. It quickly relieves the distressing symptoms of asthma; the amount of relief and the permanency depend largely upon the predisposing and exciting causes. It in no way interferes with other lines of treatment, and the author has never seen harm follow its use, although in a very few instances it excited severe coughing for a short time.

Presbyopia; Accommodation; Astigmatism. By Dr. Norburne B. Jenkins.

Philadelphia Medical Journal, September 28, 1901.

The Technique of Major and Minor Amputations. By Dr. Robert H. Cowan. —In a concisely written paper the author embodies the present-day views of amputation technics in the textbook manner. Of shock he remarks that, whatever its origin, it is essentially a condition of anæmia—due to external hæmorrhage or to slowness of the venous return, and consequent insufficient supply to the heart. The anæmia is an effect, however, and not a cause of shock. Nitrate of strychnine, hypodermically, is the drug *par excellence*, while nitroglycerin and nitrite of amyl are valuable on account of the rapidity of their action. Intravenous, or intracellular injection of a hot saline solution is possibly the best means we possess for combating shock. In the matter of amputation, the author's chief counsel is to go slowly—always in profound systemic shock, and not infrequently in the absence of systemic shock, in certain cases where we are in doubt as to the extent of injury to contiguous tissues.

Laceration of the Cervix Uteri. By Dr. Henry D. Beyea.—The author agrees with Emmet that at least one half of the ailments among those women who have borne children are to be attributed to laceration of the cervix uteri. If the examiner keeps in mind the conical or dome-shape of the normal cervix, he will usually recognize a laceration by digital examination. It is well to remember, however, that there usually coexist other lesions, repair of which is also necessary before perfect health can be restored. The author also calls attention to the importance of distinguishing as early as possible between bad laceration of the cervix uteri with sclerosis and eversion of the mucosa, and beginning carcinoma of the cervix.

A Report of Two Cases of Lymphangioma. By Dr. Vertner Kenerson.

Thrombosis of the Cavernous Sinus—Double Panophthalmitis of Septic Origin. By Dr. Edward Jackson.

One Morning's Work with Stomach Cases, etc. By Dr. Boardman Reed.

American Medicine, September 28, 1901.

The Technics of Cæsarean Section. By Dr. Matthew D. Mann.

Pelvic Indications for the Performance of Cæsarean Section. By Dr. J. Whitridge Williams.—Two hundred and seventy-eight cases of contracted pelves were noted in 2,123 consecutive cases of labor (13.1 per cent.) occurring in every fourteenth white, and every sixth black, woman. Spontaneous labor occurred in 71.58 per cent. of these cases, but decreased rapidly in frequency as the contractions became more marked. When the true conjugate measured between ten and nine centimetres, 77.28 per cent. ended spontaneously; between nine and eight centimetres, 61.54 per cent.; between eight and seven centimetres, 33 1/3 per cent.; and when seven or fewer centime-

tres, none ended spontaneously. In view of the present low mortality attending Cæsarean section, the indications for its employment should be broadened if the patient is uninfected and in suitable surroundings, the child in good condition, and the obstetrician a competent operator. The absolute indication should be extended from five centimetres and a half to seven centimetres, and the relative indication from seven to eight centimetres and a half in flat, and to nine centimetres in generally contracted pelves. In the interests of the child, in moderate degrees of pelvic contraction, forceps upon the movable head and version should be abandoned, and Cæsarean section performed if the head shows no sign of moulding and descent after one hour of second stage pains. The operation should not be performed for the relative indication in infected mothers, as, under such circumstances, perforation is the operation of choice, if delivery cannot be effected by high forceps or version; while if the absolute indication is present, the Porro-Cæsarean section should be performed.

The Place of Symphysiotomy as Contrasted with Cæsarean Section. By Dr. Charles Jewett.—When only a very little additional space is required for delivery, symphysiotomy is a suitable procedure, though axis-traction forceps, with the aid of posture, should always be tried before resorting to it. Its results would be much improved by restricting it to pelves with a conjugate of not less than seven centimetres and a half in simple flattening, or nine centimetres in general contraction. Within its proper field symphysiotomy is better than Cæsarean section for an operator of little experience in abdominal surgery.

Circumstances which Render the Elective Section Justifiable in the Interest of the Child Alone. By Dr. Edward Reynolds.—The author asserts that no man is justified in performing the Cæsarean section as a last resource late in labor, or upon infected or otherwise constitutionally ill women, for the sake of the child alone. However, at the beginning of labor on healthy women, the operation may be performed with even less risk to the mother and child than is involved in the performance of unusually difficult high forceps operations. A statistical report of twenty-three major operations is subjoined.

The Hygienic and Mechanical Treatment of Heart Disease. By Dr. Boardman Reed.

Journal of the American Medical Association, September 28, 1901.

An Improved Method of Treating High-seated Cancers of the Rectum. By Dr. Robert F. Weir.—The author believes that the depth of the wound the more or less jagged invasion of the peritoneal cavity, the possible difficulty of satisfactorily drawing down the upper portion of the bowel, and, finally, the trouble that is involved in the proper suturing of the preserved anal portion to the proximal end, render the Kraske operation troublesome and devoid of surgical neatness and precision. The author proposes an operation which is a modification of the abdominal method of operating by Maunsell's plan. Three cases are recorded.

The Present Status of the Carcinoma Question. By Dr. N. Senn.—In a very lucid and interesting article the author presents the subject of carcinoma in the light of the most recent research. If carcinoma is, as we have every reason to believe at the present time, the produce of an erratic cell proliferation beyond the limits of the influences which preside over and regulate normal tissue-growth, it appears rational to search for some remedy which would affect the parenchyma of the tumor in one of two ways: (1) An agent or agencies which would destroy the epithelial cells by causing speedy and early degeneration of them when imperfectly developed; (2) the employment of a local or general remedy or remedies possessing the power of converting embryonic into mature epithelial cells. Ligation of the principal arteries supplying the tumor tissue with blood, and the use of sclerogenic substances have been employed for the purpose of accomplishing the first object, but so far with only indifferent results. Very little has been done in transforming a carcinoma into a benign epithelioma. It is, however, not beyond the range of possibilities that future experiments and observations will open up a wide field of usefulness by the discovery of such agencies as will exert a beneficial or curative effect on the essential tumor elements by inciting degenerative processes, or by converting them into tissues of a higher, mature type.

Cirrhosis with Pigmentation. By Dr. Thomas B. Futcher.—The author presents briefly the history of this form of cirrhosis, the clinical symptoms and pathology of the disease, and the present views entertained concerning its ætiology.

Circulatory Disturbances Accompanying Hepatic Cirrhosis and Inosculation of the Portal Branches with the Systemic Veins. By Dr. Charles G. Stockton.—The author's paper is devoted to an exposition of facts which point to the conclusion that the passage of the portal blood into the general circulation, without having traversed the liver, is a source of toxæmia that produces definite symptoms. The normal blood pressure in the portal vein is low; when it is suddenly raised it is apt to be followed by symptoms of toxæmia, and these symptoms may be promptly relieved by purgation.

Röntgen Rays in the Treatment of Diseases of the Skin. A Review of Recent Literature and a Personal Experience. By Dr. William Allen Pusey.—The author is convinced that the active rays among the x-rays are practically identical with the rays at and beyond the violet end of the spectrum, and that, therefore, this method of treatment is identical in principle with that of Finsen.

Congenital Cystic Kidney. By Dr. William Jepson.

Gonorrhœa in Boys. By Dr. Abraham L. Wolbarst.

Prevention of Tuberculosis in Babies Born of Tuberculous Parents. By Dr. Clifton Scott.

The Ætiology of Paretic Dementia. By Dr. Frank Norbury.—Syphilis, according to the au-

thor, is the chief ætiological factor; infectious fevers with their toxic influences are contributing factors. Heredity is also potent.

A Case of Simple Fracture of Vault, with Meningitis on the Third Day. Autopsy. By Dr. Edward T. Alford.

Lancet, September 21, 1901.

Chronic Invalidism in Women, Its Causes and Cure. By Dr. W. S. Playfair.—In this article the author calls attention to the great value of the Weir Mitchell rest cure in cases of chronic invalidism in women. The causes of developed neurasthenia are very multifarious, but two elements that are rarely, if ever, absent, are defective nutrition and some form of mental or emotional disturbance. The phlegmatic or unemotional man or woman rarely becomes neurasthenic. The author reviews the various steps of the rest cure and lays special stress on the complete removal of the patient from her home surroundings. This is costly and unpleasant, but always necessary. Any attempt to "modify" the treatment almost certainly leads to failure. Massage is of the greatest importance, as enabling the patient to consume and assimilate the enormous quantities of food required to build up the wasted tissues. In ten days from the beginning of the treatment she should be consuming and digesting easily an amount of food that no healthy man could take. It is curious to see how, with returning health, functions that have long been imperfectly carried on become healthy.

The Occurrence of Green or Blue Urine and Its Most Frequent Cause. By Dr. F. P. Weber.—By far the most usual cause of green or blue urine is the ingestion, accidentally or otherwise, of methylene blue or some other aniline dye. Greenish urine is sometimes due to the presence of biliverdin or to carboloria; some poisonous plants also color the urine green. But where otherwise healthy persons pass green urine, it is generally due to their having eaten candy colored with methylene blue. The following is a summary of the characters by which a green or blue coloration of the urine may be recognized as due to methylene blue: 1. The earliest morning urine is the deepest colored. 2. The color varies from faint greenish-yellow to deep blue. 3. The color of the urine may sometimes be increased by boiling. 4. The color is only slightly lessened by filtration. 5. The urine is decolorized by adding caustic potash. 6. Ether does not take up the blue, while chloroform does. 7. The spectroscope shows an absorption band identical with that yielded by methylene blue. 8. Methylene blue is reduced and decolorized by the vital action of methylene blue.

Two Cases of Blackwater Fever. By F. Smith, L. R. C. P., With Pathological Notes by M. L. Taylor, M. B.—The authors report two cases of blackwater fever, both of which ran a rapidly fatal course. Autopsies were obtained in both cases. The liver, spleen, and kidneys were of a deep walnut color, due to the presence of a large amount of blood pigment. The pathological condition of the kidneys was apparently that of an

acute catarrhal nephritis. The mucous membrane of the stomach and jejunum was of a deep red color, and submucous hæmorrhages were present in the small intestines. The authors do not touch upon the question whether blackwater fever is a disease of itself, or whether it is due to quinine, to malaria, or to both in combination. In one of the cases here reported, no malarial organisms were ever found. In the other a few ring-like forms were found on one occasion.

The Pharmacology of Pyraconitine and Methyl-benzaconine Considered in Relation to their Chemical Constitution. By Dr. J. T. Cash and W. R. Dunstan, F. R. S.

Congenital Spontaneous Gangrene. By C. E. Richmond, F. R. C. S.—The author reports a case of spontaneous gangrene occurring in an infant. When born the child showed two areas of acute, dusky redness, one just below the occiput, and the other over the seventh cervical vertebra. These areas extended and sloughed, until the scalp and chest were entirely covered. The child died of exhaustion on the fifteenth day. The lesion was probably a trophic one from central nerve mischief, and not from any septic absorption.

A Case of Deformity Arising from Arrested Growth in One Limb Remedied by Exsection of Bone from the Other. By G. P. Newbolt, M. B.

Six Cases of Excision of the Larynx. By F. G. Harvey, F. R. C. S.—The author describes in detail the operation for complete excision of the larynx, and reports six cases in which the operation was performed by himself. In these six cases, all due to cancer, two patients made apparently perfect recoveries. Three patients survived several months, while in only one case did death result immediately as a result of the operation.

The Localization of Foreign Bodies by the X-rays. By W. R. Fox, L. R. C. S.

Some Remarks on, and Suggested Amendments to, the Habitual Inebriates Acts. By Dr. L. A. Parry.

Appendicitis: Some General Remarks on the Pathology and Treatment. By F. G. Lloyd, M. R. C. S.—Appendicular inflammation may be divided into the following varieties: (1) Acute appendicular inflammation (*a*) with local inflammation of the peritonæum or the cellular tissue, (*b*) ending in suppuration or abscess; (*c*) ending in gangrene, and (*d*), ending in perforation; (2) chronic appendicular inflammation; (3) relapsing appendicular inflammation; and (4), latent appendicular inflammation.

Morbid changes in the appendix are met with in about twenty per cent. of all bodies examined *post mortem*. The inflammation may be found: (1) Confined to the surface of the lumen; (2) involving one or more of its coats; or (3), "perforating" its peritoneal coat or dissecting between the layers of its mesentery. The inflammation may be of the simple, specific, or malignant varieties. I. Appendicular inflammation with abscess may track in one of the following directions: (1)

Into the cæcum; (2) into the cellular tissue; (3) into the abdominal wall; (4) into the rectum; (5) into the uterus or its appendages; (6) into the bladder; (7) into the peritoneal cavity; (8) involving the psoas muscles or the iliac vessels; (9) through the sciatic or obturator foramina; or (10) it may burrow up behind the colon, perforate the diaphragm, and give rise to pleurisy, pneumonia, or pericarditis. 2. The appendix may be (*a*) twisted upon itself or kinked; (*b*) it may be the seat of one or more strictures, or may be obliterated; (*c*) it may constitute an intussusception or hernia; (*d*) it may be elongated and lying in an abnormal position; or (*e*), it may be the seat of embolus, thrombosis, tubercle, carcinoma, actinomycosis, parasites, or worms.

Appendicular inflammation may terminate in resolution, recovery with adhesions, fistula, or death from pyæmia, lardaceous disease, or exhaustion. The *Bacillus coli communis* is constant, but is inactive except in damaged tissues. The exciting causes of appendicular inflammation are numerous: Cold, injuries, foreign bodies, concretions, diarrhœa, dysentery, etc. The three cardinal symptoms are pain, tenderness, and rigidity; but fever and constipation are usually also present.

The author deprecates the use of an exploring needle, always preferring to perform a laparotomy.

Three Points in Practical Midwifery. By G. W. Ord, M. R. C. S.—The three points brought out by the author in this paper are: (1) That the catheter in the course of a breech delivery is capable of saving life; (2) that hour-glass contraction of the uterus is avoidable; and (3), that scoliosis is possibly caused by traction upon the infant's body during birth. In the author's opinion the occurrence of hour-glass contraction after the birth of the child is always due to too much traction on the child itself during labor, and not to traction on the cord.

British Medical Journal, September 21, 1901.

Sixty-ninth Annual Meeting of the British Medical Association.

Section of Pathology and Bacteriology.

Discussion on the Pathology of Pneumococcus Infection. By A. C. R. Foulerton, F. R. C. S., and others.—The first speaker gave an excellent review of the present status of our knowledge of the pathology of pneumococcus infection. He took up in turn the general results of blood-infection and toxæmia, the direct action of the parasite on the various tissues in which it becomes located, and the secondary results of the infection. He held that the pneumococcus was a strict parasite in the sense that it was practically only found on a living host. Several of those taking part in the discussion differed with him on this point.

The Bacteriology of Posterior Basic Meningitis. By Dr. W. S. Lazarus-Barlow.—The author reports two cases of posterior basic meningitis, in which he succeeded in isolating a microorganism resembling in every way the *Micrococcus pneumoniae* (Fraenkel). These cases show

that posterior basic meningitis is not always due to the *Diplococcus intracellularis meningitis*, but can also be caused by other micro-organisms.

Pneumococcus Peritonitis. By Dr. J. H. Bryant.—The author has met with three fatal cases of peritonitis due to the pneumococcus, which he has studied very carefully and reports at length. Taking into consideration the symptoms, the physical signs, and the pathological changes found, he believes that in primary diffuse pneumococcus peritonitis, the pneumococcus reaches the peritonæum through either the alimentary canal or the uterine organs. But some of the cases are undoubtedly secondary manifestations of a general pneumococcus blood infection.

The Pathogeny of Exophthalmic Goitre. By Dr. E. Grey.—The author reviews the various theories as to the causation of exophthalmic goitre, and concludes that the only one answering all requirements is, that the disease is due to an alteration in the thyroid apparatus involving in the first place the parathyreoid, whose normal function is disturbed. The symptoms of the disease are produced by the entrance into the body of toxic substances which have a selective action upon certain parts of the nervous system. These substances result from the lowered functional activity of the parathyreoid glandules, because of the inability of the secondarily diseased thyroid to neutralize them.

The Pathology of Exophthalmic Goitre. By W. Edmunds, F. R. C. S.—The author has been experimenting with a view to the determination of the changes in the central nervous system caused by total excision of the thyroid and parathyroids. The experiments were performed on dogs. The Nissl "bodies" were no longer defined, having fused together and undergone chromatolysis. It seems probable that the absence of the parathyreoid secretion is in some way the cause of the acute symptoms, its presence being necessary to the extraction from the blood, and deposition in the cells, of the Nissl bodies, which are supposed to be the food of the nerve cells. Iodine must play an important part in these reactions.

A New Centrifuge for Bacteriological Work. By Dr. J. W. H. Eyre.

On the Urine in Tuberculous Infection. By A. G. R. Foulerton, F. R. C. S., and W. T. Hillier, M. R. C. S.—The authors have made a careful study of the urine in twenty-five cases of tuberculous infection. In nine cases, tubercle bacilli were present in the urine, yet in only one of these was there any tuberculosis of the kidney. Chemical and microscopical examinations were almost uniformly negative as to the existence of a disturbance of the kidney functions. The presence of tubercle bacilli was detected by animal inoculations. These facts show that a general blood infection is more common in tuberculosis of the lungs than is generally supposed.

Focal Necrosis of the Liver. By Dr. C. J. N. Longridge.

The Present Position of the Bacteriology of Rheumatic Fever. By Dr. F. J. Poynton and Dr.

A. Paine.—In this article the authors simply restate their view that rheumatic fever is due to a diplococcus infection, and answer the various criticisms that have been passed upon it.

The Hæmoglobin Value of the Red Blood Corpuscles. By G. H. Goldsmith, M. B.—The author has studied the hæmoglobin value of the red corpuscles by means of the various accepted methods of determination, as well as by a special precipitation method of his own. Taking the normal hæmoglobin value of the blood in men as 100, that in women was 89. The average blood count in males was 4,860,000 per c. mm.; in females 4,350,000 per c. mm.

Bacteriology of Cerebrospinal Meningitis. By A. W. Nuthall, F. R. C. S., and W. Hunter, M. B.—The authors reach the following conclusions: 1. In ten cases of meningitis a diplococcus was isolated from the cerebrospinal fluid obtained by lumbar puncture during life. 2. This diplococcus agreed in its morphological and biological characteristics with the *Diplococcus intracellularis meningitis* of Weichselbaum. 3. The diplococcus occurred in two slightly different forms. 4. In some cases the diplococcus was present in pure culture, in others associated with the *Bacillus influenzae* and the *Bacillus tuberculosis*. 5. The clinical picture and pathological changes were those of posterior basal meningitis. 6. In all probability the disease is a sporadic form of cerebrospinal meningitis, and is caused by the same organism. 7. In most cases it was impossible to make a correct diagnosis of the variety of meningitis present, from the clinical aspect alone.

A Comparative Study of Dysenteric Bacilli. By Dr. S. Flexner.

Further Observations on the Standardization of Nutrient Media. By Dr. J. W. H. Eyre.

The Diagnosis of the Presence of *Bacillus Coli Communis* by Means of Neutral Red. By W. Hunter, M. B.—The author has experimented with culture media stained with neutral red as a test for the *Bacillus coli communis*, and feels justified in drawing the following conclusions: 1. That the *Bacillus coli communis* and a few other micro-organisms possess the power of reducing neutral red to a canary fluorescent color. 2. That the *Bacillus typhosus* never possesses this power of reduction. 3. That it is possible within from twelve to twenty-four hours to diagnosticate with accuracy by means of neutral red, the typhoid organisms from the true colon group.

Typhoid Fever without Intestinal Lesion. By Dr. W. S. Lazarus-Barlow.—The author reports a case of typhoid fever without intestinal lesions occurring in a child aged thirteen months. A bacillus was isolated from the spleen which corresponded in all particulars to the *Bacillus typhosus*, and in addition the child's blood showed a marked Widal reaction.

Section of Dermatology.

A Discussion on the Rôle of Cocci in the Pathology of the Skin. By Dr. Sabouraud and others.

Paget's Disease of the Vulva. By Dr. W. Dubreuilh.—The author reports a case of Paget's disease of the vulva occurring in a woman aged fifty-one years. No such case of Paget's disease of the female genitals has hitherto been put on record.

Contribution to the Histo-pathology of Yaws. By Dr. J. M. H. MacLeod.

The Nature of the Disease Known as Erythema Induratum Scrofulosorum. By Dr. A. Whitfield. (*Abstract.*)

On a Case of Pityriasis Rubra Pilaris. By Dr. W. Beatty.

On a Case of Parakeratosis Variegata. By T. C. Fox, M. B., and Dr. J. M. MacLeod.

Some Points in the Management of Eczema. By Dr. H. Waldo.—[*End of the Report of the B. M. A.*]

A Simple and Rapid Method of Producing Romanowsky Staining in Malarial and other Blood Films. By W. B. Leishman, M. B.—The Romanowsky method of staining depends upon a substance which is precipitated when watery solutions of methylene blue and eosine are brought together. Hitherto this substance has been only available as a staining reagent when used just at the moment of its precipitation. The author has found it to be soluble in pure methyl alcohol (Merck's "for analysis"), and by taking advantage of the powerful fixative properties of this alcohol, any separate process of film fixation may be dispensed with. The dye, after being precipitated out, thoroughly washed, and dried, is dissolved in methyl alcohol in the proportion of 0.15 per cent. It does not deteriorate on keeping. Three or four drops of the solution are allowed to drop upon the coverglass to be stained. After half a minute, double the quantity of distilled water is added and allowed to mix with the dye. The film is now allowed to stain for five minutes, then gently washed in water, dried, and is ready for examination. The bodies of malarial parasites stain blue and the chromatin ruby red. Schüffner's dots are well marked. The staining is so sharp and clear that a $\frac{1}{6}$ -inch objective is sufficient; an oil-immersion lens is not necessary.

The Value of Neisser's Stain in the Diagnosis of Diphtheria. By R. M. Beaton, F. F. Caiger, and W. C. C. Pakes.—The authors have studied Neisser's stain as an aid to the identification of the diphtheria bacillus, and conclude that it is of value in two ways: 1. A positive diagnosis is rendered more certain for those who are not experts. 2. A trustworthy positive result may be obtained from smears made direct from the throat swab. The use of Neisser's stain does not appear to introduce any fallacy not found in the application of other methods.

Two Successful Cases of Operation for Perforated Gastric Ulcer. By Dr. E. C. Andrews.

Presse médicale, August 28, 1901.

Peritoneal Grafting of Echinococcus.—M. Guibé concludes that echinococcus particles set free in the peritoneal cavity can become engraft-

ed and develop and continue to multiply. The hydatid fluid alone is incapable of reproducing an hydatid cyst; either the scolex or the proligerous vesicles are essential. A fragment of the wall of a cystic sac that contains the scolex can give rise to an engrafted hydatid cyst. The engrafted cysts can thrive upon an endothelial basis and can give rise to secondary extra-peritoneal growths.

Pathogeny of Muco-membranous Entero-colitis. By M. A. Brocchi.

Münchener medicinische Wochenschrift, Aug. 27, 1901.

Ætiology of Erysipelas.—Professor Jordan says that erysipelas is not a specific disease from the ætiological standpoint. The disease may be evoked in guinea-pigs not only by streptococci, but by staphylococci, pneumococci, and the colon bacillus. In man, it is usually caused by the streptococcus pyogenes, but may also arise from the action of the staphylococcus aureus. It is still an open question whether erysipelas in man can be evoked by the facultative pus-producing bacteria, the pneumococcus, the colon, and the typhoid bacillus. This finding corresponds to the varied clinical picture of the disease from the mildest to the most severe types.

Malignant Growths of the Tonsil. By Dr. von Heinleth. (*Continued article.*)

Ligature of the Splenic Vessels in Animals.—Dr. Balacescu finds from his experimental studies that, in animals, ligature of all the splenic vessels, including the gastro-splenic ligament, is followed by gangrene of the spleen and usually by death. When death does not occur from septic absorption, the spleen becomes atrophic. Ligature of the splenic artery or vein alone is not incompatible with life or with the function of the organ, as the collateral circulation is rapidly established. The atrophic process following this procedure, too, is minimal and slow of development. If the vasa efferentia are diminished, the atrophy is rapid, the interstitial connective tissue proliferates and a splenic cirrhosis develops.

Auscultatory Percussion. By Dr. J. Hofmann.

Two Cases of Latent Sinus Thrombosis. By Dr. Hölscher.

Berliner klinische Wochenschrift, August 26, 1901.

Echinococcus of the Lung.—Dr. P. K. Pel reports a case in a man thirty-seven years of age, in which the course of the disease resembled that of an acute pleuropneumonia. The possibility of a latent tuberculosis was also considered. The clinical diagnosis was croupous pneumonia of the right middle lobe, with pleurisy of the right side. At the autopsy, an echinococcus cyst of the lung was found.

Human and Animal Tuberculosis.—Professor Ferdinand Hueppe, in crediting American investigations on the relationship of human and bovine tuberculosis, opposes the recently expressed views of Professor Koch. The author believes that possibly some species of cattle are susceptible to human tuberculosis while others may not be. The bacillus

of tuberculosis can adjust itself to new environments and it is possible that, when introduced into a new species, it may require time to effect a typical change in the tissues. Once habilitated, it shows a decided virulence in the new species. The author thinks that alimentary tuberculosis is not so rare as is generally believed.

Absorption of Alexines by Dead Bacteria. By Dr. M. Wilde.

Compression Treatment of Heart Disease. By Dr. M. Mendelsohn.

Study of Pleural Exudates. By Dr. Alfred Wolff.

Riforma medica, August 1, 2 and 3, 1901.

Contribution to our Knowledge of the Diffusion of Inflammatory Processes from Suppurating Foci to the Nerve-trunks. By Dr. Giulio Anzilotti.—The author has studied experimentally the alterations in the nerves in the vicinity of suppurative foci, or acute abscesses. For this purpose he inoculated thirty-two guinea-pigs with virulent cultures of the *Staphylococcus pyogenes aureus* and *albus* into the fibrous sheath of a nerve, and in a second series of animals in the vicinity of the nerve into the tissues. He also injected filtrates of these cultures into animals in the same way, in order to find the effects of the toxins upon the nerve-trunks. On following the nerve upward toward the spinal cord, he found in all cases in the first series of experiments that there was an ascending parenchymatous neuritis which reached almost to the roots. On examining numerous preparations of the spinal cord, however, he was unable to find any alterations, except very mild ones. The degenerative process, therefore, was at its maximum in close proximity to the suppurative focus and decreased as one ascended to the cord. In the second series of experiments the lesions were not so pronounced and bore the characteristics of true Wallerian degeneration rather than those of necrotic degeneration, as the first cases did. The injections of toxins were followed by similar changes to those caused by inoculation of more or less virulent cultures.

August 6, 1901.

Researches on the Metabolism in a Case of Scleroderma. By Dr. Ettore Tedeschi.—The patient was a woman, aged forty years. A study of her metabolism showed that the income and expenditure were perfectly balanced. The urea was slightly diminished, and the same was true of the total nitrogen, but the ratio between the nitrogen of urea and the nitrogen of the urine was raised in favor of the former. The amount of uric acid was normal, when considered alone, and was increased when the nitrogen of the uric acid and the total nitrogen were compared, or when the nitrogen of the uric acid was compared with the nitrogen of the urea. The phosphates were also normal, but increased when compared with the total nitrogen; the same was true in a more emphatic sense of the chlorides. The theories as to the cause of scleroderma are the nervous, the

vascular, and the infectious, or toxic. A study of the metabolism is offered as a contribution to the subject, as thus far neither clinically nor pathologically has much light been thrown upon the theories. The authors incline toward the nervous theory.

Roussky Archiv Patologiy, Klinitcheskoy Meditsiny i Bakteriologiy, April, 1901.

Intra-uterine Injections in the Treatment of Diseases of the Uterus and of the Annexa. By D. F. Boukoemsky.

Analysis of the Blood of a Hæmophilic. By Dr. W. Zawialoff.—The blood began to coagulate fifteen minutes after the bleeding. Coagulation was complete within an hour. One hundred parts of the blood contained: Water, 82.30; dry residue, 17.70; proteids, 16.14; fibrin, 0.22; alcoholic extract (urea, sugar, etc.), 0.04; fats, 0.45; cholesterolin, 0.07; lecithin, 0.21; soluble salts, 0.57; insoluble salts, 0.07. On hundred parts of serum contained: Water, 91.06; residue, 8.94; proteids, 7.63; alcoholic extracts, 0.04; fats, 0.54; cholesterolin, 0.03; lecithin, 0.19; soluble salts, 0.62; and insoluble salts, 0.05. The red blood cells contained cytoglobin, a substance which, according to A. Schmidt, is not present in the red cells of normal blood. This substance has the property of retarding the coagulation of the blood. During the destruction of the red cells which accompanies bleeding, cytoglobin is dissolved in the plasma and retards the coagulation. Cytoglobin belongs to the nuclear substances and may therefore be considered as a vestige of the early life of the red cell. In normal blood the red cells lose their nucleoproteids with their nuclei, but in the blood of hæmophiliacs, the nucleoproteids remain while the nuclei disappear.

Syphilis, Venereal, and Skin Diseases, and their Treatment in the Russian People. By Dr. V. Th. Demitch.—An account of the popular ideas concerning the very prevalent venereal diseases in Russia.

Contribution to the Study of Tumors of the Corpora Quadrigemina, and Some Indications as to their Diagnosis from Tumors of the Cerebellum. By Dr. W. Nissen.—The author reports five cases of tumors of the quadrigemina in children of various ages. The foci were limited to the cerebral peduncles and to the tegmentum. On the basis of his observations, the author discusses the diagnosis of tumors of this region. He considers: 1. Lesions of the cerebral peduncles (with the pyramidal tract) producing a paralysis of the extremities, always on the side opposite to that on which rigidity and contractures are noted. In cases where the tumor reaches over to the opposite side of the median line, the paralysis is bilateral. 2. Lesions of the tegmentum, the cerebral peduncles, and the nuclei of the motor nerves of the eye, which produce paralysis of the external and internal muscles of the eye innervated by the oculo-motor nerve. The order in which this paralysis takes place is irregular, and sometimes paralysis of the pathetic is added. This paralysis before becoming complete in one eye reaches the opposite side. Disturbances in the gait are then added to these symptoms, but they are of

less importance than the eye signs. 3. A small tumor may exist in the quadrigeminal tubercles only, and may pass entirely unnoticed.

Vratch, August 11 (August 23, New Style), 1901.

Ankylosing Inflammation of the Spine and the Large Joints. By Dr. L. M. Pussep.—Previously to 1892, when Bechterieff's article appeared, ankylosis of the spine was regarded as a special variety of arthritis deformans. The nervous symptoms which accompany such cases were referred to the pressure of the ankylosing bones upon the nerve roots, or to the involvement of the nerve roots in the inflammatory process. The disease was held to begin in the spine and to spread to the large joints afterward. In 1892, Bechterieff published an article in which he described ankylosis of the spine as a distinct disease, and since then a number of similar cases have been reported. In 1898, P. Marie described a condition which he called *spondylose rhizomélisque* and which had already been described by Hilton Fagge and by Strümpell. This last type resembles more closely the descriptions of spondylitis of the older authors, and the cases reported since Bechterieff, for the most part, fit into the frame of Marie's type. There are at present, therefore, two known varieties of spinal ankylosis—that of Bechterieff (*kyphose hérédito-traumatique*) and that of Marie-Strümpell (*spondylose rhizomélisque*). Bechterieff's cases are characterized by a partial or total ankylosis of a part or of the whole of the spine, without any pain on pressure or bending; kyphosis of the spine, especially of the upper dorsal region, the head appearing somewhat inclined forward and downward; paresis of the muscles of the trunk, neck, and extremities, and slight atrophy of the dorsal and scapular muscles; diminution of the sensitiveness of the lower cervical, dorsal, and lumbar nerves, and a variety of paræsthesiæ in these regions and in the extremities and the back. As ætiological factors, heredity, traumatism, and syphilis, are mentioned by the author. But a few cases of this type have been reported until now. In the cases classed as of Strümpell-Marie's type, the symptoms vary, but in most instances there are: (1) A complete immobility of the whole, or of a part of the spine; (2) a complete ankylosis of one or two large joints; (3) insignificant or even absent nervous system; (4) pain and difficulty in locomotion before the ankyloses set in; (5) flattening and narrowing of the chest; (6) sometimes atrophy of the muscles of the back. The kyphosis may be angular or rounded, or may be absent.

The chief distinction between the two types is the involvement of the large joints in Marie's type. While there is still some doubt as to the distinct nature of Bechterieff's type, most authors agree that Marie's type is a form of arthritis deformans. As regards the nature of this latter type, authorities still differ; some of them regard it as a disease of the central nervous system, others as a sequel of rheumatism or infection. (*To be concluded.*)

The Mathematical Theory of Probabilities Applied to the Question of the Infectious Nature of

Eclampsia. By G. V. Kolossoff.—Stroganoff has constructed a series of curves with the statistical material which he had collected on eclampsia. He has grouped in pairs consecutive cases of eclampsia and constructed curves which show on the abscissæ the intervals of time between two such cases, and on the ordinates the number of pairs with such distances. According to Stroganoff, these curves show that eclampsia is infectious. The present author, a mathematician, applies the theory of probabilities to the Stroganoff curves on eclampsia. His article is one series of equations and diagrams and he concludes that the most probable intervals are the smallest ones, and that the character of Stroganoff's curves is explained by this fact.

Serotoxines and their Employment in the Diagnosis of Human Blood from that of other Animals. By Dr. V. I. Nedrigailoff.—In the beginning of the current year Wassermann, Schütze, and Uhlenhuth, published articles in which they described a method of distinguishing human blood from that of other animals. They inoculated rabbits with human serum, and after five or six injections they allowed the animal to remain undisturbed for a few days. Then they took some of the serum of this animal and found that, when added to human blood in solution, the serum produced a cloudiness and a flocculent precipitate. No such reaction was, however, obtained with the blood of other animals. The specific precipitating agent developed in the rabbit's blood was termed coagulin (Uhlenhuth) and antiserum (Stern). The author calls it, by analogy with cytotoxine, a serotoxine. By this method dried blood stains, dissolved in normal salt solution gave positive reactions.

Metchnikoff, Bordet, Buchner, and Ehrlich have shown that the immunity of an animal against an infection is produced by the influence of a specific substance—an alexine. Bordet and Ehrlich have demonstrated the possibility of obtaining anti-alexines which destroy the immunizing action of the alexines. Wassermann injected repeatedly into a healthy rabbit some serum from a guinea-pig. He found that guinea-pigs used as checks recovered from infection with typhoid bacilli administered with healthy rabbit's blood, while guinea-pigs infected with this germ, together with a quantity of the "prepared" rabbit's serum which contained the anti-alexine, died. The author has tested this theory by experiments conducted in a similar manner with gonococci, and has also obtained a specific serum which produces a cloudiness and precipitation in the serum of guinea-pigs. In a similar manner he has obtained the serotoxines of man, dogs, and rabbits.

Lately, Mertens, Pfeiffer, and Zuelzter, found by similar methods that the proteids of a patient's blood were identical with those of his urine in cases of albuminuria. They injected human serum (from a placenta) into a rabbit, and developed in this animal a specific substance which precipitated only the corresponding proteid in human blood. They found, however, that the serum of this rabbit also precipitated the albumin of human urine in albuminuria.

Proceedings of Societies.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Twenty-seventh Annual Meeting, Held at Put-in-Bay Island, Ohio, on Thursday, Friday, and Saturday, September 12, 13, and 14, 1901.

The President, Dr. A. H. CORDIER, of Kansas City, in the Chair.

(Continued from page 620.)

What are the Qualifications Necessary for Success in the Practice of Medicine?—This was the subject of the address in medicine, delivered by Dr. FRANK BILLINGS, of Chicago. He said that the qualifications of success in any walk in life depended upon the meaning of the word success. Not uncommonly success meant to the majority of mankind the acquisition of wealth. Without a living income, life was too full of anxieties to allow one to do good work. The average physician probably received less compensation for his services than any other member of society, when one considered the time and money spent in his preparation, the responsibilities assumed, and the character of the service rendered to the patient. To-day the problems in medicine were so profound that a good preliminary education was necessary to enable the student to pursue the study of medicine rationally and successfully. While a college or university education might not be essential to fully prepare one for the study and comprehension of medicine, still it gave one a broad culture, a discipline of mind, which added to the pleasures of life of the practitioner, if they did not bring him material advantage.

The successful doctor must be industrious, thorough, painstaking, and methodical in all he did. One of the best evidences of a successful practitioner was the constant effort to make a diagnosis.

Congenital Valvular Obstruction.—Dr. THOMAS CHARLES MARTIN, of Cleveland, read a paper on this subject. The condition, he said, was the result of embryological hyperplasia or overgrowth of the rectal valves, which was characterized by an abnormal depth of the valve, or of such anatomical propinquity of two valves that they overlapped and established under the pressure of the descending force a temporary diaphragm. The symptoms were more or less straining for the passage of solid or semi-solid feces, which developed at an early period and continued.

Varicose Veins and their Treatment.—Dr. J. LIVELY JOHNSON, of Louisville, read a paper on this subject. Varicose veins of the first degree were of little importance, he said, aside from the mental anxiety of the patient, but as the varicosity advanced the veins assumed a more grave character and were often a source of annoyance to both patient and surgeon. A varicosity might exist in any part of the body. This condition of the veins was found most frequently in certain localities, as in the pampiniform plexus and in the veins of the foot, leg, and thigh. One of the

greatest dangers to the patient suffering from varicose veins was the danger of a sudden rupture, with perhaps a fatal loss of blood. Inflammation and thrombosis might frequently occur. This pathological condition incapacitated one for a position in the army or navy, thus debarring him from government positions as well as from all athletic sports. In this enlightened age, it seemed strange that physicians still allowed patients suffering from varicose veins to pursue the even tenor of their way, with only a smear of oxide-of-zinc ointment and a roller bandage applied to hold it in place. The rubber stocking was also a failure; aside from its inability to support the blood column, it became soiled and rancid from perspiration, producing an annoying dermatitis. This line of treatment did not cure, consequently the treatment had to be persisted in as long as the patient lived. The only rational line of treatment to be pursued in the management of varicose veins, in whatever locality, was, as nearly as possible, to completely remove the entire diseased vessels. Temporizing with varicose veins not only did the patient great harm, but brought reproach upon the surgeon. The surgeon had the choice of a number of operations for the radical cure of varicose veins of the lower extremity. He must be able to adapt the surgical procedure to the case in point. He only mentioned the operations that might be employed. Ligation might be used, or Schede's procedure might be resorted to. Phelps's excision of limited portions of the diseased veins was a good operation, and might frequently be used with success. The most radical form of treatment consisted in complete extirpation of all diseased veins. Under no circumstances should any operation be performed upon veins without the most stringent aseptic precautions, thus preventing serious consequences.

The Use and Limitations of the Elastic Ligature in Intestinal Surgery was the title of a paper by Dr. THEODORE A. MCGRAW, of Detroit. The elastic ligature, in the opinion of the author, was the most advantageous means of making intestinal anastomosis in cases of pyloric stenosis, of ulcer of the stomach, in chronic partial stenosis of the intestine, and in certain forms of gangrenous hernia. It could rarely be used to advantage where it was necessary to excise any portion of the intestine. Rules were given for its use, and an exhibition of the proper method.

Dr. H. O. WALKER, of Detroit, reported cases of intestinal resection and approximation by the Connell suture, and contrasted it with other methods of approximation. He spoke highly of this suture and recommended its use.

The Surgical Features of Typhoid Fever and Dysentery were considered by Dr. HAL C. WYMAN, of Detroit. He held that early operations for perforation in typhoid fever gave the best results. Physicians should anticipate perforation and intestinal hæmorrhage in typhoid fever of a severe type by surgical operation, which promised to heal the ulcerated bowel before it became perforated or bled. In severe cases of a threatening type, the author asked why not open the cæcum near the ileocæcal valve and establish

a fistula through which a tube might be passed cautiously into the ileum and the ulcerated region daily washed with normal salt solution until it healed, and also the colon to rid it of infecting bacteria? When the patient was convalescent, the fistula would close spontaneously.

Some Indications for Gastro-enterostomy.—Dr. WILLIAM J. MAYO, of Rochester, Minnesota, read a paper on this subject, based on experience derived from sixty-four operations. In malignant disease gastro-enterostomy was indicated only if symptoms of obstruction were present. The mortality was high, from twenty-five to thirty per cent. The writer had lost four out of sixteen patients. The reason for this mortality lay in the bad condition of the patient. The early cases, with the patient in good condition, needed radical treatment. For open ulcer, gastro-enterostomy was of the greatest benefit if the ulcer was situated near the pylorus, as it usually was. Under such circumstances, the stomach was of normal or increased size, the latter condition being due either to obstruction or to pyloric spasm. If the ulcer was distant from the pylorus and the stomach contracted, gastro-enterostomy had less value and the anastomotic opening might close, although the ulcer was usually healed before this took place. The writer had had thirteen gastro-enterostomies for open intractable ulcer, with one death. For benign obstruction, without regard to origin, gastro-enterostomy was the operation of choice, the cure being immediate and lasting. Pyloroplasty enlarged the outlet, but if the stomach was very large and pouched, the degenerated muscle fibre might fail to elevate the food to the pylorus, and relief was not always afforded. Gastro-enterostomy drained from the lowest point, and was superior in every way to the plastic operation. In thirty-five gastro-enterostomies of this class only one patient had died.

Suture of the Abdominal Wall.—Dr. CHARLES DAVISON, of Chicago, read a paper in which he said that the main points were closure of any laparotomy wound by suturing each layer with a continuous silkworm gut suture, the ends of which were left out at the angle of the wound, to be removed when healing had occurred. The suture in the strong fascia was tied in position at each end in the fascia with a knot that could be unlocked by traction on the exposed ends when the stitch was to be removed. The advantages of the method were: 1. Certainty that all suture or ligature material placed in the wound had been made sterile by boiling in water. 2. Accurate layer approximation of tissue. 3. Removal of the buried sutures when healing was complete. 4. Capillary drainage from each layer. 5. Safety of the intestines from injury during the application of the sutures. 6. Rapidity of application. 7. A minimum line of irritation on the peritoneal surface and consequent adhesion to viscera. 8. Slight scar in the skin, there being no perforation of the skin by sutures. 9. All the advantages of a permanent buried suture without the danger of future irritation and extrusion. 10. The advantages of an absorbable suture without the danger of sepsis from the suture and without producing a

nidus for septic germs from the blood current during absorption.

Scientific Aids to Diagnosis.—Dr. HENRY D. HOLTON, of Brattleboro, Vt., read a paper with this title (to be published).

Dentist's Neck.—A hitherto undescribed neurosis to which he gave this name was described by Dr. ALBERT E. STERNE, of Indianapolis. When it first attracted his attention, he thought the affection was unique, but he had since come to the conclusion that it was by no means rare, and that it sometimes attained the dignity of seriousness to the afflicted individual. As to the pathology of the affection, he admitted that he had to rely largely on conjecture. He believed that it was in many respects analogous to other occupation neurosis, not only in its ætiology of regional over-strain, but also in its cerebral functional character. In all these complaints he considered the peripheral manifestations as secondary to the localized brain-cell fatigue.

The Necessity of and Indications for the Bed-Treatment of the Insane.—A paper with this title was read by Dr. F. P. NORBURY, of Jacksonville, Ill. In its incipient stage, he said, insanity responded readily to treatment, hence the importance of early recognition and appropriate treatment.

The Dyspeptic's Diet.—In a paper thus entitled, Dr. GEORGE D. KAHLO, of Indianapolis, contended that diet was a more important therapeutic agent than medicine. Perfect nutrition was of primal import, and could only be maintained by a mixed diet, in which there must be a proper proportioning of the elementary food substances.

The Personal Element of Error in Therapeutics.—Dr. GEORGE E. BUTLER, of Alma, Michigan, read a paper thus entitled. Personal elements of error were accepted, he said, in all the exact sciences, not excluding astronomy. In medicine this element did not receive allowance, except to some slight degree in histology, pathology, and neurology. It was practically neglected in therapeutics. This was due to the crude, empirical methods employed and the lack of judicial training. The personal element led to the eulogy of worthless remedies and the ignoring of unusual effects of beneficial ones. The early but ignored recognition of the uselessness of sarsaparilla by Weir Mitchell illustrated this. Only the recognition of this personal element could render therapeutics scientific. The elements involved were proper diagnosis, not merely of the disease, but of its type, recognition of individual peculiarities of the patient, recognition of the proper preparation of the remedy, recognition of its untoward effects, and, finally, recognition of the fact that pathological states indicated a new force introduced into the organism which disturbed its balance.

The Acquirement of Nervous Health was discussed by Dr. F. SAVARY PEARCE, of Philadelphia. The pathogenesis of nervous and mental diseases was considered, and from the standpoint of salient signs and symptoms of the so-styled "nervous breakdown" in the earlier periods of development, medical guidance in prophylaxis was detailed. Insistence was made upon the urgent necessity

of more serious recognition by the profession of the points elucidated in the paper, if the wear and tear of modern exacting American life is to be forestalled in its baneful influence upon the acquired nervous temperament of many, and of business men in particular, in the temperate zone of the United States.

A Series of Communications on Tuberculosis was introduced by Dr. CHARLES F. MCGAHAN, of Aiken, S. C., who dealt with the treatment of the disease in the patients' homes. He was followed by Dr. HOWARD, of Champaign, Ill., who reported favorably on the treatment of tuberculosis with formaldehyde and its salts. Dr. WILLIAM A. DICKEY, of Toledo, who read the third paper in the series, spoke on the attitude of the profession toward the public and the individual suffering from tuberculosis.

The Address in Surgery was delivered by Dr. REGINALD H. SAYRE, of New York. He reviewed the status of surgery during the past, and noted the changes that had taken place in men, methods and modes of thought, and speculated on the position which surgery would attain during the next one hundred years.

The following officers were elected for the ensuing year: President, Dr. S. P. Collings, of Hot Springs, Ark.; vice-presidents, Dr. J. C. Culbertson, of Cincinnati, and Dr. Paul Paquin, of Asheville, N. C.; secretary, Dr. Henry E. Tuley, of Louisville; treasurer, Dr. Thomas H. Stucky, of Louisville; chairman of the committee of arrangements, Dr. A. H. Cordier, of Kansas City, Mo. It was voted to hold the next meeting in Kansas City.



Book Notices.

The Health Resorts of Europe. A Medical Guide to the Mineral Springs, Climatic Mountain and Seaside Health Resorts, Milk, Whey, Grape, Earth, Mud, Sand, and Air Cures of Europe. By THOMAS LYNN, M. D., Fellow of the New York Academy of Medicine, etc. London: Hirschfeld Brothers, 1901. Pp. 281.

This little volume, while not so compendious as some other brochures on the subject, will prove a valuable work of reference to the practitioner who desires to send his patient to a suitable spring or bathing resort of Europe. All the Continental resorts, as well as those of England, are carefully described as to their location, accessibility, and therapeutic value in various disorders.

Transactions of the American Association of Obstetricians and Gynecologists. For the Year, 1900. Volume XIII.

This volume contains a number of timely and interesting papers, most of which have seen the light in current periodicals. Dr. Hale's presidential address on The Education of the Laity in Sexual Matters is a thoughtful and suggestive essay. Among the other contributors to the volume are Dr. Charles A. L. Reed, Dr. E. J. Ill, Dr. C. G. Cumston, Dr. Joseph Price, and Dr. J. B. Deaver.

Transactions of the Southern Surgical Gynecological Association. Thirteenth Session, held in Atlanta, November 13, 14, and 15, 1900. Volume XIII.

The usual number of interesting papers are embraced in this volume. While it would be difficult to particularize, it may be said in all sincerity that the papers of the thirteenth annual meeting were very much superior to those usually presented at these meetings. The volume is well illustrated, too, and forms an excellent work of reference for those interested in abdominal and pelvic surgery.

Retinoscopy (or Shadow Test) in the Determination of Refraction at One Metre Distance, with the Plane Mirror. By JAMES THORINGTON, A. M., M. D., Professor of Diseases of the Eye, Philadelphia Polyclinic, etc. Fourth Edition, Revised and Enlarged. Fifty-one Illustrations, Twelve of which are Colored. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. xviii-19 to 89. [Price, \$1.]

This work is so well and favorably known that an extended review is hardly needed to introduce its fourth edition to the profession. The author aims at constant improvement, and has accordingly added a little to the text and introduced a few more illustrations. The reviewer maintains an opinion previously formed, that no better work on retinoscopy is published and none which adheres more strictly to its own particular subject.

On account of the attempts which are frequently made to employ retinoscopy to determine refraction without the use of a cycloplegic, an italicized statement from page 30 can hardly be too strongly emphasized, "*The patient must have his accommodation thoroughly relaxed with a reliable cycloplegic.*" with the few exceptions mentioned on page 79.

Miscellany.

Thrombus of the Lateral Sinus.—At the recent annual meeting of the American Laryngological, Rhinological and Otological Society, Dr. Thomas J. Harris, of New York, presented a case of thrombus of the lateral sinus. The patient was a man, about twenty-three years of age, who had been admitted to the hospital on April 3d, with a history of pain and otorrhœa for about a week, and a swelling in the neck. There was no elevation of temperature at the time, and he complained only of frontal headache. A few days later an exploratory incision was thought to be necessary, and accordingly the mastoid cells were opened, but nothing was found. On opening the sinus, a long clot was found and removed. From that time to April 17th the man did well, but on a return of the symptoms the incision was extended to the clavicle, and the jugular vein opened. No clot was found until the facial vein was reached. The man was very ill for several days afterward, and had a metastatic pneumonia. At no time was there any tenderness over the mastoid, and no pus was found in that region. The pain complained of was almost wholly over the frontal lobe of the brain. The symptomatology of this

case had been quite obscure. Dr. Harris said that it should always be remembered that it was not necessary for the patient to have a decided chill before one felt justified in making a diagnosis of involvement of the sinus. In this case there had been no chill, but there had twice been chilly sensations. With high temperature and chilly sensations one was warranted in making an exploration.

The Nature of Cancer.—At the same meeting Dr. Henry L. Wagner, of San Francisco, presented drawings illustrative of the work done by an investigator in his city on the nature of cancer. About two months ago this gentleman, Dr. Eisen, had become infected with cancer, and was now practically in a dying condition. His important and interesting research was completed about two years ago. This gentleman had even studied the development of the spores in his own case. Upward of seventy cases of carcinoma had been investigated in this way, and the results would be eventually published in detail in book form.

Disease of the Upper Air Passages in Relation to the Mental Development.—At the same meeting Dr. L. F. Page, of Indianapolis, read a paper in which he said that the intimate relation between the blood spaces of the mucous membrane and the subarachnoid space had been thoroughly demonstrated, and an equally intimate relation existed between certain venous regions of the nose and the interior of the skull. The capacity of the lymphatics of this region for absorbing toxins was often observed in diphtheria, and impure blood was one of the causes of interference with mental development. Engorgement of the erectile tissues and the irregularities of the nasal cavities often interfered with drainage, and so gave rise to contamination of the blood. A study of the anatomy of the nasal fossæ showed plainly that this region should be a fertile source of reflex disturbance, and it was not difficult to imagine that such irritation might exert an important influence on the psychological functions of the brain. A bony spicule or an enlarged turbinate by constant pressure and irritation, might cause exhaustion of its special centre, and gradually and secondarily affect the whole nervous system. Constant overstimulation meant exhaustion sooner or later. The author said that he had been often impressed by the mental defects exhibited by children with adenoids and enlarged tonsils and with the mental improvement which followed the removal of these pathological conditions.

Frontal and Ethmoidal Disease with Abscess of the Orbit.—At the same meeting Dr. Thomas R. Pooley, of New York, reported the case of a youth of nineteen who had come to him suffering intense pain around the right eye and that side of the head. The temperature was 104° F. and the pulse 120. Six years previously this eye had suddenly swollen, and had been relieved somewhat by an incision of the lid. Two years later the sinus had been opened to relieve the swelling. Dr. Pooley had operated under ether anæsthesia, exposing

the orbit. The sinus was found enlarged and was curetted. On penetrating the depth of the orbit, one or two drachms of pus escaped. An opening was then made into the anterior ethmoidal cells and through the infundibulum into the nose. A soft-rubber catheter was then drawn through, and the ends of the tube were tied together. The wound was packed around the tube. This operation effected immediate improvement. Almost daily dressings were made, and at the end of two months healing was complete. Numerous nasal polypi were discovered after this operation, but they disappeared in a short time. The paper concluded with a reference to the common involvement of the accessory sinuses after scarlet fever and the need for prompt and thorough treatment when there is external swelling. The patient was exhibited.

Empyema of the Frontal Sinus; Some Observations on its Treatment.—At the same meeting Dr. George L. Richards, of Fall River, Mass., read a paper in which he called attention to the fact that the frontal sinus varied in position, size, and thickness. The danger to life of empyema of this sinus he considered to be very small. If exploratory puncture of the antrum was negative, the source of the pus might be the anterior ethmoidal cells. Transillumination was of some value. As a rule, the entire anterior portion of the middle turbinate would have to be removed as a preliminary measure to treatment. These cases tended to get well if the drainage was thorough enough. The direction of the canal having been determined by means of a probe, a silver or hard-rubber tube, curved like the probe, should be passed in and the sinus washed out. Where the purulent discharge had lasted a long time and polypi had formed, it was more difficult to decide upon the best method of treatment. The anterior ethmoidal cells should be thoroughly destroyed with the curette. He had had the best results from irrigation when he had used a solution of corrosive sublimate, 1 to 10,000. The question of operation must depend upon evidence of septic absorption, upon symptoms of cerebral irritation, or upon the recurrence of attacks of pain. He preferred to make the opening between the supra-orbital notch and the root of the nose, and underneath the ridge, and preferred the mallet, chisel, and curette to the surgical drill. The opening should be made as large as possible, and all the ramifications of the sinus vigorously curetted. The best form of drainage was by the fenestrated rubber tube. The tube should be retained at least two or three weeks. It was best to keep the external wound open for a time.

The Treatment of Stricture of the Lacrymal Duct by Electrolysis.—At the same meeting Dr. L. L. Mial, of New York, read a paper in which he said that he had found silver the best metal to use, and preferred to place the positive electrode on the wrist. As a stricture never extended the whole length of the canal, it was a matter of much importance to apply the current only to the narrowed portion. He had used the volt-selector, the ampèremeter, and a rheostat, with the Edison

110-volt current. Any one could satisfy himself of the relaxing effect of the current by introducing an instrument which was tightly grasped, and then noting how loosely it was held after the passage of the current. Each séance should last from thirty seconds to three minutes. Several illustrative cases were reported. The author maintained that electrolysis was harmless if used properly, that it was antiseptic in its action, that it was much less painful than the usual mode of passing probe, and that it dissolved and relaxed strictures much better than any other method, thus diminishing the danger of tearing the mucous membrane and making false passages.

The Physical Basis of Melancholia.—John Turner, M. B., assistant medical officer to the Essex County Asylum, Brentwood (*Medical Press and Circular*, August 7th), in a paper read at the Cheltenham meeting of the British Medical Association, said that certain of the nerve cells of the cortex presented an alteration in appearance in many cases of melancholia and dementia (alcoholia). The change was similar to that which followed when the axones of the fore-horn cells or those of the pontine nuclei had been severed. But examination of the axones (in the cord) showed that in melancholia the change was not produced primarily by interference with the axones. The change had also been noted in melancholia by Wiglesworth and others.

The distribution of the lesions was as follows: The pyramidal and giant cells of the so-called motor cortex showed it most clearly; in this region most of the cells being affected. It was commonly met with in the frontal and occipital regions, especially in the large cells of the latter. Of all the nuclei examined in cross sections of the medulla oblongata, hypoglossal, vagus, lateral, ambiguous, gracile, and cuneate, only the first escaped, all the others showed the change affecting generally the major proportion of the cells.

In the cord the cells of Clarke's column were early affected and ultimately in advanced cases the fore-horn cells.

In the posterior spinal ganglia, while only a few cells showed the changes yet many were altered in another way—densely stained and very shrunken.

In the tracts of the cord only in very advanced cases was there any sign of degeneration of the myelin sheaths, and then it was the crossed pyramidal tract (axones of motor cells of cortex) which was affected.

The pathological observations indicated that the cause which brought about this change was not a general one, operating on all parts of the nervous system, such, *e. g.*, as a perverted state of the blood, otherwise we should expect to find all the cells of a similar type participating in the change. This, as had been shown, they did not. Another point brought out was that the change early affected the afferent cells, and notably those of Clarke's column.

The experiments of Warrington showed that this change could be produced in the cells of Clarke's column by division of the posterior roots, and he assumed that in this case it was due to depriving these cells of the ingoing stimuli normally passing to them.

Thus it had been established experimentally that this change could be set up in at least two ways:

1. By agents having a destructive action on the axones of the cells in question (traumatism, and probably also alcohol), and

2. By agents which did not primarily affect the axones of the affected cells.

These observations indicated that the melancholic cases fell into the latter class, and, further, that the state of the mind was an essential factor in inducing the change.

The deprivation of the nerve cells of their normal ingoing stimuli was the explanation offered in accordance with the writer's hypothesis (*Journal of Mental Science*, July, 1900) that melancholic states depended on dissolutions of the nervous system affecting the sensory, or ingoing section, of the nervous reflex mechanism. Clinical observations from Griesinger and others were also given in support of this contention, notably the very general occurrence of anæsthesia in melancholia.

Epithelioma of the Upper Lip Developing on a Syphilitic Ulceration.—Mr. A. W. Finch Noyes, Jun., F. R. C. S. E. (*Intercolonial Medical Journal of Australasia*, July 20th), reports the case of a man aged forty-two years, who contracted syphilis when twenty years of age. After a series of syphilitic manifestations an ulcer appeared on the upper lip, sharp-edged and punched-out, with a purulent discharge, painless, and with no tendency to new growth around the margin. The ulcer responded to iodide of potassium, but the patient's attendance was irregular, and it became indolent. It was then touched with acid nitrate of mercury. Much swelling ensued, giving place at the edge to cell infiltration and new growth, with much fungation which, on clinical and microscopical evidence, was a malignant growth.

The clinical evidence in favor of the original lesions having been syphilitic, was: (1) The multiplicity of the ulcerations. (2) The sharp-cut edges, and punched-out appearance of the ulcers. (3) The rapid destruction of tissue. (4) The painless character. (5) The absence of cell infiltration or new growth round the margin. (6) The response at first to iodide of potassium. (7) The concomitant signs, *i. e.*, nodular syphilitic lesions of the forearm.

From microscopical evidence the indications of this being a very active epithelioma were: (1) Small thin columns of epithelioma penetrating deep into the sub-lying tissue, not solid thick masses such as would indicate a more chronic growth. (2) The character of the cell nests in the corium, lying in masses of epithelium cells. (3) Infiltration of the margin of the growth with leucocytes. (4) Small detached groups of epithelial cells lying in the adjoining lymphatics.

The indications of existing syphilis were: (1) Endarteritis, affecting many of the small arteries in the adjacent tissue. (2) Patchy infiltration of the tissues in the neighborhood of the affected arteries, with small round cells. This infiltration bore no relation to the proximity of the epithelial growth, or to the size of the vessel. It was often found connected with vessels so small as to necessitate the use of the high power of the microscope to define them.

The patient was successfully operated on by Dr. F. D. Bird as shown by an illustration representing the patient before and afterward.

The new lip was formed of a vertical flap extending from just beyond the commissure to well on the margin of the orbit; as much of the thickness of the cheek was acquired as possible, and the inner vertical incision, which formed the margin of the new lip, was not cut perpendicularly to the surface, but in a sloping manner, so as to leave a redundancy, which afterward shrivelled to about what was wanted for the free edge of the lip.

Causes of Idiocy and Imbecility.—Dr. Louise G. Robinowitch (*Journal of Mental Pathology*, June and July) from a clinical study formulates the following conclusions: The causes of idiocy and imbecility are many and varied. Subtle causes, such as maternal impressions during pregnancy, must not be accepted without searching for more substantial underlying causes.

Hereditary degeneracy, psychoses and psychoneuroses of the parents are some of the causes.

Acute infectious and contagious diseases of the mother during pregnancy are causes, but additional search must always be made for underlying causes other than these.

Syphilis is a cause.

Self-infection, myxoedema, is a cause.

If the acute contagious and infectious diseases during childhood leave the child an idiot or an imbecile, that child's heredity must be well scrutinized, as the latter is most certainly the underlying cause.

Alcoholism of the parents is the major cause responsible for the birth of idiot and imbecile children, according to the study of the cases cited.

Alcoholism of the parents not only causes idiocy and imbecility of the offspring, but also acts as a strong factor in reducing the birth-rate and increasing the death-rate.

Children of alcoholic parents, if not idiots or imbeciles, are apt to be invalid in many other ways.

Children of alcoholic parents generally die in early infancy of meningitis.

More about Prickly Heat.—A "Government Medical Officer in the West Indies" continues in the *Journal of Tropical Medicine* for August 1st the discussion which has been some time continuing in that journal, and to which we have made frequent reference. He says:

"In my opinion all the papers I have read in your journal, valuable as they are in their lines of treatment, travel round the subject. I believe prickly heat to be, as its old name 'eczema solare' expresses, a true eczema running from moist vesicles to dry branny scales, and that the popular idea that it is salutary is a true one, *i. e.*, its presence is protective when established. It is Nature expressing 'You have been trying to introduce into the system poisons that I have thrown out once; I won't have them, so I throw them out again.'

"Both sudoriparous and seborrhaceous secretions are eliminative in purpose, and excrete deleterious products. These, if thrown away, as they are intended to be, and are by those who do not wear clothes, give no further trouble; but held by any garment and kept in application to the skin, are more

or less retained, and prickly heat is the mode of their rejection. For years I have been free from this trouble, to which for a long time I was subject; and I attribute it to having (in addition to adopting those means recommended, which tend to make a skin healthy), avoided soap and everything that by chemical means hastens the separation of the epidermis, and interferes with its natural secretory power. Veterinary surgeons will tell you, 'Do not wash animals with soap if you wish to keep their skins healthy.'

"I have used cocoanut oil sparingly, as it should be used, for years; but lately have adopted the almond oil and lanoline, 1 to 7, with ol. rosæ, and find it a most delicious and elegant preparation. It is difficult to get cocoanut oil free from taint of burn, even though not rancid, and to take scented oil and maintain its aroma. Then the dusting powder recommended is most valuable as a further aid. When no other has been handy I have used fine Indian corn meal with advantage; but my chief reliance is on thin cotton garments *under* my Jaegers, and changing my clothes, which I try to do every time I come in, as frequently as three or four times a day. These cotton garments can be washed in a hand-basin with ammonia and water, and dried quickly; while the Jaegers can be worn a week, free from all trace of perspiration or odor of any kind. Under this régime prickly heat quickly disappears.

"I have seldom or never seen prickly heat on the lower extremities, below the line of closely applied garments. Intertrigo in all its forms is, I think, of a like nature."

Accidents of Eruption of the Wisdom Teeth.—Moty (*Revue de chirurgie*, May, June, July) terminates a paper with the following conclusions: 1. There exist light accidents attendant on the wisdom teeth and due to irritation of the gum at the time of eruption. 2. Grave accidents of the wisdom teeth are due to two principal causes: *a.* The proliferation of epithelial debris included at the time of formation of the dental follicle; *b.* total inclusion of the tooth; *c.* caries of the tooth. 3. The gravity of the accidents is most often dependent on invasion of the dental canal by the inflammatory process, the infectious character of this process in caries rendering it particularly formidable. 4. Constriction complicates nearly all these accidents, whatever be the initial cause. 5. The rational treatment is the extraction of the tooth. 6. Conservative treatment, however, may be attempted in the first form (*a*) if the condition of the denture renders the wisdom tooth of more relative importance than usual. This form of treatment comprises curetting of the fungosities of the roots by the external surface of the maxilla, exposed without opening the buccal cavity.

A Four-legged Baby.—According to *American Medicine* for September 21st, on May 24th a negress of Opelika, Ala., gave birth to a well-developed male child with four legs. One pair of legs is in the ordinary position, and, like the arms, they are well formed. The extra pair of legs is near the arms, and while quite well formed, the legs are small. The feet on the extra legs are regularly formed, with toes and toenails. The child is robust and healthy, with all the faculties of an ordinary child.

Original Communications.

THE LANE LECTURES ON THE SOCIAL ASPECTS OF DERMATOLOGY.

By MALCOLM MORRIS, F. R. C. S. ED.,

LONDON,

SURGEON TO THE DEPARTMENT OF SKIN DISEASES, ST. MARY'S
HOSPITAL.

LECTURE V.

Delivered at the Cooper Medical College, San Francisco, September 4, 1901.

General Inoculable Diseases; Tuberculosis, its Infectious Character; "Scrofula"; Tuberculous Affections of the Skin; Lupus Vulgaris; Modes of Inoculation; Transmission of Lupus by Vaccination; Tuberculosis of the Skin; Tuberculous Infection from Ritual Circumcision; Tuberculous Ulcers; Scrofuloderma; Lichen Scrofulosorum; Acneiform Tuberculide; Erythema Induratum Scrofulosorum; Tuberculides.

Leaving the territory of diseases which affect only the surface of the skin and, however disfiguring and otherwise troublesome to the individual and to those about him, do not except by accident invade the sanctuary of life, we have now reached a region haunted by formidable shapes of death which claim a terrible tribute of victims from the human race. These are the diseases which do not confine their ravages to the skin in which they are inoculated, but carry their work of destruction into the innermost recesses of the body.

TUBERCULOSIS.

Preeminent among them stands tuberculosis, the White Plague which slays more men than any other disease, probably as many as all other diseases put together. This hideous mortality would be grievous enough if the victims were mostly those whose way of life had declined into the vale of years, but the fact that it is mainly lives in the quickening spring or ripe summer of their productiveness that are cut short makes the loss a disaster to the human race. And the pity of it is that it is preventable. For us, too, there is cause for deep shame as well as sorrow in the thought that it is the medical profession itself which has till lately stood in the way of its prevention.

ITS INFECTIOUS CHARACTER.

As far back as the days of Aristotle consumption was looked upon as infectious, and so strong was the belief in its contagiousness that in southern Europe rigorous precautions were enjoined till near the middle of the century just past, with the view of pre-

venting dissemination of the disease. The medical profession, however, laughed at the idea of tuberculosis being infectious, and the wholesome conviction was finally discarded by the public. Fortunately, just about the same time came the dawn of a new sanitary era and with it drainage of soil, improved dwellings for the poor, diminution of overcrowding, and general betterment in the mode of life that brought about a great and progressive decrease in the prevalence of the disease. It is not too much to say that the most serious obstacle now is the difficulty of implanting once more in men's minds the conception of the infectiousness of tuberculosis which was uprooted by the misdirected efforts of the medical profession. One of the chief objects of the League of Nations against the scourge which is now being gradually organized is to make the people unlearn the wrong teaching of the doctors.

It is but right that an acknowledgment should be made here of the debt which humanity owes to Robert Koch for having placed the beacon of truth in regard to the infectiousness of tuberculosis on a height of demonstration where it could be seen of all men. Villemin had taught the truth many years before, but his flickering light was at first hidden under a bushel of indifference and soon extinguished by the condemnation of the superior person who looks with suspicion on everything outside the narrow pale of academic orthodoxy, and hence in medicine, as in every other sphere of thought, is the greatest hindrance to progress. In honoring Koch, therefore, let us not forget Villemin. I only wish that I could claim for any of my countrymen some share in the credit due for this great service to humanity; but truth compels me to confess that nowhere more than in England, where tuberculosis is so rife, has the doctrine of its infectiousness met with opposition from some of those who had the largest opportunities of observing the disease. I am glad to note that here in America the lesson has been so well learned that aliens suffering from pulmonary tuberculosis are not to be allowed to land at your ports. This decision is a logical consequence of the doctrine of the contagiousness of phthisis, and, though it may entail hardship on individuals, it is justified by the principle of the greatest good of the greatest number.

"SCROFULA."

Before speaking of the manifestations of tuberculous infection which particularly concern us here it may be well for the sake of clearness to say a few words about scrofula, which is still used by some writers to denote a disease. The changes in the map of pathology that have been made necessary by the progress of discovery have, as you know, led to most of the affections that used to be known as "scrofulous" being absorbed into the vast territory of tuber-

culosis. But, though the scrofula has disappeared from the list of diseases, it remains as the designation of a state. What that state or diathesis really is we do not know; we only know that the term scrofula connotes a special delicacy of tissue making it vulnerable beyond what is seen in the healthy state to injurious influences of all kinds. And the lesions induced by such influences are apt to become starting-points of chronic inflammatory and suppurative processes leading to the formation of unhealthy "festering" sores. Scrofula may prepare the way for tuberculosis, or, rather, it is the soil, the bacillus is the seed, and tuberculosis is the harvest.

TUBERCULOUS AFFECTIONS OF THE SKIN.

Owing to the great variety and complexity of the lesions and processes by which tuberculosis manifests itself on the skin, the subject as presented in most text-books is still in a state of confusion, both of description and of terminology, that at first sight appears inextricable. For the sake of clearness, therefore, it will be well for us to consider first the skin affections now universally recognized as being due to the tubercle bacillus, and next those which, though equally due to the presence of that organism, are probably more familiar to many as the effects of "scrofula." To the former category belong (1) lupus vulgaris; (2) verruca necrogenica, or post-mortem wart; and (3) the tuberculous ulcers which occur about the orifices of the body in persons suffering from pulmonary or intestinal tuberculosis as the result of direct infection. In the second category should be placed the conditions grouped together under the terms of scrofuloderma and "tuberculides."

LUPUS VULGARIS.

Lupus vulgaris is a chronic form of tuberculosis, its chronicity being doubtless due to the fact that only a small number of bacilli are found in the diseased tissues. Though a hideously disfiguring disease, it does not directly threaten life, though indirectly it may do so by leading to the development of secondary tuberculosis in the lungs or of epithelioma in the lesions themselves. On the other hand, the disease shows little or no tendency to spontaneous cure, but continues, now smouldering, now bursting into a slow flame. It may remain stationary for years and may then be quickened anew into activity by an attack of measles or scarlet fever. I have seen many cases in which this has occurred, particularly after measles. In rare cases it seems to burn itself out, but this consummation does not occur until it has wrought irreparable havoc and left the marks of its destructive presence in unsightly scars, obliteration of features, permanently narrowed passages, and deformed limbs. The unhappy sufferer,

as a rule, becomes an outcast from society; he is unable to earn his living in an ordinary trade or industry, because other workers will not tolerate his presence among them, although his general health may remain unaffected for long years and, indeed, till the end. The disabilities entailed by his disease tend steadily to become greater as the disease spreads, and crippling of limbs is superadded to increasingly repulsive deformity. I may here state that it is not only in the case of adults that the disease entails social disabilities. I have known a mother refused lodgings for her little child and herself because the child had lupus of the face. It has been said that epithelioma may develop on a lupus lesion. This, if I may judge from my own experience, is not very common, but Ashibara¹ has collected 122 cases. The possibility of such an occurrence must always be reckoned with in making a forecast of the patient's future. As has recently been pointed out by Professor Fordyce, of New York, the prognosis of epithelioma which develops in lupus is of greater gravity than that of the ordinary cutaneous form, because, as he says, "the morbid condition of the connective tissue permits a more rapid development of the growing epithelium, so that we have a tumor of more malignant type than when independent of such a connection."

As to the development of secondary tuberculosis in the lungs from a focus of primary lupus in the skin, the fact has been noted by too many trustworthy observers to be doubted, although others, among whom may be mentioned Nevins Hyde, of Chicago, and Brocq, of Paris, have never seen a case in which this has occurred. Among the many who have noted the occurrence of phthisis secondarily to lupus there is a great divergence of opinion as to the frequency of its occurrence. Besnier holds that secondary tuberculous infection is "a not infrequent result of lupus," but this is contrary to my own experience.

MODES OF INOCULATION.

The implantation of lupus is effected by direct inoculation of the tubercle bacillus. This cannot occur when the skin and mucous membrane are in a state of perfect integrity, but any abrasion, scratch, or wound may give admission to the parasite. An insect sting may become the site of inoculation, but any affection leading to destruction of the horny layer makes a breach at which the bacillus can enter. The mucous membrane of the mouth and nose is particularly liable to become the point of attack, especially in persons presenting the characters of the scrofulous constitution. Neisser gives emphatic expression to the belief that most cases of lupus of the face have their origin in a diseased nasal mucous

¹ *Archiv. für Dermatologie und Syphilis*, LVII, 1, 2.

membrane. The inoculation may be made by a contaminated finger used to "pick" the nose—a fact which may supply parents and teachers with a strong additional reason for condemning that dirty habit; or the tubercle bacillus may be inhaled and deposited on a suitable spot on its passage through the nostril. If the mucous membrane is unhealthy, the conditions are favorable to the growth of the micro-organism, and a tuberculous focus is established. I have seen cases in which lupus apparently began in the tear ducts and travelled down into the nose. These facts would account for the marked predilection that the disease shows for the nose. They would also help to explain the much more frequent occurrence of lupus among that class of the population in which, owing to bad conditions of life, the required vulnerability of tissue is more general and discharges from the nose are but little noticed than among the better cared for children of the well-to-do. Neisser points out that the nasal catarrhs and eczematous eruptions seen in scrofulous subjects are not in themselves tuberculous, though they are conditions which directly favor infection. The possibility of the tubercle bacillus gaining a foothold in a weak spot hidden away from sight, as in the depths of the nose, should always be borne in mind. For years it may be thought that nothing is the matter except a slight the nostrils, while the tuberculous process is already well established. The fact that the primary focus of lupus is often situated inside the nose also supplies an explanation of the difficulty of permanently curing the disease. It is obvious that, as long as the source of the trouble escapes detection, reinfection of the skin may take place again and again. My attention was particularly called to this source of difficulty in the treatment of lupus of the face by Professor Finsen, of Copenhagen, who has now had a very large experience of the disease.

It should be added that, even if the primary focus within the nose is discovered, lupus of a mucous membrane is extremely refractory to treatment. In every case of lupus of the face, however, the inside of the nose should be thoroughly examined and an attempt made to cure or at least mitigate any disease that may be found there, otherwise there is little chance of obtaining a definitive cure.

Among other ways in which lupus is conveyed may mentioned eruptions, suppurating glands in the neck, boils, syphilitic lesions, circumcision, the piercing of ears for rings, tattooing, and vaccination. I have seen one case which commenced in the ear after piercing.

TRANSMISSION OF LUPUS BY VACCINATION.

The attention of the profession has recently been forcibly drawn to the possibility of the transmission of lupus by vaccination by Dr. Graham Little in the *British Journal of Dermatology* (March, 1901). In

view of the great public importance of the subject, I venture to give some details of the cases which forms the basis of his paper. The patient was a Jewish girl born in December, 1891, and vaccinated in April, 1892, in four places in the usual situation on the arm, by the public vaccinator of the district. Calf lymph supplied by a private firm of excellent reputation was used, and four other children were vaccinated at the same time with the same lymph. These, however, could not be traced. The manager of the firm which supplied the lymph stated that it was treated with glycerin and was quite fresh, certainly less than forty-eight hours old. No complaints had been received of the lymph sent out at the time. The calf from which the supply was taken was vaccinated with calf lymph taken previously from another calf. It was killed, but no special examination for tuberculosis was made either before or after it was vaccinated. "Chief reliance was at that time placed on the statement that tuberculosis in young calves is of extreme rarity, occurring only once in many thousands examined." The father's history of the origin of the disease in the child was as follows: The two lower of the four vaccination sores remained unhealed after the scabs from the two upper wounds fell off, which happened within three weeks of vaccination. The lower lesions, in fact, did not heal, but within from four to six weeks of vaccination their scabs fell off, leaving in the site of the wounds bleeding nodules and an unhealthy red sore, which oozed "blood and corruption." This discharge persisted for some years, and the patient attended various hospitals for it; it ceased only twelve months before she came under Dr. Graham Little's observation. The child was one of six children, of whom one died at the age of three of phthisis and another after operation for a mastoid swelling. The other children are said to have been healthy. When shown at the Dermatological Society of London, in January, 1900, the girl had on the left arm a patch of scabby dermatitis presenting all the clinical appearances of lupus vulgaris; it occupied the site of two of the four vaccination scars. There were three nodules of more recent origin at the margin of the main patch, but separated from it by healthy skin. There were two or three moderately enlarged glands in the left axilla. The child had frequent attacks of bronchitis, but showed no physical signs of tuberculosis. The lupus patch was removed by operation by Mr. Kellock, and the wound covered by skin grafts; when the child was seen a year afterward there was no lupus, the cicatrices were healthy, and the child was in good health. Inoculations of an emulsion of the removed tissue in two guinea-pigs gave a positive result in one case; the other animal died after four days, of course without any sign of tubercle.

In discussing the question, Was this a case of inoculation of tubercle associated with vaccinia? Dr. Graham Little said his opinion might be well expressed in the language used by Besnier in reporting a similar case of his own—namely, that “the lupus was inoculated by the vaccinator, the vaccine, or other outside agency, before the end of the eruption of vaccinia.” Dr. Graham Little gives notes of four recorded cases of lupus occupying the site of vaccination, with details of three others from unpublished notes by Dr. Colcott Fox. Mr. Hutchinson described a case in a child of eight in which the vaccination spots never healed and lupus supervened a few months after vaccination. Besnier reported a case of vaccinal lupus in a young man aged eighteen; the disease had existed since vaccination at the age of one year. A case came before the Royal Commission on Vaccination in 1896 in which, of four vaccination punctures, two never got quite well and a “sore” had gradually spread from these as a centre. The child, aged seven years, had a lupus patch on the arm which had existed since vaccination at the age of four months. Kayser reported a case of lupus of the left arm in the site of vaccination in a girl of thirteen; there was coexistent lupus of the lobe of the left ear. The “sores” had existed since the child was six months old, and small nodules had developed which grew steadily larger. The patient’s father died of tuberculosis three years after the girl was vaccinated, but at the time of the vaccination he was quite well. The girl herself was thin and pale, with somewhat suspicious physical signs at the apices of the lungs. Both the ear and the arm seemed to have developed tuberculous manifestations at the same time. Another case in which lupus developed on the site of vaccination has been recorded by Lennander, but the patient was not seen till thirty-four years after vaccination, and the details are by no means clear. J. F. Payne has seen a case in which lupus was said to have followed vaccination, but the lesion had no connection with the site of the punctures.

Dr. Colcott Fox’s unpublished cases comprise: 1. A female infant exhibited to the Dermatological Society of London on November 9, 1892, suffering from lupus vulgaris occupying the site of a vaccination scar and a multitude of tuberculous lesions. The mother stated that the child was perfectly healthy until vaccinated, and that there was no tuberculosis in the family. The appearance of the patch of lupus was followed after some months by scrofulotuberculous gummata of the scalp, perforating the skull, and by other tuberculous manifestations. 2. A boy, aged fifteen months, who was vaccinated in five places when three months old. He was said to have been quite healthy at that time and previously. On the site of one of the vaccination

scars a red patch developed which Dr. Fox diagnosed as lupus vulgaris. Later scrofulotuberculous gummata developed here and there about the limbs. In this case there was a collateral family history of phthisis. 3. A boy, aged one year, who was vaccinated at the age of four months, having previously been of good health and free from all eruptions on the skin. The “sores” did not heal for a long time, and finally in two of the scars there appeared a chronic red scabby infiltration which Dr. Fox diagnosed as lupus vulgaris. Dr. Fox gives as his reason for not publishing these cases before that, although they certainly raise suspicions as to the possibility of a coincident inoculation of tuberculosis and vaccinia, he does not think they are of value when critically examined. For example, preexistent bacilli may have found a suitable soil in the wounded tissue or the inoculation from the outside may have been secondary. He says he has seen other cases of lupus vulgaris in vaccination scars, but at too long an interval of time from the vaccination to make the history convincing. I have myself seen only one case in which lupus attacked a vaccination scar. The mother stated that the “sore” had never healed and that the characteristic nodules had developed in a few weeks.

On the whole, I think it is clear that the inoculation of lupus must be regarded as a possible accident of vaccination. It is by no means clear, however, how or when the inoculation occurs. It is, of course, conceivable that the tubercle bacillus might be conveyed in lymph taken from a tuberculous child or a diseased calf, but, with the strict precautions now taken in the selection of the source of the vaccine and in the treatment of the lymph, such an occurrence can hardly be reckoned as a practical danger. But it is obvious that the vaccination sores, like other skin lesions, may, unless the most rigorous care is taken to keep them safeguarded from infection, readily become the site of inoculation from outside or from preexisting foci of tuberculosis. The scantiness of the literature on the subject seems to show that the transmission of lupus in this way is very rare, but it is most important that the profession should be awake to the possibility of so deplorable a sequence of events.

Although lupus is inoculable in such a variety of ways, it is not contagious. But it must be remembered that it does not need for its entrance a wound, as Mercutio says, “so deep as a well nor so wide as a church door”; a scratch will suffice. And, as a skin that looks perfectly whole may have on its surface some tiny abrasion or puncture, it is well in practice to recommend that lupus should be treated as contagious. This is, of course, especially necessary in the case of persons predisposed to tuberculosis.

TUBERCULOSIS OF THE SKIN.

Tuberculosis of the skin may be a localized infection or one of the manifestations of generalized tuberculosis. Of the localized infections, the most common as well as the most important form is lupus vulgaris, which has just been discussed. Another is the so-called post-mortem wart, which is the result of infection derived from handling dead flesh in which lurk living bacilli. Hence it is almost peculiar to medical men, students of anatomy, dead-house porters, butchers, and cooks. The mode of infection is the same as in lupus. The process is more superficial than in lupus and is very chronic, the wart-like growths on the hands becoming slowly larger for an indefinite time, but never, as far as I know, causing infection of the system. The post-mortem wart is only a special variety of the condition described by German writers under the name of *tuberculosis verrucosa cutis*. These local infections mostly attack the hands and feet, and are seldom seen on covered parts of the skin. They occur in persons who live with sufferers from phthisis, especially those who render personal services to such patients. Fabry has noted the comparatively frequent occurrence of warty tuberculosis of the skin in colliers; this he attributes to the wounds of the hands so common among those who handle coal.

TUBERCULOUS INFECTION FROM RITUAL CIRCUMCISION.

Tuberculous infection of the skin or mucous membrane not seldom occurs as the result of ritual circumcision when the wound is sucked by an operator who is the subject of tuberculosis. Bernhardt, who sees many such cases (quoted by Graham Little, *loc. cit.*), gives the following as the typical course of events after such an occurrence: "Fifteen to twenty days after circumcision there form on the frenulum or the neighboring skin nodules which speedily ulcerate; at the periphery of the ulcer fresh nodules form, or there is greater infiltration with fresh ulceration gradually invading the whole wound. A hard, deep ulceration with prominent, much infiltrated edges is developed. The ulcer is occasionally undermined and its floor is covered with grayish granulations and pus. The ulcers developing on the frenulum have often a strong resemblance to a hard chancre." The practice of sucking the wound after circumcision has been denounced by medical authorities as a possible cause of syphilitic infection for many years past. It is clear that it entails an equally serious risk of inoculating the virus of tuberculosis. If it be pleaded that it is a part of the Mosaic rite, I can only urge that that ritual should give way to the higher law which forbids infliction of a grievous personal injury on a fellow-creature.

Tuberculous infection is also sometimes conveyed by tattooing; the operator may poison his needles by holding them in his mouth or may inoculate the virus more effectually by rubbing in the ink with his saliva.

TUBERCULOUS ULCERS.

An acute form of skin tuberculosis occurs in persons suffering from advanced tuberculosis of the lungs or intestine. Inoculation of infective material contained in the discharges takes place about the mouth and nose in cases of pulmonary disease, and the anus when the intestine is the seat of tuberculosis. The result is the production of small, flat, rounded ulcers with ragged, undermined edges, and a clean, reddish-yellow floor, at the junction of skin and mucous membrane. Yellow miliary tubercles are generally to be seen in the vicinity of these ulcers. They tend to spread by infection of contiguous parts; sometimes they run together and form serpiginous sores. Such secondary tuberculous ulcers frequently form on the mucous membranes, especially on the lips, the inside of the mouth and nose, the urethra, and the bladder. In the lesions of this form of tuberculous infection, bacilli are to be found in large numbers in the affected tissues.

Time will not allow us to do more than glance at the varied conditions grouped together provisionally under the names scrofuloderma and tuberculides. These terms are not scientific, for scrofuloderma is a survival of an obsolete pathological theory while tuberculide might well be a general designation of skin lesions due to tuberculous infection, but can scarcely with propriety be reserved for a motley group of eruptions the tuberculous nature of which has not been definitively proved.

SCROFULODERMA.

Scrofuloderma denotes the results of tuberculous infection in the subcutaneous tissues, where it gives rise to the formation of nodules which become swellings to which the name of "scrofulous gumma" or "cold abscess" is often applied. As they increase, they push their way toward the surface, undermining the skin and finally boring their way through it. A similar process may start in a lymphatic gland or may become developed by extension from a bone affected with tuberculous osteomyelitis. The process is chronic and unattended with pain; the abscesses tend to heal up when the contents have been discharged through the opening in the skin, leaving the unsightly scars which are still occasionally seen on the neck, though much more rarely than used to be the case twenty or thirty years ago. If seen in a young subject to-day, they may be taken as a proof either of the folly of the parents or of the incompe-

tence of the medical adviser. If such tuberculous masses are excised, the amount of scarring that follows the operation is trifling compared with that which takes place if the swelling is allowed to come through the skin. The "gumma scrofulosum" is of a purely tuberculous nature, but in the later stages of its development, when suppuration occurs, the original process is complicated by mixed infection.

LICHEN SCROFULOSORUM.

Lichen scrofulosorum represents a condition which has nothing to do with lichen. It is characterized by a papular eruption, mostly seen on the back and abdomen, which occurs in persons of the so-called "scrofulous" or, as I should prefer to term it, potentially tuberculous constitution. At first the papules are scattered in isolated groups, but gradually the eruption spreads over the whole skin, which acquires a dirty reddish-brown color and is covered with thin, easily detached scales. In most cases there are evidences of phthisis or other tuberculous mischief. The tuberculous nature of the disease has now been clearly established by the finding of bacilli in the lesions by Jacobi and Wolff. Experimental inoculations on animals have given negative results.

ACNEIFORM TUBERCULIDE.

Dr. T. M. H. Macleod, of London, and Dr. Ormsby, of Chicago, have recently made an exhaustive study of two cases of which the following details may be given:

CASE I.—A baby with tuberculous history and evidences of general tuberculosis, such as dactylitis, acneiform tuberculides on the arms, hips, etc. Histological examination revealed typical tuberculous architecture and tubercle bacilli in the giant cells, also endophlebitis in the veins of the hypoderm.

CASE II.—"Acneiform tuberculides" on the legs of a young woman aged twenty-five. Typical tuberculous architecture in the sections and periphlebitis and endophlebitis.

They conclude that acneiform tuberculides begin in an affection of the veins of the hypoderm due to the tubercle bacillus. The process results in a deep-seated necrosis which is definitely tuberculous in character and the consequence of the invasion of the tubercle bacillus and its toxins.

ERYTHEMA INDURATUM SCROFULOSORUM.

An affection of which the nature is more doubtful is that known as erythema induratum scrofulosorum. The distinctive lesions are deep-seated nodules commencing in the subcutaneous tissue and chiefly situated on the legs. They are of chronic inflammatory character and often bear a close likeness

to the nodular gummata of syphilis. They show a tendency to break down into irregular ulcers. The disease is almost peculiar to young girls whose occupation, at the wash-tub or behind the counter or the bar, involves prolonged standing. The tuberculous nature of this disease has recently been proved by Dr. Colcott Fox, who excised a deep-seated nodule and submitted it to examination. Typical giant cells are present, but not in great abundance. The result of an experimental inoculation in a guinea-pig made by Dr. Eyre was that the animal died of tuberculosis.

TUBERCULIDES.

A group of affections of more doubtful character remains to be considered. These are eruptions which, although presenting a great variety in appearance, have certain characters in common. According to Colcott Fox, who presented a report on those eruptions to the Fourth International Congress of Dermatology, "the essential lesion is a small, extremely indolent granuloma tending to undergo central softening and death, and thus leaving scars." According to differences in the size, character, grouping, and behavior of the lesions, a bewildering complexity of affections have been described by various observers, with a corresponding complexity of nomenclature. The following are a few of the names collected by Fox: *Lupus*, *psoriasis scrofulosa*, *folliculitis exulcerans*, *folliculitis scrofulosorum*, *hydradenitis destruens suppurativa*, *spiradenitis disseminata suppurativa*, *acnitis*, *acne telangeiectodes*, *impetigo varioliformis*, and *acne varioliformis*. The evidence as to the tuberculous nature of these varied eruptions is not complete. They are often, but by no means invariably, associated with tuberculous disease in the lungs or glands. The microscopical evidence so far obtained is inconclusive, while the bacteriological evidence is absolutely negative. Experimental inoculations have mostly been unsuccessful. It has been suggested by Hallopeau and others that these tuberculides may be the result, not of the inoculation of tubercle, but of the circulation in the blood of toxins produced in tuberculous foci within the body. In view of the eruptions produced by other kinds of toxins and by drugs, the possibility of such an origin cannot be denied. But it is at present a mere theory resting on no solid proof. Fox points out that if these tuberculides are due to the implantation of Koch's bacilli emanating from some distant focus and coming by way of the blood current, the organisms must be of little virulence and probably easily killed. This would, he says, explain why the pathological changes are often indecisive and why inoculations fail.

From what has been said it will be seen that an exact delimitation of the territory of tuberculosis is

one of the pressing problems of dermatology. This is also a problem of the greatest importance in the interest of the public, that on the one hand we may avoid danger where it exists, and on the other that we may not put the social stigma of an infectious disease on the subjects of a harmless eruption.

THE TONSILS.*

By ROBERT LEVY, M. D.,

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Even a casual glance at recent laryngological literature reveals so many articles dealing with what had for many years been considered well established facts concerning the tonsils, their diseases, and methods of treatment, that one cannot but be struck with it all, and question the reason for many diverse opinions and the attempts of prominent authors to find satisfactory solutions for numerous problems.

In studying the structures known as the tonsils, we no longer refer to the collection of follicles situated between the pillars of the fauces, but think of the entire ring of lymphatic tissue which, according to Kayser (*Handbuch der Laryngologie und Rhinologie*) runs from the "tonsilla pharyngea to the region of the Eustachian orifice, from there to the posterior rim of the velum palati, around the posterior palatal fold to the faucial tonsil, over the base of the tongue to the opposite side, and by the same direction back to the pharyngeal tonsil." This ring is known as the "ring of Waldeyer," and includes, not only isolated follicles, but large collections grouped in certain situations so abundantly together, that distinct organs have been developed, known as the pharyngeal tonsil in the vault of the pharynx, the faucial tonsils between the anterior and posterior palatine folds, and the lingual tonsil at the base of the tongue.

Diseases affecting these parts are found at all ages, but it is specially interesting to note that those of the pharyngeal and faucial tonsils are associated together in childhood, while those of the faucial and lingual tonsils are associated in adult life. We rarely find at any age one of these tonsils affected without involvement of some other portion of this lymphatic circle.

It is not the purpose of this paper to discuss the pharyngeal or the lingual tonsil, or, indeed, to consider all of the diseases of the faucial tonsils, but I believe that one cannot successfully deal with one unless one recognizes to the fullest extent the rela-

tions existing between them all. This, then, in the author's opinion, is one important reason why many cases do not respond to the usual methods of treatment.

The anatomy, both normal and pathological, as well as the physiology, of the faucial tonsils is still indefinitely understood. The embryology of the parts, from which much might be learned, has always been sadly neglected, comparatively few investigators having turned their attention to this important subject. From time immemorial the functions of the tonsils have been the subject of great variation of opinion. Among recent investigators, Dr. R. D. Fry, of Cleveland, after elaborate experiments and after numerous inquiries among prominent laryngologists, concludes that the "tonsil in man is a retrograde organ and has no function." On the other hand, Mangouly (*Vratch*, October 28, 1900, reported in the *New York Medical Journal*) concludes, after apparently careful experiments upon dogs, that the tonsils bear an important relation to the blood, and that their integrity is an important factor in the struggle of the organisms against the invasion of germs through the mouth.

A most comprehensive article by Ullman in the *Medical News* for January 26, 1901, also points out the important relations these structures bear to the economy, and concludes, first, that the normal tonsil has a physiological function, probably protective to the organism, but, secondly, that this function is frequently impaired and that in the tonsil begins the nidus for the growth and distribution of pathogenic organisms in the system. Many references might be made to authors of note, proving by both clinical and microscopic evidence the important rôle played by the tonsils as portals of infection, while many others, notably Labbé in the *Presse médicale* for August 3, 1900, have shown that the tonsils play an important part in hæmatopoiesis, and that the follicles of the tonsils by the extent of the epithelial surface are also a means of defense against microbian invasion. Here again, then, are numerous reasons why such diversity of opinion exists concerning the proper management of these structures.

The tonsils are subject to acute and chronic inflammation, infections, to disturbances in the character of their secretions, and to development of hypertrophic or hyperplastic changes. These pathological processes must be considered as due to both local and constitutional causes. The local causes are dependent upon certain variations from the normal in the structure of the tonsils themselves, while the constitutional causes may be due to such systemic vices as rheumatism, lymphatism, or systemic infection from absorption through the tonsillar tissue. It is extremely rare, in the opinion of the author, that the systemic causes exist alone, and,

*Read before the Colorado State Medical Society, June 19, 1901.

therefore, one is forced to the conclusion that the local cause is the more important. Consequently, the proper management of the local condition should result in the prevention of subsequent diseases of the tonsils, such as acute amygdalitis, as well as chronic amygdalitis, whether attended with hypertrophy, degeneration, or perverted secretion.

It is an established practice that when tonsils appear enlarged they should be removed. The patient is promised relief from all symptoms and immunity to after attacks of sore throat. The immediate results are often gratifying, but, as time goes on, one after another of these patients returns with recurrences, new hypertrophies, frequent attacks of amygdalitis, etc.

The conclusion is again forced upon one that there is something wrong in the management of these conditions. What, therefore, may be the solution of the vexing problem? How may we best preserve the protective function which so many good authors recognize, and how may we overcome the conditions and ætiological factors for which tonsils are responsible agents?

In the majority of instances, especially in adults, complete enucleation of the diseased tonsil should be performed. Whether there is simple hypertrophy, or a diseased condition of the follicles unattended with hypertrophy but giving rise to well-defined symptoms, nothing short of complete removal will assure one that the symptoms will not return. Amygdalotomy will not suffice. The best method for complete amygdalectomy in adults is by the galvanocautic snare, for, by this means, the danger from secondary hæmorrhage is the least, although it may even occur here. There are, however, many diseased tonsils which cannot be engaged in the snare, or, for that matter, in a guillotine. Here, complete dissection of the diseased tissue may be accomplished by properly constructed galvanocautic electrodes. In all operations, whether by amygdalotome, snare, or dissector, the adhesions which so frequently exist between the tonsils and the anterior and posterior pillars should be removed by a proper knife or electrode.

In children amygdalotomy has its uses, and certainly its advantages, for here the tonsillar tissue is not yet all pathologic, and one may by the rapid use of the guillotine, remove the tonsil so that a decided concavity marks its former situation. A certain amount of tonsil structure remains to perform a possible function in the growing economy at the same time that the child is relieved of the symptoms for which the operation was undertaken. Only in those cases in children in which recurrence after a former amygdalotomy has taken place, or in which there is a diseased condition without hypertrophy,

such as is seen in adults, should the more difficult and radical procedure be undertaken.

Finally, I should insist upon the maxim that no operation upon the tonsils should be performed simply because the structure is not absolutely normal in appearance, but only when distinct and well-defined symptoms exist, referable to these organs as the obvious cause.

A CASE OF PELIOSIS RHEUMATICA (SCHÖNLEIN'S DISEASE).

By FAIRFAX IRWIN, A. M., M. D.,

SURGEON, UNITED STATES MARINE-HOSPITAL SERVICE.

John McC., twenty-nine years of age, a native of Massachusetts, was admitted to the United States Marine-Hospital, Chelsea, Mass., on the 8th of May from the steamship *Admiral Sampson*. This man presents the following history, not very clear, by reason of a certain degree of hebetude and extreme debility, which seems to make any exertion, even talking, difficult. The first symptoms of disease appeared three weeks ago, and consisted of œdema of the hands and pain in the phalangeal and metacarpal joints. The pains were dull and not severe. Then followed in order the same condition in the feet, then swelling of knee joints. The next symptom noticed by the patient was that of pyalism, with sponginess of the gums, looseness of the teeth, and ulceration of the mucous membrane of the mouth. Coincident with this there was œdema of the face, with a purpuric eruption. During this period the seaman was employed on board a steamship belonging to a regular line, plying between Boston and Jamaica.

Status Præsens.—The patient is a small man, weighing 120 pounds, and is five feet six inches in height, slightly built, but does not present an appearance of emaciation, though badly nourished. The face is very cedematous, especially around the eyes, there is a fading purpuric eruption, and there are also some nodules, quite marked on the forehead, ears, and cheeks. The mouth is in a very foul condition, secreting quantities of saliva, and showing a foul ulcer on the mucous surface of the lower lip. The pharynx is very much swollen, and shows ulcers on its surface, and there are ulcers in the mucous lining of the cheeks. This sore throat appears to have been the point of infection, having begun with a mild erythema.

Both hands are very much swollen and cedematous; although he complains of pain in the elbows and shoulders, they are not swollen. The feet are swollen and cedematous, but the ankles and knees do not appear to be swollen. There is no œdema along the shins. The scrotum is swollen and cedematous, and there is a marked purpuric eruption on the inner side of each thigh, close to the groin. The inguinal glands on both sides are very much enlarged.

The eruption is most profuse upon the back, the upper and lower parts of the arms, and the buttocks. In some places there are discrete purpuric spots, of about the size of a penny, slightly raised above the surface, while in others are wheals, all resembling purpura urticaria. Many of them are bright red in color, while others are fading, showing all the vary-

ing colors of an ecchymosis. In the middle of the dorsal region and over the right scapula the eruption has coalesced in patches as big as the palm of the hand, red in color, with dark purple spots. This eruption does not fade away on pressure. Scattered with the general eruption are small, deep-red nodes resembling in character, almost exactly, an erythema nodosum.

The lungs are in good condition; there are vesicular breathing sounds and a good percussion note.

nally, and tincture of myrrh and potassium chlorate as a mouth wash.

Blood Count.—The blood count failed to show any abnormality whatever.

Diagnosis.—This case presents some difficulties in diagnosis, and the following diseases have to be considered: Scurvy, purpura hæmorrhagica, peliosis rheumatica, or Schönlein's disease, and possibly



FIG. 1.—Case of Peliosis Rheumatica.

The heart sounds are muffled as though there was some effusion in the pericardial sac, but there appears to be no extension of the area of heart dulness. The urine is scanty and high colored, but contains neither albumin nor blood. His evening tempera-

ture is 38.4° C. (101.1° F.), morning temperature 38.2° C. (100.7° F.).

syphilis. Syphilis is considered because of the ptyalism and the enlargement of the inguinal glands, but is dismissed because of the absence of the history of Hunterian chancre and because the eruption

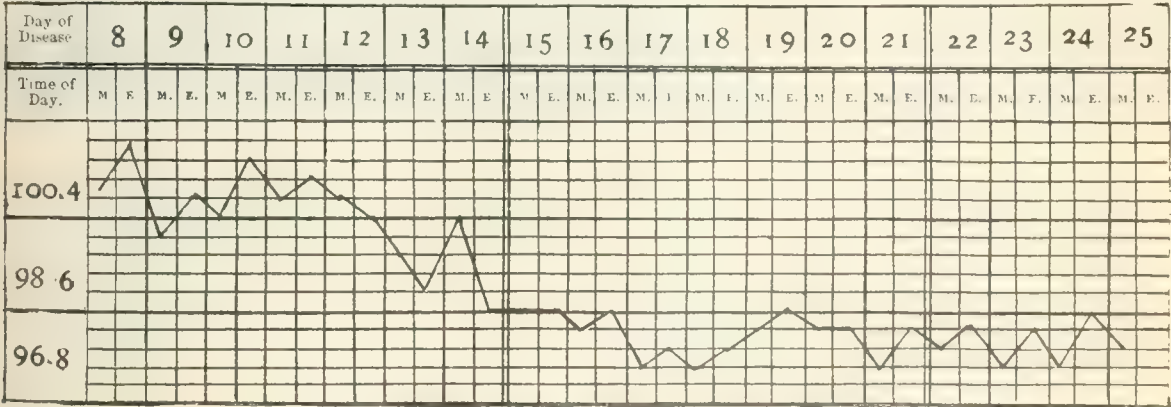


FIG. 3. Case of Peliosis Rheumatica. Temperature Chart.

ture is 38.4° C. (101.1° F.), morning temperature 38.2° C. (100.7° F.).

Treatment.—Tincture of chloride of iron and strychnine sulphate were ordered to be taken inter-

is decidedly not syphilitic. The enlargement of the inguinal glands, it is true, is somewhat marked, but yet not more than is often seen in persons in whom there is no suspicion of syphilis, and in seamen par-

ticularly. The patient has had gonorrhœa once, which lasted two months.

As regards the pyalism, it is believed to be due to a bottle of medicine, purchased at a drug store in Boston, described by the patient as "sarsaparilla," but which was in all probability a mixture of potassium iodide and mercury.

Scurvy, it seems, can be excluded by the history of the case; the patient, having been a cook on the vessel, could obtain, the voyage being only of two weeks' duration, all the fresh vegetables he desired, as well as lemons and limes.

The case is finally concluded by the writer to be either purpura hæmorrhagica or peliosis rheumatica, and the latter is decided to be the case on

that of the hands has very much lessened. Pain in the joints is quite severe, causing insomnia. The pain during the last twenty-four hours has been principally in the knees, having almost disappeared from the ankles. The eruption on the back has somewhat faded, and at the same time it has appeared lower down on the buttocks. The rheumatic symptoms are very predominant. The œdema of the pharynx has lessened, and the ulcers of the mouth are very much improved.

13th.—There is very little change, and such as there is is for the better. The temperature shows a steady decline, is 37.3° C. (99.1° F.) this morning. The eruption is fading rapidly, although some fresh spots are showing on the dependent portions of the body. The œdema has almost entirely disappeared, and the arthritis is confined to the knees. The mucous membrane of the mouth and pharynx is rap-

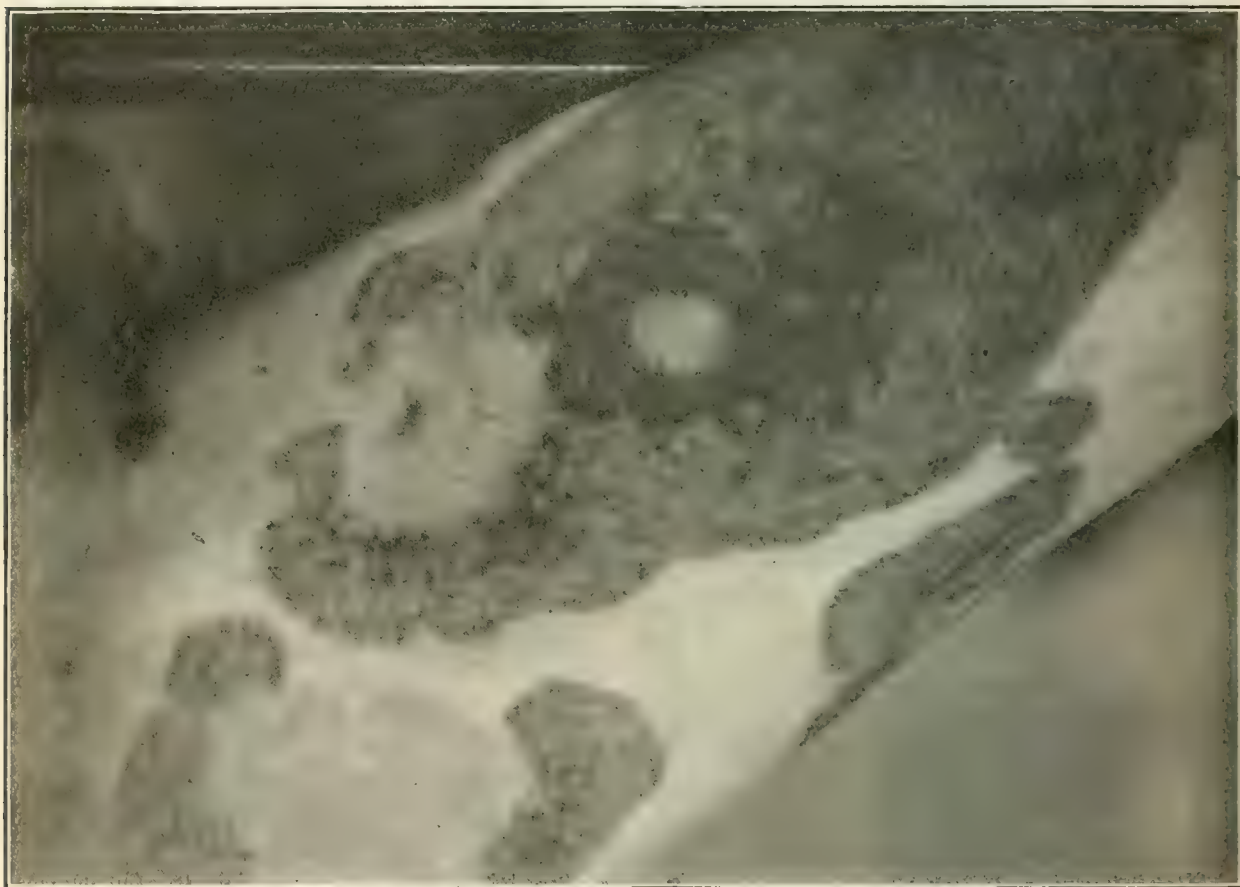


FIG. 2. Case of Peliosis Rheumatica—Enlarged View

account of the predominance of the œdema and general rheumatic symptoms.

May 11th.—The œdema of the hands, feet, and face is lessened to a marked degree. The eruption is practically unchanged. There is a slight increase on the chest of that character of eruption which resembles erythema nodosum. He complains of sleeplessness, for which morphine in small doses is prescribed. His temperature remains practically the same.

12th.—The patient's condition still shows improvement. Moderate pyrexia continues. The œdema of the feet and ankles has disappeared, while

idly returning to a normal condition. Sleeplessness still continues, but the appetite is good.

14th.—The continuous improvement observed in the patient since his admission shows a check, inasmuch as there is a rise of temperature this morning, with a recrudescence of the pain and swelling in the hands and an increase of debility. The administration of iron is discontinued, and sodium salicylate in one-gramme (fifteen-grain) doses three times daily, after meals, ordered.

15th.—The temperature last night and this morning is normal. The eruption is rapidly fading away, showing the usual colors of a disappearing ecchymosis. The rheumatic symptoms are confined al-

most entirely to the elbows and shoulders. The face is again swollen, showing particularly around the mouth. The ulcers of mouth and pharynx are better. There is constipation. The condition of the patient still shows a great deal of debility. The insomnia is disappearing.

16th.—The patient is in excellent condition. The temperature remains normal, and there is only slight pain in the shoulder. The œdema has disappeared from the face. Constipation is still obstinate, and enemata are used to overcome it.

17th.—The patient's condition has improved since yesterday, although ecchymoses still continue to appear. Constipation still continues rather obstinate. There is no fever, and the rheumatic symptoms are very slight.

18th.—The patient is in an excellent condition, with no fever and no pain. Edema has practically disappeared.

23d.—There has been very little change in this case for the last three days, except that the ecchymoses have almost entirely disappeared. The temperature remains normal and the rheumatic symptoms are still in abeyance, except for slight pain in the right knee. The patient is still quite feeble and is suffering from hæmorrhoids.

June 3d.—The patient is getting well rapidly and all symptoms of disease are fast disappearing.

12th.—He is discharged, entirely recovered.

THE GROWTH OF NEW BONE FROM PERIOSTEUM.*

By J. HERMAN BRANTH, M. D.,

NEW YORK.

More than twenty years ago the writer removed nearly one half of the inferior maxilla with a view to having a resulting regeneration of the bone from the periosteum. The history of this case was as follows: The patient, a woman thirty-four years of age, about fifteen years previously had worked in a match factory, but was not employed for many years in this manner. For five years, or thereabouts, she had suffered from carious teeth with inflammation of the alveolar process on the left side. The teeth on that side were loosened one after another, and drawn. The inflammatory process did not moderate, however, but numerous abscesses pointed on the lower aspect of the jaw, from which gritty, bony débris and some bony spiculæ made their exit. At this point the writer's attention was drawn to the case. Upon examination with probe and director, loose bone was detected. The matter of operation was submitted to the patient, who was ready to accept almost anything that offered a hope of relief. A number of operations were undertaken to remove sequestered bone, and in some places the periosteum was like an empty bag. On the removal of the first sequestrum, improvement and a diminished indura-

tion in that neighborhood followed, and were apparent to the patient. It took over a year to close the last sinus. One year later still but very little scarring was visible and the contour of the face did not lead one to suspect the fact that so much bone had been removed. On touch, one could feel that bone substance was reproduced. An artificial denture on a base of amalgam, which was then in vogue with dentists, was secured, and the patient was enabled to masticate on that side.

To-night I have the pleasure of showing you a patient from whom, in 1884, I removed nearly all of the os calcis except the anterior part articulating with the astragalus and cuboid. This patient had the following history: A plump, well-developed child; one brother, about twelve years of age, was an idiot, and had a large hydrocephalic head. The parents, now dead, were strong and healthy. Fourteen children in the family, all alive. A sister of the mother was of hysterical temperament. This sister had two sons who, in later years, became inmates of an insane asylum. The father, I have recently been informed, had one or two brothers with some mental disturbance. But none of these defects were observable in the parents of this patient; the father, a prosperous merchant, provided his household with affluence.

This patient, Max S., caught the measles about 1882, from which he made a slow recovery. Soon followed the symptoms of hip joint disease, and I brought him in the first stage of this disease, that of distention of the joint, to Professor Lewis A. Sayre. As you can see, an absolute cure of the hip joint resulted. Then followed necrosis of the os calcis, which I treated in 1884. I took out a large necrotic body and curetted the empty periosteal sac. The anterior articular part was a thin, healthy, shell-like body, and I feared to invade the joints of the astragalus and cuboid, but I removed all knotty protuberances from this hollow with a Simon's sharp spoon. I drained with rubber tubing, surrounded by sterilized old linen packing, using iodoform in the dressing. I beg you to examine the patient.

Some time after the wound in the foot had healed, symptoms of Pott's disease of the spine were noticed. I again sent the little patient to Professor Lewis A. Sayre, who applied the plaster of paris jacket. He still wears such a support to his spine. Professor Sayre and Professor Pancoast, of Philadelphia, the latter being a visitor and guest of the former, made a close examination of the foot at this time and gave favorable comments on the operation, its principles, and its results.

In the writer's experience this principle of subperiosteal bone surgery for reproduction of bone has been applied with varying success, but even, if a failure, nothing has been lost, for at a later stage

*Read at the meeting of the Medical Association of the Greater City of New York, June 10, 1901.

an operation for removal of the entire inflamed part can be undertaken.

To find the proper application and limitation let us study some features of growth, nutrition, repair, degeneration, death (necrosis), etc., connected with periosteum and bone substances.

Observation and text-books tell us that the tissues of the body are only capable of existing and preserving their function for a certain length of time. Their power of regeneration becomes less and less as age advances, and, finally, the regenerative processes are no longer able to keep pace with the rapidly advancing processes of degeneration. Death from old age may be attributed to the gradual wearing out of organs, and the gradual loss of resistance, which the diminution of the powers of regeneration entails upon them.

The contra-distinction to this general death of the organism is the local death of a part, or of single cells, or of a group of cells, that is, caries, or necrosis. Then there may be neuropathic necrosis, due to a disturbance of the trophic nerves. Regeneration of tissue and nutrition generally, is largely under the control of the nervous system. Regeneration does not take place so completely if the nervous supply of a part is destroyed. Samuel found that when the long feathers of a pigeon's wing were pulled out, they were only incompletely regenerated if the nerve of the wing had been cut.

In young bones the periosteum is thick and very vascular, and is intimately connected with either end of the bone, that is, with the epiphysis, but less closely with the shaft. It seems, therefore, plausible, that the growth of the skeleton (we know that the bone grows in length from the epiphysis) depends in a measure upon the function of the periosteum, and that the main quantity of developmental material comes through this avenue. In later years of life the periosteum becomes thinner and less vascular.

The periosteum serves as a centre for the ramification of blood vessels previously to their distribution in the bone-substance, hence the liability of bone to exfoliation or necrosis, when denuded of this membrane by injury or disease. The periosteum is a strong fibrous membrane of several layers; its vessels freely inoculate with the vessels of the Haversian canals.

The medullary, or nutrient, artery of the bones, supplies the inner bone tissues, the marrow, while the periosteum mainly supplies the compact and outer bone tissues.

Ordinary inflammatory diseases of bone are divided into three classes:

1. *Death of Bone in its Entirety* occurs in acute osteo-myelitis, or is caused by severe shock, crushing, or by infection. It involves the whole bone,

including the diaphysis, epiphysis, and medullary substance.

2. *Caries* means death of particles of spongy or of articular parts. In caries it often happens that the nidus of inflammation becomes encapsulated and the liquid matter absorbed—as, for instance, may take place in caries of the spine, in which the inflammatory matter, in encapsulation, is walled off, and the destructive process comes to a stop, which we term a cure.

3. *Necrosis* means death of a part, a mass, of compact tissue. In necrosis there is no end to the lesion until the dead bone-substance is out of the system.

Certain inflammatory processes, such as those of syphilis, attack the diaphysis; others, as those of tuberculosis, attack the epiphysis.

On studying these definitions, it becomes apparent that subperiosteal surgery, generally speaking, is limited to cases of necrosis, and does not include in its range cases where malignant constructive and malignant destructive cell-life exist.

Necrosis of parts of bone may be due to a disturbance in the vascular system, to a thrombus or an embolus in the Haversian canals or in a system of canaliculi, or to a form of infection as a consequence to some blood crisis. The result will be an induration, a plugging of a system or systems of Haversian canals, and a slough in the bone substance, which will work its way out to the surface, as all inflammatory currents are centrifugal.

Injuries to the periosteum will often cause a necrotic condition of the underlying bone of more or less depth until the inflammatory condition and its walls form a barrier against further invasion. Quietude and healing in the part do not set in until the dead matter is ousted from the body; the dead matter having reached the surface of the bone, often finds an especial resistance in the periosteum, and, as a consequence, the periosteum, besides becoming involved in the inflammatory process, is then dissected up farther from the underlying bone by the pressure of the abscess matter. Now more bone surface is denuded and deprived of one source of nutrition, that of the periosteum, and the pyogenic germs find less resistance in the half-starved living part, the *locus minoris resistentiæ*, and more or less of the bone is involved before the inflammatory process can make its way out through the periosteum, which latter has the greater vitality. In this way it may occur that, after necrosis of a part of a bone, the periosteum, having been lifted off the bone, may deposit bone cells on its lower surface, and so build a bridge, as it were, over the necrotic substance for some distance, while at some small outlet the *débris* makes and finds its exit. The internal dead bone is the sequestrum, and the newly formed bone is the involucrum. Such a condition will not permit heal-

ing until the sequestrum is removed, which Nature alone accomplishes by a slow process of disorganization into *débris*, so that it becomes portable through the avenues of exit.

For the proper treatment of a case, indications are plain. The surgeon should aid Nature to get rid of the dead bone substance. Operative intervention should be delayed until the line of demarcation, the line between living and dead tissue, can be detected, and then the dead bone can be removed piecemeal from openings which one may enlarge by incisions.

Dr. F. S. Dennis, in his *Text-book on Surgery*, Vol. i, page 806, says of excision of the inferior maxilla: For necrosis the resection should, as far as possible, be subperiosteal and intra-buccal, and both objects may often be accomplished by occasionally aiding the slow process of separation of the necrotic bone from its attachments to bone and periosteum with the elevator or handle of scalpel, or a spatula. By degrees the sequestrum is loosened, new bone forms around it from periosteum, and eventually the dead bone may be lifted from its bed, with perhaps slight incisions of the gum; by this method, large portions of the jaw, and even the entire jaw, may be reproduced during the process of sequestration, and not only its contour, but its function be preserved. This method is preferable to early resection, which is liable to be followed by great contraction of the parts, even if the periosteum is preserved and new bone produced.

To illustrate the osteogenic power of the periosteum in another direction, the writer desires to refer to the process of repair in a simple fracture where no complication exists, where *no* element of septicism or pyogenic infection hinders the reparative work of Nature. To make the matter still clearer, I will select a fracture of malposition, *not reduced*. A bone fracture is followed by hæmorrhage from the broken vessels of the Haversian system, medulla, etc., which blood covers the fractured surfaces; the periosteum, where not torn, is lifted from the bone for some distance. Soon the blood becomes changed by process of metabolism into *callus*, which involves all of the inflamed region, and even the medullary canal for some distance.

There must be a limited osteitis during the repair of a fracture, which repair is firstly and mostly established by the periosteum, and later, when the medullary canal is re-established, the endosteum will also contribute to attain so far as possible the normal condition and contour of the bone. Let us examine the condition of such a fractured long bone, where the muscular action has caused a lapping of the fractured ends, and where parts are allowed to repair in this malposition (Fig. 1). Here the periosteum follows the irregular contour of the

fractured bone, the medullary canal of the upper part is not in axial line with the lower part; hence the medullary canal is not continuous in this new relation. If repair takes place in this malposition, we shall find, on its completion, that the bone has become

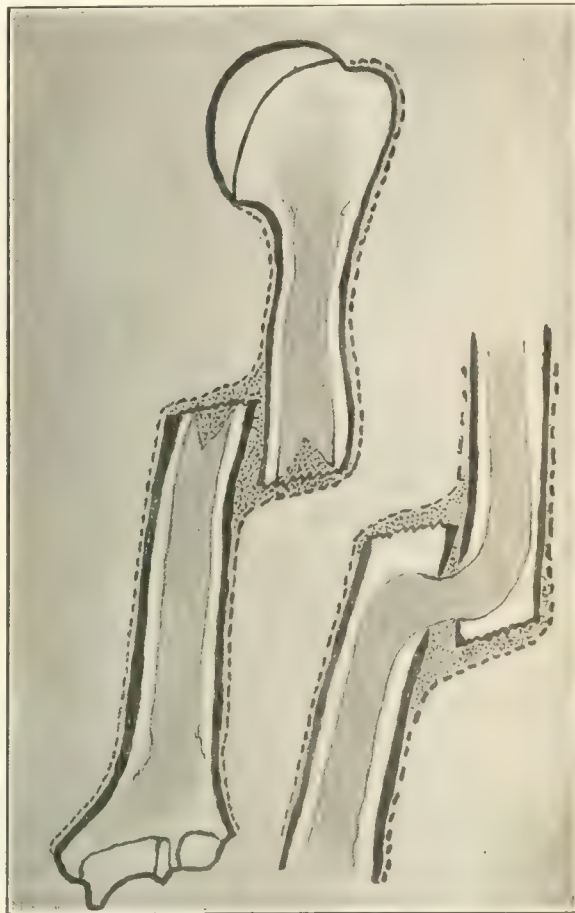


FIG. 1.—Dotted portion shows hæmorrhage in the region of a recent fracture.

FIG. 2.—Region of hæmorrhage, by metabolism, is transformed into callus; the bone-walls between the marrow-ends have been perforated by absorptive processes, and the marrow-ends have united and become continuous. The periosteum in both figures is indicated by dotted lines.

one piece in this lapped condition, that the callus is absorbed and replaced by a sufficiency of new bone, that the medullary canal has been re-established following the crooked direction of the bone (Fig. 2). It appears then that from the fact that while the medullary portion and endosteum is not continuous, the repair depends mostly on the function of the periosteum.

In amputations the surgeon should take pains to cover the end of the bone stump with a flap of periosteum, for the fact seems clear that, with a periosteal flap, the bone stump would have more vitality, more resistance, and would serve much better for the use of an artificial limb, and possibly avoid that conical and pointed condition which predisposes so much to vulnerability of a stump.

In operations for cleft palate we depend on trans-

planted muco-periosteum for material to close the gap.

By experience the writer has found that, in operative procedures, the periosteum is easily injured by the thumb forceps, for it will not bear bruising well. A small tenaculum or a volsella forceps will enable the surgeon to lift the edge off the underlying bone, and then, by insertion of the periosteotome, further detachment can be effected.

While the principle of reproduction of new bone from periosteum is confined to somewhat narrow limitations, the application of this principle to cases such as I have presented, may be followed by a satisfactory result, especially where delay is possible and where one can hope that nutrition can carry out the task of repair or rebuilding.

183 WEST EIGHTY-SEVENTH STREET.

LARYNGOLOGY AND ITS PLACE IN MEDICAL EDUCATION.*

By HENRY L. SWAIN, M. D.,

NEW HAVEN.

(Concluded from page 636.)

To revert to our former figure, it is necessary to have in mind the kind of a building and to what purpose it is to be devoted before the architect can advise with precision and propriety about the individual parts. The master builder always makes a rough form of what his arch is to be before cutting the stone. So here, setting aside for a moment the finer details, the problem is in any given case Do we wish to educate men to be physicians or to be mere specialists, otologists, gynæcologists, proctologists, or do we desire to lay a broad foundation of the scientific branches, build thereon the clinical edifice, and into the latter put such elements of specialism as shall give the man the equipment necessary to cope with disease as it arises, knowing enough of all to appreciate the needs of his patient and his own limitations, and well enough grounded to appreciate his own qualifications leading to ultimate specialization. The crying need of the times is not for specialists, but for those who will make a special training of general medicine, internal medicine. But the days of domineering pedagogy in medicine should be numbered. To give a degree because the student has attended certain courses and paid his tuition, regardless of his attainments, is no better now than it used to be, and we must live up to our duty as it presents itself to-day. If we simply, because we have a little more to teach, take a longer time to do it, wherein are we better than our predecessors, who, having less to teach, did it in a shorter time? Considering what we have to draw

upon, what heights and depths of knowledge, we might question ourselves, Do we do so much better, higher-grade work than did the teachers of twenty-two years ago? I am afraid not always, and if not, why? Largely because we still have grammar school methods in teaching. The academic courses in our universities have been struggling with the question and are gradually solving it by increasing the electives, giving more freedom and independence to the student mind instead of goading him on to do the same old tasks by the same old methods which his great-grandfather did in the study of Latin and Greek, as was formerly the case. Notwithstanding this trend, it is still felt by the leading educators that a certain amount of work must be done. While much more freedom is given to the student in his electives, he must take a certain amount of work in order to be a candidate for a degree, which latter he can only attain by proving his title thereto by passing an examination. In other words, if he can in any way attain a certain standard of knowledge he can obtain his degree, but the latter may be conferred for knowledge gained in various prescribed ways, and not always by the wearying monotony of so many hours of Greek, Latin, and philosophy. It seems as though if this banishment and ostracism of petty pedagogy has begun in the academic course, it should find its best demonstration in the professional schools. Here preliminary education is supposed to be finished. From them, therefore, any restraining weight of old-fashioned schoolmaster methods can be removed.

If this is true of the subject of medical education in a general way, surely argumentatively it would apply with the greatest of force to the teaching of specialties. But to make the problem clear, it may be well to map out what might be considered a fairly ideal course of medical study. A certain standard of knowledge should be attained by the student in the scientific branches. He should have learned a prescribed amount before he is allowed to enter the practical work. Let this be at the end of one, two, or three years of work, according to his ability or the amount of work previously done. The examination admitting him to the practical side of his work should be most rigid, so that no unfit material would be allowed to get past and hold back the progressive work in the higher practical courses. This would correspond to the *Physicum* of the German university, and could be the outcome of several methods of arranging the courses.

It would seem particularly incumbent upon any new plan of work to so arrange it that it would not be necessary for every student to spend the same amount of time in studying each branch. Why should the faculty say to the student in advanced

work of this kind that he must have learned all that is necessary to pass the examination in a certain prescribed time? Why would it not be better to make the odium of failing to pass an examination so great that no student would apply until he knew that he was fit and ready? Would it not be better to give him a minimum amount of time which he must have spent upon the work and let *him* say when he thought he was ready for his examination.

If it seems best to still continue to keep the students in classes, the concentration courses which have been undertaken in some of the medical schools seem to recommend themselves as perhaps better suited to such a professional and scientific course as the study of medicine. By that is understood, instead of taking four or five subjects and spreading them through one or two years, to concentrate all the work of any given period entirely upon two subjects, and in this way hold the student's interest instead of dividing it. If, therefore, by proper adjustment of the courses and their length to the needs of the student the preliminary has been passed and the practical work begun, why say that it must be two years more or that in two years he is expected to come up for examination for his degree? Let that be a minimum. Let him know that he must pass a severe but fair examination. Let him understand that to be dropped will make him have to face an even harder one next time, and if left to himself he will not come up until he feels prepared. Do not compel him to spend one year devoted to the study of medicine, surgery, pathology, and obstetrics and one year in the special studies, which now number a dozen or more, and tell him that he must pass an examination in every one, whether he is interested in them or not. If it still seems best in the practical work to adhere to the class routine, a point even more debatable than in teaching the scientific studies, one should at least expect to allow the student some latitude in selecting what courses to take.

We do not intend to graduate specialists, but if a man intends to be an otologist, teach him medicine, surgery, and pathology if you will, all that he can assimilate, but why dwarf the growth of his tree of knowledge by weighing him down with a course of obstetrics lasting a year and make him take another year's work in gynecology. Or the other way round, suppose he is to be a gynecologist—and you are bound to allow that a man will think for himself, or if he cannot, the sooner he goes into a trade the better—do not stultify his intellect by saying that you and you alone have the right to say what he shall study. Such a choice should be the outcome of your greater knowledge of his probable needs, tempered by his desires, taste, and ambitions. Why make him in his final clinical year spend an *equal* amount of time on ophthalmology, otology, rhin-

ology, laryngology, dermatology, orthopædics, psychiatry, pædiatrics, hygiene, and a long list of other subjects which are not pertinent to his chosen specialty? If he is up to the standard of intelligence which we must tend to promote by encouraging its expression, he could select certain courses, which were cognate to his chosen field of work, or if he was not quite sure which he had better take, what more useful place could the faculty fill than to advise on this very point? A very different position from the one usually taken, *i. e.*, that it does not make a bit of difference what a man wants to do, he has to take all these things before he can come up for graduation and pass an examination in all before he can have his diploma. How much more dignified it would be to say to the student that he would be expected to present before graduation a thesis on some subject which he could elect as one of major interest to him. Upon such a subject he will have to pass a rigid examination and also upon three or four cognates, similar if you will to the usual courses leading up to the degree of Ph.D. That would allow him a fair range of work in the special lines and yet not compel him to take work that was not interesting or agreeable to him.

Suppose he elected, for example, a surgical subject. His surgery would then be his major, and the work of the entire last two years would have this in mind. In his first year he would be obliged to take four of the different subjects which were demanded of a student in that year, and he could elect to take all the surgical work allowed and in addition medicine, therapeutics, and pathology. Let him then have an examination if you will. The second year he would select from the specialties those which would bear on his subject, and would learn of abdominal surgery, of gynecology, of otology, and of orthopædics, take courses on bandaging, and all the clinics he desired to fill in spare moments. Would that not be a fair course to be supplemented by a hospital?

Now, what is to be said of the man who, when he enters his clinical period, does not know what he wants to do? He will be able to find out of the entire possible list enough to interest him, and if he desires to develop into the general practitioner he will be able to choose many things in medicine as a major, and his cognates are numerous and interesting. He is obliged by the rules to take enough work, so that when he graduates he will not be an ignoramus, and if the same results follow the possibility of electing what course to take as has been the case in other branches of educational work, from the very fact that the student is not compelled to take anything he dislikes, he usually, instead of taking too little work, takes all that he possibly can, and I am gratified to learn that this is the actual experience of

some of the leading medical schools where some of these ideas have already been adopted. Freedom encourages work rather than lessens it. As compared with such men as have zeal and earnestness in their work, the indifferent student soon drops behind and finally out of medicine altogether into some more fitting line of work.

Now, all this has been to lead up to the teaching of specialties, and we can illustrate the point in our own chosen field of work. We have for years all of us devoted our time to the teaching of laryngology, but there are none of us, I take it, so sordidly self-centred, so narrow-minded, so fixed upon one idea that we cannot interest ourselves for one moment in the work of our fellow laborers in the great cause of education and profit thereby. We all of us, as just stated, teach laryngology either directly or indirectly, by showing the world what good laryngologists should be and should accomplish. Our example is freighted with good or ill according as we live near or far from our high privilege. If in our work and in our teaching we see only the spur of the sæptum and never take our eyes from it as a source of all disease to which flesh is heir, the opprobrium to which we, perhaps, too easily allow ourselves to be open, we shall soon assume that position among our fellow-practitioners which we should richly deserve. If on the contrary we always stand as believing our work to be only one small but important part of the great fight against disease in the world, and in aiding and prolonging a better life in those who depend upon us, we shall evolve our true mission and be respected as is our just desert. We must not be looked upon as viewing tuberculosis, for example, simply from the dollars and cents which we may garner by helping the victim of laryngitis to be more comfortable in his latter days. We should be found in the forefront of the movement which has brought all the world to realize that tuberculosis is a preventable disease, that we have not to fold our hands and allow the monster to stalk up and down the land seeking whom he may devour, merely praying for the crumbs which may drop from his table, so to speak, but should continue, never ceasing to cry to the distressed and ignorant victims that their disease is an infectious one and by their carelessness their own most loved and cherished ones are immolated, sacrificed to the monster; that if they would only be careful enough, however Utopian it sounds, this devouring power could be stayed and in the years to come claim for its victims as really few as does small-pox. The stand we must take is that we can control the fearful ravages of this dread disease, and we must teach this in no uncertain language to our classes. We must not leave this to the professor of the diseases of the chest alone. We must be more than laryngologists.

And what shall I say of the present teachings and opinions regarding amygdalitis? We can no longer appropriate it as we used to as our own. The general practitioner has stolen another of our dependencies, and now we are told that, instead of the rheumatoid diathesis causing the tendency to inflammation of the lymphoid structures, the latter are ports of entry where infection takes place locally and then generalizes in many cases into what we knew formerly as a typical attack of acute articular rheumatism. All these years we have been having the cart before the horse, so that not only has the professor of internal medicine to state that rheumatism is an acute infectious disease, but he as well as we has to teach that one of the sources of that infection is or may be the tonsils.

Without running on over the long list that might be brought to show our connection with the greater world of general medicine, enough has been said to point clearly to the two salient points of any orthodox, up-to-date treatment of the subject of laryngology as applied to undergraduates. We must in teaching it give two distinct courses—one, a general one, for any or all of the students to take; the other special, where the men who make it a major or a greater cognate can get their further insight into the work, which shall give them all they can assimilate at a time and pave the way for further development if they so choose into full-fledged specialists.

Of course this is most remote from the suggestion of expecting to graduate a fully equipped M. D. and at the same time an expert laryngologist, but we can and should give the man who desires it more of that kind of work than the one who does not.

As to precise methods and details, it would be folly for me to attempt to discuss them in the presence of the Nestors and very creators of the art, so I will but briefly refer to that part of the subject, more than I may round out these remarks than that I may hope to offer anything new or suggestive.

Whereas it might be considered debatable whether the old-fashioned didactic lecture has not outlived its usefulness, especially when such a mass of textbooks and current literature exists where the desirous soul can quench its thirst for knowledge beyond the possibility of asking for more, yet this very plethora of material makes it the more incumbent upon the teacher in these days to select assimilable and proper pabulum for the growing mind and serve it out in proper proportion for easy acquisition. No student can do this as well as his instructors, even when we are arguing along the lines of liberty, as in this address. Then, again, think how much that is really new is transpiring each year. In referring to the old didactic lecture I had in mind cases where for seventeen years the same material would be served up year after year to the students, the jokes

and sarcasms, the witticisms and the dry, meaty problems, following each other with unflinching and unaltered sequence. That was very far from the lecture of to-day, which I think should be so bright, so full of new and interesting facts that it would serve to introduce the student to any given subject better, perhaps, than any other way I know.

Now, in large clinics in large cities this may be a clinical lecture illustrated by patients, where also operations demonstrating methods and means may prove helpful in impressing ideas. In the small cities and clinics it may seem wiser, and I am not at all sure that it may not always be the better way, to give the lecture where the student is not attracted from the subject material at hand by some freak of the patient or some incident of the operation.

There is much to be said upon the point of tersely, clearly, and interestingly impressing by word of mouth certain facts which seldom would be gleaned by the student, even if he read, and give to those who would never take the trouble to look the subject up a few facts to guide them when they were actually brought face to face with disease in their active practice.

I believe the best plan to be, as in most schools to-day, to lay out a distinct scheme of lectures, say, fifteen or twenty, and in them discuss in a general way the various important subjects of our specialty, especially where they reach out toward general practice or where the general practitioner is most apt to hit them. Make this as interesting and instructive as possible and leave it open to all comers. It will serve to introduce the men who make it a major, and will usually be ample for a minor. Similar courses to be given in all specialties. Then subsequently in rhinology and laryngology, those who wish to go more deeply into the work are divided into sections and are taught to use the laryngoscope and the rhinoscope, first upon the phantom and then upon educated living subjects. When the difficult technics of complete examination is so thoroughly learned that the details of the movements are so mastered as to be nearly reflex and mechanical, then they are to be turned in sections of at the most four each into the clinics, there by actual contact and study to develop first diagnosis, then details of treatment, and finally some of the easier operations. These may all be taken by every aspirant for a degree if he chooses and can be accommodated, preference always being given to those making the subject a major. And if all is taken the student must have at graduation a good, clear understanding of the the most common diseases, and sufficiently clear that he will know his limitations. He can, if laryngology is a major, be put through a genuine test such as a first-class thesis on some scientific research work. He will then be given a written examination

to prove his general knowledge of the subject, and then by being given cases to diagnosticate and report in the clinic, prove his more intimate acquaintance with the finer details. The written examination can also be taken by the men who have made laryngology a cognate.

When such a "major" graduates he will be ready to go to any other or larger city at home or abroad and begin to develop his attainments in the capacity of an assistant.

As a "minor" he will probably take a course of lectures and one of the short practice courses in learning the technics. This will put him in a position to develop later if he will or will round out his work for general practice.

Now, what would be the result of such a course of medical study? The men would all have a broader and more general interest in their work. They would not have to drag through courses of lectures which did not interest them and from which, as proved by the results of examinations, they got but little if any good. While it might result in but few men attending some courses, those who did would reap many fold more benefits than in the old way of seeing things from the rear of a large, jostling crowd of eager students. If a man has a genuine desire to learn he can do so and do more even than before, and we as teachers, like the students, shall enjoy our work immensely better, for nothing is more harassing than to attempt to give of our store of knowledge to a man whose heart is not in his work and who goes through it simply to get his skepskin. Away with such "cramming" processes in the pursuit of a profession. And if all this is true, shall we not get better men out into the world and thus promote the progress of medicine and the advance of laryngology? Even if we do so by ever so little, then is the time you have so patiently borne with me in this consideration not altogether wasted and valueless.

Now, having fulfilled, all too poorly I fear, one of the duties devolving upon your presiding officer, I hasten to do the next and much more pleasing one of opening the real work of the day. Much lies before us—a splendid array of papers. Let us go into our work with spirit, and with this I also desire of you a large modicum of forbearance for the obvious shortcomings of your president.

The Michigan State Sanitary Convention.—The forty-ninth annual Michigan State Sanitary Convention opened at Ludington, Mich., on September 5th, with one hundred prominent physicians and health officers of the State attending. The convention, which lasted two days, consisted chiefly in discussions of methods relating to the prevention of sickness and untimely deaths.

ON THE SO-CALLED GLUTEN AND DIABETIC FOODS OF COMMERCE.*

By H. C. SHERMAN, AND H. M. BURR.

Something over two years ago one of us, having occasion to look up American analyses of commercial glutens, was struck by the small number of such analyses available, as well as by the poor quality of the materials which had been examined. It was thought that a systematic study of commercial glutens might be of sufficient interest to warrant the labor involved, especially as it cannot be doubted that great improvement is entirely practicable, inasmuch as Fielden found in British glutens of commerce from 60 to 76 per cent. of gluten and only from 7.6 to 16.7 per cent. of starch and sugar. (*Pharmaceutical Journal*, iv, 7, 170.)

During the winter of 1898-1899, eleven samples were purchased in the retail market or ordered by mail from the manufacturer. In general those brands were selected which were most widely advertised and apparently most generally sold. The prices ranged from eleven to sixty cents a pound, and the allegations made by the manufacturers, either on the packages, or in their descriptive circulars, almost invariably implied that the goods had been largely freed from starch. In most cases they were specifically recommended for diabetic patients. A sample of ordinary "entire wheat flour" (No. 12 in the table) was purchased at the same time and analyzed by the same methods for comparison. Before the analyses could be finished an interruption of several months occurred, and we have only recently been able to complete the work. Meanwhile some other analyses have been published.

Woods (*Report of the Maine Experiment Station for 1899*, pp. 97 and 104) has analyzed three samples of glutens purchased in Maine, and Jaffe (*Bulletin 84*, Office of Experiment Station, U. S. Department of Agriculture, p. 12) three samples of gluten breads purchased in California. A revised compilation by Atwater and Bryant (*Bulletin 28*, Revised, Office of Experiment Station, U. S. Department of Agriculture) gives the maximum, minimum, and average of available American analyses, most of which are probably several years old. No extended series of recent analyses of such products has come to our notice. While our own samples were collected a little over two years ago, they probably fairly represent the composition of the glutens now on the market in this country.†

*The work here recorded was originally undertaken in the chemical laboratories of Wesleyan University, for the facilities of which we are greatly indebted to Professor W. O. Atwater. It has since been continued and completed by one of us in the Havemeyer Laboratories of Columbia University.

†Since the foregoing was prepared for publication, we have seen a paper by Dr. W. Camerer, *Ueber die diabetischen Nahrungsmittel*, in which he gives the results of his analyses of various gluten foods of Germany.

Our results agree with those recently published in showing that most of these so-called glutens have about the composition of ordinary Graham, or whole wheat, products, and carry only a little less starch than white flour. In a few cases there was a noticeable increase in proteid contents, but in no case would the substitution of the so-called gluten for an equal amount of ordinary flour or bread have resulted in a decrease of more than one fourth in the amount of carbohydrate consumed. Following the table of the analyses below is a brief comparison, for each sample, of the allegations made for it with the results actually found.

Method of Analysis.—Moisture, fat, protein, ash, and fibre were determined by the methods of the official agricultural chemists (*Bulletin 46*, Revised, Division of Chemistry, U. S. Department of Agriculture), and the "carbohydrates by difference" were estimated, as usual, by subtracting from 100 the sum of the percentages of the constituents above mentioned. It was thought best, however, to include in each case a direct determination of starch. This was separated from the fibre and gummy matters by digestion with saliva, as recommended by Chittenden (*Studies from the Laboratory of Physiological Chemistry, Yale University*, 1888; abstract in *Journal of Analytical Chemistry*, 2, 153), the solution containing the resulting maltose and dextrin being filtered off and hydrolyzed with hydrochloric acid. The resulting dextrose was then determined by Fehling's solution, according to the Allihn method (*Bulletin 46*, *loc. cit.*). Owing to an interruption of several months, which occurred during the work, the samples had developed more or less acidity at the time the starch determinations were made. This was probably due mainly to lactic acid formed from starch or sugar originally present, and is therefore included in the carbohydrates by difference in the table below, in which the samples are arranged according to protein contents. The column headed "undetermined" represents (besides analytical errors) mainly the carbohydrates other than starch and sugar (gummy matters, etc.) and, in the case of cooked materials, carbohydrates and perhaps fatty bodies which have been so changed by heat as not to be extracted by the usual methods.¹

published in the *Zeitschrift für diätetische und physikalische Therapie*, Band V (1901-1902), p. 229; and have also noted in the *Massachusetts Board of Health Report for 1899* (pp. 643-644) a report of the determination of starch in thirteen samples representing seven brands of diabetic flours purchased under the drug inspection law of that State. The amounts of starch found by the Massachusetts analyst (A. E. Leach) ranged from 0.0 to 68.7 per cent.

¹While the percentage found for carbohydrates may thus be a little high in some cases, it is probable that the factor 6.25 (by which the percentage of nitrogen found is multiplied to get the protein) is also somewhat high, hence it is believed that the ratio of protein to carbohydrates as given in the table is practically correct and affords a convenient means of comparing the different samples.

ANALYSES OF SOME SO-CALLED GLUTEN AND
DIABETIC FOODS OF COMMERCE.

Number. Laboratory Number.	Moisture.	Fat.	Protein, N x 6.25	Ash.	Fibre.	Carbohydrates by Difference.	Ratio of Protein to Carbohydrates	Starch Actually Determined.	Free Lactic Acid, ³ as Lactic Acid.	Undetermined.
1 62	7.02	9.79	9.49	4.35	0.34	69.01	1:7.3	62.25	1.11	5.65
2 54	8.19	6.60	12.44	1.82	0.85	70.10	1:5.6	64.31	0.47	6.02
3 55	9.86	2.47	12.76	2.12	1.23	71.56	1:5.6	68.90	0.78	1.88
4 58	8.75	2.82	12.81	1.68	0.95	72.99	1:5.7	64.31	0.58	8.10
5 61	7.51	6.67	14.06	2.61	1.05	68.10	1:4.8	58.77	1.24	8.09
6 63	8.63	0.51	14.38	0.50	0.32	75.60	1:5.3	72.10	0.29	3.21
7 71	11.60	3.18	15.19	1.93	1.09	66.41	1:4.4	61.15 ⁴	1.10	1.16
8 56	9.69	0.33	15.56	0.91	0.27	73.54	1:4.8	69.66	0.54	3.34
9 60	6.89	14.14	21.13	2.62	0.42	54.80	1:2.6	51.53	1.27	2.00
10 57	10.33	0.77	22.69	0.74	0.23	65.24	1:2.9	63.79	0.42	1.03
11 64	8.95	0.48	29.84	0.91	0.27	59.55	1:2.0	57.42	0.45	1.68
12 52	12.31	1.94	14.13	1.38	0.86	69.33	1:4.9	59.17	0.63	9.28 ⁵

Description of Samples and Discussion of Analyses.—The descriptions here given are taken either from the packages containing the samples or from the circulars of the manufacturers, and are intended to show the representations under which the articles are sold.

No. 1. Diabetic biscuit, intended for use only in diabetes, said to contain little starch and no sugar and to be harmless and allowable in all cases and curative in their effects. The analysis shows this sample to have practically the composition of ordinary soda crackers, such as sell at from seven to ten cents a pound.

No. 2. Called gluten wafers, made tender by the addition of sweet butter and alleged to be "very useful in diabetes." Except for the fact that it is somewhat higher in fat, this sample has essentially the composition of dried bread made from the cheaper grades of ordinary flour.

No. 3. This one was conspicuously labeled as "gluten of wheat." The detailed statement on the package recommends it for invalids, but does not especially mention diabetes. The analysis corresponds almost exactly with the average composition of ordinary Graham flour or the lower grades of baking flours.

No. 4. A small hard cracker purporting to be made from the gluten of wheat mixed with water only. The composition of this sample is much like that of the preceding and closely resembles that of ordinary crackers made "with water only."

No. 5. Gluten zwieback, recommended as very useful in diabetes. This contains nearly the same amounts of gluten and of carbohydrates as the entire wheat flour (No. 12).

¹This includes with the starch any small amount of dextrin or sugar which may have been present.

²The free acid was probably derived from starch, and, if so, the sum of these two determinations would indicate the percentage of starch originally present.

³The starch in this case (No. 7), was determined by heating the sample directly with dilute acid and is probably about two per cent. too high.

⁴This includes the pentosans (wood gum, etc.), which may amount to five or six per cent. in actual whole wheat.

No. 6. The package in which this was sold was labeled "gluten wafers" without further statement or description. In the amount of gluten they closely resemble the preceding.

No. 7. So-called crude gluten. This is very similar in composition to the sample of the entire wheat flour.

No. 8. Called wheat gluten. It is alleged for this gluten that a large portion of the starch has been removed, and it is added that experience shows that it is better adapted to all but exceptional cases than pure gluten, besides being more palatable and less expensive. This sample contained 4.8 times as much carbohydrate as protein, a proportion quite similar to that shown by the entire wheat flour and one which might readily be obtained by simply grinding selected wheat. Very little, if any, starch could have been removed in the preparation of this sample, certainly by no means a "large proportion."

No. 9. Called extra gluten biscuit, and said to contain no sugar and but a very small amount of starch—not over 10 per cent. This sample contained at least five times as much starch as should have been present according to the description under which it was sold. There was nearly twice as much protein in proportion to carbohydrate as in ordinary bread stuffs, but still it contained 2.6 times as much carbohydrate as proteid.

No. 10. Described as a perfect food for diabetes, dyspepsia, and obesity. This food contains as much starch and nearly as much carbohydrate as the whole wheat flour purchased at the same time and analyzed by the same methods. It is considerably richer in protein, but must certainly be regarded as very far from a satisfactory gluten food.

No. 11. Called gluten biscuit, also diabetic gluten biscuit. This sample, the best of those examined, contains twice as much carbohydrate as protein, whereas the British products examined by Fielden contained only about one tenth as much carbohydrate as protein.

No. 12. This is a sample of commercial "whole wheat flour" purchased at about the same time as the samples above described and analyzed by the same methods.

Conclusions.—Of the eleven samples examined, which are believed to fairly represent the so-called glutes generally found on the market, not half are noticeably higher in protein or lower in carbohydrate than ordinary whole wheat, or Graham, flour, and many are scarcely better than ordinary white flour or bread. Only three samples show any really material increase in the proportion of gluten, and all of these contain at least three fourths as much carbohydrate as ordinary baker's flour. The best sample examined contained twice as much carbohydrate as protein. Fielden found in commer-

and gluteins in England from five to ten times as much protein as carbohydrates, and there can be no doubt that equally good products will be offered by American manufacturers whenever they are seriously demanded. The sale under the name "gluten" of such breadstuffs as those here described is certainly a most serious imposition upon both physicians and patients.

Correspondence.

LETTER FROM TORONTO.

Small-pox Inspection.—Births and Deaths.—Trinity Medical College.—The Medical Department of Toronto University.—The Toronto Clinical Society.—The Toronto Medical Society.—Medical Representatives on the Senate of Toronto University.

TORONTO, October 5, 1901.

The Provincial Board of Health of Ontario is considering the advisability of appointing a permanent inspector in the unorganized districts in the northern portion of the province, as small-pox has reappeared in some localities in these townships, which comprise an extensive country stretching from the Ottawa River on the east to Rat Portage on the west. Along the line of the Canadian Pacific Railway, which traverses this country, are numerous settlements with a total population of 100,000. Special regulations were recently adopted with regard to this country, but it is now thought necessary that a special official should be on the spot to see that these regulations are strictly carried out.

At the office of the city clerk, there were registered in this city, last month, 339 births, 229 marriages, and 253 deaths, as compared with 328 births, 187 marriages, and 290 deaths, in September, 1900. The registration of births should be much larger, as there are said to be a considerable number of physicians who totally disregard registering, holding that, as the government makes no allowance for this work, they should not be put to the trouble of doing it for nothing. Last winter there were several summonses issued for the police court, but particularly against fathers; the same machinery of the law may have to be put in operation again in order that provincial regulations shall be complied with.

Trinity Medical College opened for the season of 1901-1902 on the afternoon of September 25th, Professor Sheard delivering the opening lecture. Reverting in his address to the matter of the amalgamation of Trinity and Toronto, Dr. Sheard declared that, so far as Trinity was concerned, the question was finally and completely closed. Extensive improvements have been made during the summer vacation in the histological, pathological, and ana-

tomical departments; and the fact that more first-year students this year registered on the first day than had done so on that day in the last twenty years, augurs a continued confidence in the work this institution is performing in the cause of medical education.

While Trinity Medical College appears to be prosperous, the Medical Department of Toronto University is at the present time enjoying, also, a great degree of the same good fortune. The opening lecture of this medical school was delivered on the evening of the 1st of October. Professor J. F. W. Ross delivered this lecture, and took for his subject *The Indian Medicine Man and His Work*. Dr. R. A. Reeve, the dean, also addressed the gathering of students, professors, and invited guests, pointing out that the number of students had increased to such an extent that it would be necessary to demand of the government additional buildings for their accommodation. The number of new students registered had doubled in the last four years. In 1897-98 there were sixty-one first-year students; in 1898-99, seventy-three; in 1899-1900, one hundred and four; in 1900-01, one hundred and twenty-four; and this year, before a single lecture had been delivered, more students had been enrolled than had ever been enrolled before. With the two leading medical schools of the Province prospering at such a rapid pace, it may truly be asked, What is the outlook for the profession of medicine in this Province of Ontario?

The first regular meeting, for the season of 1901-1902, of the Toronto Clinical Society was held on the evening of October 2d, the president-elect, Dr. J. F. W. Ross, in the chair. Dr. H. A. Bruce showed a hairy tumor secured by operative procedure from the stomach of a young married woman, aged twenty-six years, which he had shown at the Winnipeg meeting of the Canadian Medical Association. Dr. A. A. Small presented two patients. The first was a woman, aged forty years, with a cystic tumor in the left popliteal space, which Dr. Grasett thought was growing, either from a tendon sheath, or from a bursa; the second, which Dr. Small presented as a case of polymastia, occurred in a woman, aged sixty years, who had borne several children. This tumor was very characteristic of a female breast, and was situated on the back near the posterior axillary line of the right side. The small, nipple-like tumor had always been present, but the breast proper had only developed within the last four or five years. Dr. McIlwraith and Dr. Ross were inclined to regard it as a lipoma, as no lactiferous ducts or their openings could be demonstrated. Dr. A. A. Macdonald showed a specimen of a cystic adenoma of the breast, stating that he believed it proper practice to remove the entire breast in these

conditions. The cystic part had developed in eight weeks' time.

The Toronto Medical Society opened for the season on Thursday evening, October 3d, with Dr. F. N. G. Starr, the president, in the chair, who delivered the annual presidential address. This proved very interesting, the subject being the lives of deceased members of the profession in Toronto who had attained eminence and distinction, the address being illustrated with their photographs projected upon the canvas. Mr. I. H. Cameron showed some specimens of calculi, fourteen of which he had secured by high section, from the cul-de-sac behind the prostate of an old gentleman, aged seventy-six years. Dr. J. H. Richardson was present and told some interesting anecdotes which had occurred in the profession in days gone by. Dr. Graham Chambers presented a girl, aged thirteen years, who for over ten years had hydroa vacciniiforme. Numerous scars could be seen upon the patient. Dr. Primrose and Dr. Chambers showed a young man, twenty-five years of age, with blastomycetic dermatitis. The warty outgrowths were situated on several parts of the body. Two lantern-slide projections showed them on the right malar bone, on the right shoulder, and at the inner canthus of the right eye, this latter simulating epithelioma. The fungus was readily demonstrated under the microscope. Dr. Primrose operated, excising portions and cauterizing with the actual cautery. The patient also took eighty grains of iodide of potassium three times a day for six weeks. He exhibited marked improvement.

At the recent elections held for representatives on the senate of Toronto University, Dr. Cameron, Dr. W. H. B. Aikins, Dr. Adam H. Wright, and Dr. James M. McCallum were elected by acclamation to represent the medical faculty on that body.

Therapeutical Notes.

For Chronic Ulcer of the Mouth.—*Ἱατρικὴ πρόδος* for January cites the following from *Therapeutische Blätter*:

R Chloroform..... 18 drops;
Bismuth subnitrate..... 45 grains;
Water..... 5 ounces.

M.

Half a soup-ful every hour or two hours.

Oil of Turpentine in Ringworm and Pityriasis.—Leven (*Journal des maladies cutanées et de syphilis*, April; *Treatment*, August) recommends the rubbing in daily for five minutes of oil of turpentine in pityriasis versicolor. In ringworm the oil is applied night and morning on pieces of linen. Inflammation occurs after six days, and the epidermis exfoliates; the patches are then healed by simple ointments.

For Hæmorrhoids; an East Indian Remedy.—Zahur Pir, C. M. S. (*Indian Lancet*, July 29th) has employed the following ointment in many cases of piles with the happiest results:

R Gandaberoza (a common
native medicine),
Butter, } of each... 3 ounces.

Dissolve over a fire in a gallipot, strain through a fine piece of muslin into a wide-mouthed bottle, and keep in a cold and dark place. At the termination of two or three hours the mixture will become semi-solid.

For internal piles, a little cotton wool soaked in the ointment should be introduced into the rectum and repeated thrice daily.

For external piles, a little cotton soaked in the same should be placed on the piles, then gutta-percha tissue, cotton, and bandage; the dressing must be reapplied every twenty-four hours, or after each motion.

The application of the ointment causes neither burning nor irritation. Eight days' use will afford great relief to both internal and external piles. A notable diminution will appear in the size of the piles. Tension and pain will vanish. If it is used in external piles for about four days, the malady is said not to recur. All medicines and diet which induce constipation must be avoided.

[Gandaberoza is probably *Boswellia serrata*, Indian olibanum, whose Bengali name is given in *The Indigenous Drugs of India*, by Kanny Lal Dey, late professor of chemistry and chemical examiner to the Indian Government, as Gandhabiroja. It is a gum resin and is said to be used externally as a rubefacient and stimulant application to boils, carbuncles, etc. Internally, its action appears to be exerted chiefly on mucous membranes.]

For Zona.—The *Journal des praticiens* for September 14th gives the following formula:

R Tannic acid, } of each... 30 grains.
Bismuth subnitrate, }
Zinc oxide, } of each..... 75 "
Starch, }

M.

If powders seem to irritate, Kaposi recommends the following formula for a paste:

R Yellow wax..... 150 grains;
Olive oil..... 450 "
Watery extract of opium..... 6 "

M.

Lestikow, in his *Maladies de la peau*, speaks highly of the following ointment:

R Boric acid..... 37½ grains;
Cocaine hydrochloride..... 7½ "
Vaseline..... 330 "

M.

The surface should always be covered with cotton or gauze.

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THE NEW YORK MEDICAL JOURNAL.

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NEW YORK, SATURDAY, OCT. 12, 1901.

THE SEMI-ANNUAL MEETING OF THE MEDICAL
SOCIETY OF THE STATE OF NEW YORK.

An important and progressive step was taken by the society when, at the last annual meeting, held in Albany during the last week in January, it was resolved to hold a semi-annual meeting in New York. The meeting is to be held on Tuesday and Wednesday, October 15th and 16th, under the presidency of Dr. Henry L. Elsner, of Syracuse. The programme, which we publish elsewhere in this issue of the *Journal*, embraces fifty titles, and it may be said of nearly all of them that they stand for papers on subjects of general interest to the profession, coming from careful and experienced authors and well-known practitioners. With such a body of men as the members of the Medical Society of the State of New York there is no difficulty in providing ample and valuable material for two meetings annually; indeed, we believe that quarterly meetings would prove both practicable and profitable, and we hope that at least the semi-annual gathering will be made a permanent feature of the society's work.

It is to be remembered that next week's meeting is to be wholly of a scientific character. There will be no officers to elect, no legislative schemes to distract one's attention, no business matters of any sort to interfere with the full and free consideration of the papers that will be presented. There is good reason to look for a large attendance, not only from those who live in or near to the metropolis, but also from those whose homes are in distant cities or in the open country. New York is never more enjoyable than at this season of the year, and there is no better place in the United States for holding a medical meeting than Hosack Hall, in the Academy of Medi-

cine's building. In the intervals between the sessions visiting members will find ample mental occupation in the Academy's library, and in such hours as they choose to give over to recreation they will not, we believe, find their New York brethren wanting in hospitality. In view of all these considerations, we believe that the success of the meeting from every point of view is assured.

LEPROSY AND THE EATING OF FISH.

We are not among those who fear lest a casual exchange of salutations between a leper and a healthy person may prove disastrous, neither are we among those who jauntily declare that leprosy is not contagious and pooh-pooh the idea of the segregation of lepers. We believe we are in accord with an overwhelming majority of careful and unprejudiced observers when we concede the contagious nature of leprosy and approve of the isolation of its victims, while not demanding that every stray leper should be summarily hounded down and hustled off to a leproser. We are surprised, therefore, to find that a medical journal of such good standing as the *Polyclinic*, of London, should admit to its pages an anonymous article, having by its anonymity the force of an editorial, of the character of one that appeared in its September number, entitled *Leper Houses in the Middle Ages*. In so far as the article is descriptive of mediæval leper retreats and of their administration, it is interesting, but the latent motive that apparently inspires it must be said to be in direct conflict with the general opinion of the medical profession.

Speaking of the island of Crete, where leprosy is said to have always been rife, the author says: "One part of its population, the Sphakiots, have, however, it is believed, always escaped, and they are, on the most recent testimony, exempt at the present day." Again, he says: "It may be remarked in passing that, as the fasts of the Greek church exclude fish as well as flesh, there will not arise that special demand for this article [among the Sphakiots] which occurs everywhere under the Roman Catholic régime. This may be of some importance as regards the immunity of the Sphakiots. At a great distance from the coast, they would get no share of the produce of the sea in a fresh-state, and, not be-

ing allowed to eat fish on fast days, they would be under no temptation to import it in a dried state into their mountain villages." Further along he quotes as follows from *Travels and Researches in Crete*, by Captain T. A. B. Spratt, F. R. S.: "The ignorant Cretans attribute the prevalence of this disease in their island in a great degree to impurity of habits (*i. e.*, syphilis), and hence their extreme disgust at it; but the educated, perhaps more rightly, attribute it to the great consumption of oil with their food; it, being the principle produce and cheap, is in consequence largely used by all, either pure or with the olives, which, *with salt fish, often rancid and of the worst sort*, and bad cheese, constitute the principal portion of their diet." Apparently the italics are the *Polyclinic's* writer's, and they well illustrate the underlying idea of the whole article, an idea which we do not hesitate to characterize as wholly at variance with the best judgment of the present day on leprosy. The article opposes the theory of the contagiousness of leprosy and the policy of the segregation of lepers; from those points of view it is utterly undeserving of serious consideration.

THE COCOANUT TREE.

In their purely professional capacity, physicians can hardly be expected to consider as of prime importance to themselves such matters as the origin and distribution of a plant, even if the plant is one that figures prominently in the pharmacopœias. Still less can they feel a deep interest in the origin and dissemination of a plant that has such a small place in the materia medica as the cocoa palm. Nevertheless, as scientific men, they can scarcely fail to be impressed with the admirable treatment of the subject which constitutes No. 2 of the seventh volume of *Contributions from the United States National Herbarium*. The essay is the work of Mr. O. F. Cook, the Department of Agriculture's special agent for tropical agriculture, and it is published by the department. In this work Mr. Cook displays, not only great learning, but also remarkable lucidity and fairness in argument. The thesis which he seems to us to have proved, so far as proof is possible in the present state of our knowledge, is that the cocoanut palm, *Cocos nucifera*, originated in tropical America, and was not carried thither from

Asiatic regions by ocean currents, by the agency of man, or in any other way, as is maintained by the great majority of writers, including De Candolle. The excellence of Mr. Cook's argumentative writing we, of course, cannot illustrate to any great extent, but we can indicate some of the points.

It seems that De Candolle originally favored the theory that the tree was of American origin, but subsequently reversed his opinion and inclined to the idea of its origin in the Indian Archipelago; but it does not appear what reasons De Candolle had for this change of view. Of all the species of the genus to which it is assigned, argues Mr. Cook, the only one whose American origin has been doubted is *Cocos nucifera*, but its affinities are all with the American palms, which are decidedly different from the Asiatic palms. Hence the presumption is in favor of its American origin. The author then shows the exceeding improbability of the introduction of the tree into America by the Spanish conquerors, and proves that it actually existed in the Western Hemisphere at the time of Columbus's discovery of America. The theory that the cocoanut palm disseminates itself by dropping its nuts into the sea, which bears them to distant shores, where they take root, is shown to be very improbable. In the first place, the trees are rarely so situated as to be able to drop their fruits into the ocean, and, if they were, the action of winds, waves, and currents on the Pacific coast of tropical America would almost certainly strand them on the shores whence they came. Moreover, the cocoanut, as a seed, retains its vitality for only a short time. Mr. Cook seems to be quite positive that human agency is necessary for the propagation of the tree, and he thinks that any tract of land on which it is found growing is or has recently been inhabited by man. We must refer our readers to the pamphlet itself for the details of Mr. Cook's arguments; they will find it most interesting reading. The similarity of the popular names of this and some quite different plants has probably led to some confusion in the accounts handed down to us, he intimates, and he remarks upon the difficulty that we still have in restricting cacao to *Theobroma*, coca to *Erythroxylon*, cocoa to *Cocos*, and coco to *Colocasias*. A common example of this difficulty, we may add, is shown in the frequency with which we hear cacao butter (oleum theobromæ) called "cocoa butter."

IMMIGRATION TO THE UNITED STATES.

The character of immigration to the United States has a very important bearing upon the future of the country, and it is with regret that we learn from the Annual Report of the United States Commissioner of Immigration for the Port of New York, a copy of which has been kindly placed at our disposition, that there is a constantly increasing proportion of illiteracy among the immigrants. Comparative statistics show that, not only are we drawing more and more from the countries where illiteracy is high, but also the immigrants themselves show a higher percentage of illiteracy. Nearly one half of our steerage immigrants come from the south of Europe and show an illiteracy of from forty to fifty per cent.; and, as is pointed out by the commissioner in his report, it is only through the higher proportion of literacy among the immigrants from the northern and western countries of Europe, that the general average of literacy is brought down to about thirty per cent. The most interesting feature of the medical division of the report is that which deals with the exclusion of immigrants on sanitary grounds. In view of the great interest excited by the issuance of the departmental order placing tuberculosis on the list of contagious diseases, it is a noteworthy fact that the medical reports show that this disease in a demonstrable stage is a comparatively rare one among aliens arriving here for the first time, the most conspicuous cases occurring among aliens returning to their homes here after a trip abroad, in the vain hope of improving their health. A recent ruling of the department to the effect that the wife and minor children of a naturalized citizen, even though they have never dwelt in this country, are by virtue of the man's naturalization, "not aliens within the meaning of the law" has worked unfavorably from a medical standpoint, as it is frequently difficult to disprove claims of relationship which are, to say the least, of doubtful authenticity. A more complete summary of this interesting and valuable report will appear in a later issue of the *New York Medical Journal*.

THE MEDICAL PROFESSION AND THE NEWSPAPERS.

Though we must admit that the leading newspapers of the country have been very kindly in their comments on the management of the case of the late President McKinley, some of the less dignified papers have seen fit to indulge in flippancy. An esteemed correspondent writing from St. Louis, where some of the newspapers were severely critical, well says that the effect upon the community of such language as they used is to produce lack of confidence in the profession at large. As an offset, he sends us the following clipping from the Belleville,

Illinois, *Daily News-Democrat*: "Is there not danger that an injustice will be done the medical profession by the severe criticisms made on those in attendance upon the late President McKinley? While they were hopeful of his recovery—as all the people were—they were incapable of resisting, at last, the result of the shot fired by the anarchist assassin. That all was done that could be done to save the life of the President all sensible people admit. It seems wrong to destroy confidence in a class of men who are not only doing so much for the people to prevent disease, but when sickness comes respond to the call with wisdom, fidelity, ability, and generosity scarcely equalled by any other class of our citizens. No injustice should be done to those in whom the people repose so much confidence." We trust that these eminently just and kind remarks will be widely copied.

THE GOOD WORK OF THE ROYAL VICTORIA HOSPITAL, MONTREAL.

We have received the first number of a series of scientific publications entitled *Studies from the Royal Victoria Hospital, Montreal*. It is a large octavo of eighty-two pages, handsomely printed and illustrated, on the subject of The Primary Intracranial Tumors of the Optic Nerve (Fibromatosis Nervi Optici), by Dr. W. Gordon M. Byers, assistant oculist and aurist to the hospital and demonstrator in ophthalmology in McGill University. Our Montreal brethren have never been backward in the work of advancing medicine, and we welcome this fresh example of their zeal and erudition.

THE DESTRUCTION OF TUBERCLE BACILLI IN MILK.

To the much discussed question of how to free milk from living tubercle bacilli Levy and Bruns (*Hygienische Rundschau*, 1901, No. 14; *Berliner klinische Wochenschrift*, September 16th) contribute the results of their experiments. They find that bottles of milk are freed from the living organisms by an exposure of from fifteen to twenty-five minutes to a temperature of from 149° to 158° F.

INFLUENZA AND APPENDICULAR INFLAMMATION.

Perhaps we must include inflammation of the vermiform appendix among the manifold sequelæ of influenza, for Charpentier (*Bulletin médical*, 1901, No. 2; *Berliner klinische Wochenschrift*, September 16th) reports having met with five cases during an influenza epidemic. They were mild in character and did not advance to suppuration. Only one of the patients had previously had peritonitis.

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general, during the week ending October 5, 1901:

Smallpox—United States.

California	San Francisco	Sept. 14-21	1 case.	
Indiana	Michigan City	Sept. 24-Oct. 1	1 case.	
Kentucky	Lexington	Sept. 21-28	1 case.	
Massachusetts	Boston	Sept. 21-28	2 cases.	1 death.
Michigan	Detroit	Sept. 22-29	1 case.	
Nebraska	Omaha	Sept. 14-21	1 case.	
New Jersey	Newark	Sept. 21-28	6 cases.	5 deaths.
New York	Elmira	Sept. 21-28	4 cases.	
"	New York	Sept. 21-28	5 cases.	2 deaths.
Pennsylvania	Philadelphia	Sept. 21-28	29 cases.	3 deaths.
Ohio	Youngstown	Sept. 21-28	1 case.	
Utah	Salt Lake City	Sept. 14-28	2 cases.	
Washington	Tacoma	Sept. 15-22	1 case.	

Smallpox—Insular.

Philippine Islands	Manila	Aug. 3-10	1 case.	
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Smallpox—Foreign.

Austria	Budapest	Sept. 2-9	2 cases.	
Belgium	Antwerp	Sept. 7-14	1 case.	1 death.
Brazil	Pernambuco	Aug. 8-15	56 deaths.	
"	Rio de Janeiro	Aug. 4-18	114 deaths.	
Colombia	Panama	Sept. 16-23	15 cases.	
Gt. Britain	London	Aug. 24-Sept. 7	166 cases.	15 deaths.
Italy	Naples	Sept. 7-14	57 cases.	6 deaths.
Russia	Moscow	Sept. 7-14	2 cases.	1 death.
Spain	Madrid	June 17-July 15		6 deaths.

Plague—Insular.

Philippine Islands	Manila	Aug. 3-10	6 cases.	3 deaths.
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Plague—Foreign.

Australia	Brisbane	June 1-30	3 deaths.	
Brazil	Rio de Janeiro	Aug. 4-18	5 deaths.	
China	Canton	Aug. 5	Diminishing.	
Italy	Naples	Sept. 7-30	15 cases.	4 deaths.

Yellow Fever.

Brazil	Pernambuco	Aug. 8-15	1 death.	
"	Rio de Janeiro	Aug. 4-18	2 deaths.	
Cuba	Havana	Sept. 4-21	3 cases.	2 deaths.
"	Santiago	Sept. 23	6 cases.	1 death.
Mexico	Vera Cruz	Sept. 14-21	5 cases.	2 deaths.

Cholera.

Java	Batavia	Aug. 3-17	5 cases.	3 deaths.
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Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending October 5, 1901:

DISEASES.	Week end'g Sept. 28		Week end'g Oct. 5	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	170	24	143	19
Scarlet fever	64	4	85	5
Cerebro-spinal meningitis	0	3	0	0
Measles	37	3	48	6
Diphtheria and croup	134	21	181	31
Small-pox	5	2	7	2
Tuberculosis	255	139	225	134

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the three weeks ending October 5, 1901:

ALTREE, G. H., Acting Assistant Surgeon. Granted leave of absence for 14 days from September 9—September 14, 1901.

AUSTIN, H. W., Surgeon. Granted leave of absence for one month from October 7th.

BILLINGS, W. C., Assistant Surgeon. Relieved from duty at Los Angeles, California, and directed to proceed to Chicago and report to the medical officer in command for duty and assignment to quarters.

BROOKS, S. D., Surgeon. Granted leave of absence for 14 days from September 29—September 24, 1901.

CUMMING, H. S., Passed Assistant Surgeon. Granted leave of absence for 30 days on account of sickness.—September 26, 1901.

GIBSON, L. P., Acting Assistant Surgeon. Granted leave of absence for 10 days on account of sickness.—September 17, 1901.

GRUBBS, S. B., Assistant Surgeon. Granted leave of absence for 11 days from September 25—September 20, 1901.

HALLETT, E. B., Acting Assistant Surgeon. Granted leave of absence for 3 days from September 24—September 23, 1901.

HOBBY, W. C., Assistant Surgeon. To proceed to South Atlantic Quarantine as inspector.—September 21, 1901.

HUME, LEA, Sanitary Inspector. Granted leave of absence for the month of October.

MASON, M. R., Hospital Steward. Relieved from duty at Dutch Harbor, Alaska, and directed to return to the States.—September 20, 1901.

McDOWELL, A. B., Acting Assistant Surgeon. Granted leave of absence for 20 days from October 12.—September 24, 1901.

MOORE, DUNLOP, Assistant Surgeon. Relieved from duty at Nome, Alaska, and directed to proceed to the States and await orders—September 13, 1901.

OWEN, HENRY, Acting Assistant Surgeon. Granted leave of absence for 10 days from September 24.—September 16, 1901.

PARKER, H. B., Assistant Surgeon. To proceed to Jacksonville, Fla., for special temporary duty.—September 23, 1901.

PETTUS, W. J., Surgeon. Granted leave of absence for 2 months from September 15—September 14, 1901.

PORTER, J. Y., Sanitary Inspector. Directed to visit Key West, Miami, Jacksonville, Fernandina and Mayport as appraiser.—September 6, 1901.

ROBBINS, S. D., Acting Assistant Surgeon. Granted leave of absence for 30 days from September 6, on account of sickness.—September 20, 1901.

RODMAN, J. C., Acting Assistant Surgeon. Granted leave of absence for eight days.

ROSENAU, H. J., Passed Assistant Surgeon. Detailed to represent service at meeting of the American Public Health Association September 16-20—September 13, 1901. Granted leave of absence for 1 day, September 14—September 16, 1901.

RYDER, L. W., Hospital Steward. Directed to report to Director of Hygienic Laboratory for temporary duty.—September 11, 1901.

STANTON, J. G., Acting Assistant Surgeon. Granted leave of absence for 18 days from September 13—September 14, 1901.

STEARNS, H. H., Acting Assistant Surgeon. Granted leave of absence for fourteen days from October 10th.

STEVENSON, J. W., Acting Assistant Surgeon. Granted leave of absence for 16 days from September 9, 1901—September 11, 1901.

THOMAS, A. R., Passed Assistant Surgeon. To proceed to Naples, Italy, and report to J. H. EAGER, Passed Assistant Surgeon, for duty.

THORNBURY, F. J., Assistant Surgeon. Relieved from duty at Dutch Harbor, Alaska, and directed to return to the States.—September 20, 1901.

WALKER, R. T., Acting Assistant Surgeon. Granted leave of absence for three days.

WALKLEY, W. S., Acting Assistant Surgeon. Granted 3 days leave of absence from September 12, 1901—September 10, 1901.

WARREN, B. S., Assistant Surgeon. Granted two days' extension of his leave of absence.

WILLE, C. W., Assistant Surgeon. Granted leave of absence for seven days from October 17th.

WASDIN, EUGENE, Surgeon. Relieved temporarily from command of the service at Buffalo, N. Y., and assigned to special duty with the President, September 13, 1901. Detailed to represent the service at meeting of the American Public Health Association September 16-20—September 13, 1901.

WETMORE, W. O., Acting Assistant Surgeon. Directed to assume temporary command of service at Buffalo, N. Y., during absence of Surgeon Eugene Wasdin on special detail.—September 13, 1901.

WOODWARD, R. M., Surgeon. Detailed to represent the service at meeting of the American Public Health Association September 16-20—September 13, 1901.

XIQUES, JUAN R., Acting Assistant Surgeon. Granted leave of absence for 30 days from September 1, 1901—September 12, 1901.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending October 5, 1901:

AYERS, J. C., Medical Director. Detached from the Naval Hospital, Chelsea, Massachusetts, and ordered home to await orders.

DICKINSON, D., Medical Director. Detached from duty on the medical examining board at Washington, and ordered to duty in charge of the Naval Hospital, Chelsea.

GRIFFITH, S. H., Surgeon. Detached from duty at the Pan-American Exposition, Buffalo, and ordered to duty as a member of the medical examining board at Washington.

GROW, E. J., Assistant Surgeon. The order to proceed home upon detachment from the *Castine* is modified, and he is ordered to the New York Navy Yard.

KERR, D. B., Assistant Surgeon. Detached from the *Culgoa* and ordered home to await orders.

LAW, H. L., Surgeon, retired. Ordered to duty at Buffalo, in charge of the exhibit of the Bureau of Medicine and Surgery at the Pan-American Exposition.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending October 5, 1901:

BAIRD, WILLIAM T., Contract Surgeon, is granted leave of absence for one month.

BELT, HENRY D., Contract Surgeon, is granted leave of absence for twenty days.

CARROLL, JAMES, Contract Surgeon, is directed to return from Havana to Washington, not later than November 1st.

CLAUSIUS, MAX F., Contract Surgeon, will report to the commanding officer of the Twelfth Battery, Field Artillery, Presidio of San Francisco for temporary duty with that battery *en route* to its new station, Fort Douglas, Utah. Upon completion of this duty, he will proceed to Fort Grant, Arizona.

CLOUD, MARSHALL M., First Lieutenant and Assistant Surgeon. The extension of leave granted him on account of sickness is further extended three months.

DALE, FREDERICK A., First Lieutenant and Assistant Surgeon will proceed to San Francisco for return transportation to Manila.

DAVIS, W. B., Major and Surgeon, is granted leave of absence for ten days.

HALLOCK, HARRY M., Captain and Assistant Surgeon, is assigned to duty with troops on the Army transport *Hancock*, and upon arrival at Manila, he will report to the commanding general, Division of the Philippines, for duty.

HARTNETT, EUGENE H., First Lieutenant and Assistant Surgeon, is detailed as a member of the examining board convened at Governor's Island, New York, vice A. W. WILLIAMS, First Lieutenant and Assistant Surgeon, relieved.

HEARD, GEORGE P., First Lieutenant and Assistant Surgeon. The leave of absence granted him is extended seven days.

HOLMES, T. G., Contract Surgeon, will proceed to San Francisco for duty on the transport *Grant*.

JENKINS, FREDERIC E., Contract Surgeon, will proceed to Fort Morgan, Alabama, for duty.

MORHART, FREDERICK H., Captain and Assistant Surgeon, United States Volunteers, is honorably discharged from the service on account of physical disability.

ROBERTS, DAVID M., Contract Surgeon, will proceed from Fort Sam Houston, Texas, to Fort Bliss, Texas, for duty during the absence of W. T. BAIRD, Contract Surgeon.

Society Meetings for the Coming Week:

MONDAY, October 14th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private); New York Ophthalmological Society (private); Lenox Medical and Surgical Society, New York (private); Harlem Medical Association of the City of New York; Gynecological Society of Boston; Burlington, Vermont, Medical and Surgical Club; Norwalk, Connecticut, Medical Society (private).

TUESDAY, October 15th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Societies of the Counties of Kings, St. Lawrence (semi-annual), and Westchester (White Plains), N. Y.; Hunterdon, N. J., County Medical Society (Flemington); Baltimore Academy of Medicine.

WEDNESDAY, October 16th.—Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society.

THURSDAY, October 17th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, October 18th.—New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society (annual).

Changes of Address.—Dr. Thomas H. Allen, to The Glenmore, No. 859 Seventh Avenue, New York; Dr. William H. Bates, to No. 567 Park Avenue, New York; Dr. J. Riddle Goffe, to No. 29 West Forty-sixth Street, New York; Dr. D. S. D. Jessup, to No. 305 West Eightieth Street, New York; Dr. Frederick M. Luther, to No. 210 West Fifty-ninth Street, New York; Dr. E. Pierre Mallett, to The Dorilton, No. 171 West Seventy-first Street, New York; Dr. Louis C. Millspaugh, to No. 117 West Eighty-first Street, New York; Dr. Francis J. Murray, to No. 28 West Sixty-first Street, New York; Dr. John J. O'Sullivan has opened an office at No. 209 West Ninety-seventh Street, New York; Dr. Abbott Smith Payn, to No. 545 West One Hundred and Forty-eighth Street, New York; Dr. William Shannon, to No. 130 West Eighty-first Street, New York.

A Dinner in Honor of Professor Waldeyer.—The German Medical Society of the City of New York will give a dinner on October 26th to Dr. W. H. G. Waldeyer, professor of anatomy at Berlin.

Free Beds for Eye, Ear, and Nose Cases.—The Chicago Eye, Ear, Nose, and Throat Hospital has provided free beds for indigent patients, which are filled only through appointments by physicians. Practitioners who wish to nominate patients for these beds should communicate with the secretary, Dr. J. R. Hoffman, 206 East Washington Street, Chicago.

A Hospital for Tuberculous Patients in New Mexico.—A hospital has been established at Silver City, N. M., by the Sisters of Mercy, with Dr. E. S. Bullock, formerly pathologist and physical diagnostician to the U. S. General Hospital for Tuberculosis at Fort Bayard, in charge as medical director of the department of tuberculosis.

The Omega Upsilon Phi Fraternity.—The fifth annual convention of the Omega Upsilon Phi Fraternity (medical) was held August 29th and 30th at Buffalo, N. Y. Dr. Edward M. Thompson, of New York city, was elected president; Dr. Dean O. Thompson, of Hornellsville, N. Y., secretary, and Dr. George H. Minard, of Lockport, N. Y., treasurer. A banquet was held at the Hotel Genesee, Buffalo, on the evening of the 29th and was a great success. The next convention will be held in New York city during September of next year.

The Late Dr. J. H. Morrison, who died recently at his home, in St. Johns, N. B., in his forty-seventh year, was one of the best known of the aural and laryngological surgeons of Canada. He was a graduate of the Bellevue Medical College of New York city, and later studied abroad under Professor Politzer and Sir Morell Mackenzie, serving two years in the London hospitals. He was an active participant in the political affairs of the city in which he resided and was at one time superintendent of the board of education in Manitoba, where he practised before going abroad.

The Nicholas Senn Prize Medal is awarded annually at the meeting of the American Medical Association for the best essay upon some surgical subject. The competition will close on March 1, 1902. The essays must be submitted anonymously, the name of the author being submitted in a separate sealed envelope, together with the title of the essay. Communications may be addressed to any of the committee as follows: Dr. Herbert L. Burrell, 22 Newbury Street, Boston, Mass.; Dr. Edward Martin, 415 South Fifteenth Street, Philadelphia, Pa.; Dr. Charles H. Mayo, Rochester, Minn.

Boston's Camp for the Treatment of Consumptives.—An open camp for the treatment of consumptives by subjecting them to exposure to the winter air will be tried in the Back Bay this winter. None but consumptives of a most advanced stage will be selected for this series of experiments. The first camp will be established when ten consumptives are found who are willing to go into it, where it is hoped the progress of the disease will be stopped. The first outfit will be named Camp Courage. Just where it will be located has not been made public. The camp will consist of ten box tents, each seven feet high, with four-foot walls. The flap of the tent will open into a little park, the ten tents being arranged in a circle. Each tent will contain a square piano box, which, with its fittings, will serve as a bed. In the centre of the park will be a fire, which will furnish all the warmth thought necessary.

Small-pox Epidemic Closes Philadelphia's Public Schools.—Small-pox is epidemic in certain sections of Philadelphia, including a portion of the suburbs known as Tioga. The M. Hall Stanton and Glenwood public schools, two of the largest in the city, have been closed, and the health board has asked that all the schools in the Twenty-eighth ward be closed. Physicians, clergymen, and other residents in the infested portion of the city are making strenuous efforts to secure the removal of the hospital containing the stricken to a more sparsely settled section. Mass meetings were held nightly. More than four hundred policemen have been pressed into service to guard dwelling houses which are quarantined.

The Legal Responsibilities of a Board of Health.—The extent of the legal rights of a board of health in taking measures to prevent the spread of disease will be tested in a Massachusetts court. Louis E. Bourbeau, a grocer of Leominster, Mass., has brought suit in the sum of \$5,000 against the Leominster Board of Health in an action of tort wherein the plaintiff claims that during the recent small-pox epidemic in that town, two of his sons having been stricken down with the disease, the board closed his store, isolated the plaintiff and his family, fumigated his store, ruining his stock of groceries, and resulting in his losing the greater part of his trade. Bourbeau made a claim for damages at the time, but was ignored by the defendant board. The case is believed to be the first of the kind in New England.

Warfare against the Mosquito at New Orleans.—The New Orleans Board of Health has determined to begin a fight against mosquitoes at once, instead of waiting until next spring, as was intended. Such experiments as have been made have tended to show that the nuisance can be reduced very materially if the work is begun even this late in the season. Only a part of the city will be freed of mosquitoes at once. Two wards have been assigned to four sanitary inspectors, who will devote their entire attention to them for several weeks, visiting every house, inspecting all water supplies and treating all possible places for the incubation of mosquitoes with oil. It has been decided to use kerosene oil in the cisterns. Crude Beaumont oil will be used in the gutters and open ponds. Dr. P. Michinard, of the board of health, will superintend the work.

New Health Rules for Barbers.—The following rules, prescribed by the San Francisco Health Board, must be obeyed by all barbers and a copy of them hung in every shop: "Mugs and shaving brushes shall be sterilized by immersion in boiling water after every separate use thereof. Razors shall be wiped with alcohol before and after being used. Hair brushes known as 'sanitary brushes' must be used after first being sterilized. Razor strops must be kept clean and never wiped off with the hand or blown upon with the breath. A separate clean towel shall be used for each person. Barbers shall not blow away with breath any hairs after cutting, but use a towel or bulb or hairbrush.

Barbers shall keep their finger nails short cut and clean. Alum or other material used to stop the flow of blood shall be so used only in powder form and applied on a towel. The use of powder puff, finger bowels, and sponge is prohibited. No person shall be allowed to use any barber shop as a dormitory. All barbers' instruments must be disinfected after using."

A Scientific Food Experiment in Chicago.—Children of wealthy parents are to be the subjects of food experiments by scientists in a splendidly equipped home known as the Chicago Hospital School for nervous and delicate children, at 5201 Drexel Avenue. Only the well-to-do can afford to send their children to the school. The home can accommodate only fifteen children, and has more applications than it can fill at the present time. An annex is to be established soon, and the effects of food on the brain and body are to be studied under the direction of Dr. John M. Dodson, when he returns to Chicago from Boston, where he is understood to be conducting further researches in the subject. All conventional ideas of a school are to be disregarded at the hospital school. There will be no desks and nothing to suggest an institution will be allowed. The idea of working out such a problem originated with Dr. John M. Dodson, dean of Rush Medical College. The hospital school is affiliated with Rush College.

A Psycho-physical Laboratory to be Established.—The International Congress of Criminal Anthropology, in its meeting at Amsterdam, September 9 to 14, 1901, passed the following resolution:

The members of the Fifth International Congress of Criminal Anthropology are in favor of the establishment of a psycho-physical laboratory for the practical application of physiological psychology to sociological and abnormal or pathological data, especially as found in institutions for the criminal, pauper, and defective classes, and in hospitals, and also as may be observed in schools and other institutions.

This congress consisted of distinguished specialists from all over Europe, and it is the highest authority. In our country up to date four national associations—The American Medical Association, the Association of American Medical Editors, American Medico-Psychological Association and the Association for the Study and Cure of Inebriety; thirteen State medical societies—Connecticut, Indiana, Kansas, Kentucky, Louisiana, Minnesota, Mississippi Valley Medical Association, North Dakota, New Jersey, Pennsylvania, Texas, and Wisconsin; and three city medical societies—St. Louis, Chicago, and Syracuse, have passed the same resolution and referred it to the Department of the Interior.

Very faithfully,
ARTHUR MACDONALD.

Arizona Begins a Campaign Against Pulmonary Tuberculosis.—Arizona has begun a campaign against tuberculosis, which may finally result in a strict quarantine against victims of pul-

monary trouble. The city council of Phoenix has passed ordinances intended to provide protection against infection from the thousands of health-seekers who come to Arizona each year. The plans submitted by the health board call for the providing of cuspidors or proper receptacles on the street-crossings and in public parks. The most important measure is the fumigation of rooms occupied by invalids. In its report the board says: "The danger of infection to natives here is growing more apparent and the need of adopting stringent safety precautions more urgent. Annually the number of invalids suffering from consumption come to Arizona in greater numbers. The fame of the Salt River Valley as a health resort is spreading all over the country, and future influxes of consumptives will grow larger in consequence." The Arizona Medical Association, at its meeting two months ago, adopted a resolution calling upon the councils of the cities and towns throughout the Territory to take precautionary measures against the spread of the disease. Nearly every city in the Territory is preparing to take up the fight on the disease, and a bill has been prepared for the next legislature, barring from entrance into the Territory all persons showing the germs of tuberculosis.

Leprosy being Eradicated in the Hawaiian Islands.—According to a recent cable, leprosy is being slowly but none the less certainly eradicated in the Hawaiian Islands. Five years ago there were over thirteen hundred inmates at the leper settlement on the island of Molokai, but when the annual visit was made a few days ago there were barely nine hundred. This is due, not so much to any scientific treatment of the disease, as to the gradual extinction of the native race, which, alone, in the opinion of Superintendent Reynolds, of the settlement, will cause the complete eradication of leprosy. Last year there were an even hundred lepers sent to the island, while only fifty have been sent during the first nine months of the present year. In the biennial period ending December, 1900, directly after the islands had been annexed, over five hundred were taken to the settlement. This was due, not to any increase in the disease, but to the fact that the question was taken out of the hands of the party previously in control and many afflicted persons who had remained in Honolulu through political influence were hurriedly bundled off to the place of segregation. The disease is thought to have been brought to the islands thirty years ago by a Chinaman, and as soon as it once reached the natives, it spread with great rapidity. The Hawaiians are much given to an outward display of affection, especially kissing and embracing. They smoke the same pipe, eat from the same dish, and in other ways lead to a direct inoculation of the disease. The same reasons are given by the physicians for the great increase in tuberculosis among the natives. Every accommodation is provided for the lepers at Molokai. They have their own homes, a school for boys and one for girls, and seven churches for the little town of 900 people. Besides the lepers there are about a hundred per-

sons at the settlement—teachers, ministers, and nurses. Of the nine hundred lepers on the Island of Molokai, all but fifty are native Hawaiians. There are only fifteen whites and thirty Chinese. Expert physicians who have made a lifelong study of leprosy in Japan, France, and China have been studying the conditions, but have found no suitable remedy for the disease. The local government has given up experiments and there is a general feeling that the United States should now take up the study with the purpose of effecting a permanent cure.

New York's Health Board Begins an Anti-malaria Crusade.—The Board of Health of New York has adopted stringent measures toward the stamping out of malaria. At a special meeting of the board it was agreed that malaria should be counted as a contagious disease and that physicians and public institutions should make report of each case of malaria that came to their notice, so that it could be recorded and care taken to prevent its spreading. Investigations by the board of health and private physicians have shown that where one case of malaria appears, almost invariably other cases develop. Dr. Dillingham, Dr. Roberts, and Dr. Cosby compiled the records of the spread of malaria. Their opinions resulted in the adoption of the following resolutions:

Whereas, Recent investigations show that malarial fever is an infectious disease and can be largely prevented by the adoption of a simple precaution, and

Whereas, It is the desire of the Department of Health to prevent the extension of malarial fever, which now exists in some of the boroughs, and to restrict its prevalence in those boroughs where it exists.

Resolved, That all public institutions, homes, asylums, hospitals, etc., be required to report all cases of malarial fever which come under their observation, giving the name, age, sex, occupation, and address of the patient, and also whether the attack is a primary infection or a relapse, and also the address where the disease was probably contracted.

Resolved, That all physicians in the city of New York be requested to furnish similar information in regard to patients suffering from malarial fever under their care.

The Women's Medical Association of New York City will meet at the Academy of Medicine on Wednesday evening, at 8.15.

Louisville Society of Medicine Elects Officers.—At the annual election of officers of the Louisville Society of Medicine, held at the Galt House, September 2d, the following officers were elected: President, Dr. Walter B. Gossett; vice-president, Dr. Thomas A. Hayes; secretary, Dr. W. O. Green; treasurer, Dr. A. H. Falkner.

The International Congress of Nurses, which met in Buffalo on September 18th, 19th, and 20th, was well attended, about one hundred official delegates registering, and an audience of over five hundred nurses being in attendance at every session. The meetings were well managed and

the programme was carried through successfully. But few papers were read by title. The most important resolution passed was one affirming the need of legal status and State protection of the minimum training required to make a good nurse.

Proceedings of the International Medical Congress.—We are requested by the general secretary of the Thirteenth International Medical Congress, held at Paris last year, to state that the proceedings of the general sessions and of the seventeen sections have all been printed and delivered. All members who are entitled to the volumes and who have not already received them should at once address a request for the same to the publishers, Mrt. Masson & Co., 120 Boulevard St. Germain, Paris. No claims for copies will be allowed which are not filed prior to December 31, 1901.

The Medical Association of the Greater City of New York.—A stated meeting will be held at the New York Academy of Medicine, Monday, October 14th, at 8.30 p. m. The following is the order of exercises: (I) Discussion on Cholelithiasis and its Treatment, Medical and Surgical, opened by Dr. William N. Thomson; The Medical Treatment of the Acute Attack and the Management of Chronic Gall-stone Disease, with Special Reference to Cases without Icterus, by Dr. Leonard Weber; discussion continued by Dr. William H. Katzenbach, Dr. Reynold W. Wilcox, and others; The Indications for Surgical Interference, by Dr. Albert Ashton Berg; Discussion of Surgical Aspect continued by Dr. George R. Fowler, Dr. George E. Brewer, and others. (II) On the General Aspects of Corneal Astigmatism, by Dr. H. Davison Saril; discussion by Dr. L. A. W. Alleman, Dr. Neil J. Hepburn, Dr. William Oliver Moore, Dr. Edward Sprague Peck, and others.

The Medical Society of the State of Pennsylvania held its fifty-first annual meeting at Philadelphia on September 24th, 25th, and 26th. The programme included the annual address of President Thomas D. Davis, of Pittsburgh; a reception by the Philadelphia County Medical Society, a lawn party on the university campus; four receptions—at the Jefferson Medical College, Woman's Medical College of Pennsylvania, Dr. John V. Shoemaker's residence, and Dr. James Tyson's residence, and a reception at the Medico-Chirurgical College. For the benefit of the visitors special clinics were held at the Medico-Chirurgical, Jefferson, and University of Pennsylvania hospitals. During the sessions addresses were made by Dr. John B. Donaldson, of Canonburg; Dr. James W. Macfarlane, of Pittsburgh; Dr. David S. Funk and Dr. E. B. Borland, of Pittsburgh; Dr. Robert H. Chase and Dr. E. U. Buckman, of Wilkes-Barre, and many others.

The American Association of Obstetricians and Gynæcologists met on September 17th at Cleveland, Ohio. The following new fellows were elected: Dr. A. R. Dudley, of St. Louis; Dr. Charles L. Ill, of Newark, N. J.; Dr. Magnus Tate, of Cincinnati; Dr. M. Stamm, of Fremont;

Dr. G. C. E. Weber, of Willoughby, and Dr. George E. Crile, Dr. Walter Lincoln, Dr. N. Stone Scott and Dr. R. E. Skeel, of Cleveland. After the election the sessions proper began. Dr. C. H. Hoover, of Cleveland, welcomed the association on behalf of the local medical profession. The response to the address of welcome was made by the president, Dr. W. E. B. Davis, of Birmingham, Ala. Papers were read by Dr. Humiston, of Cleveland; Dr. Miles F. Porter, of Fort Wayne, Ind.; Dr. Charles G. Cumston, of Boston; Dr. Edwin Ricketts, of Cincinnati; Dr. Edwin Walker, of Evansville, Ind.; Dr. Walter B. Chase, of New York; Dr. J. W. Hyde, of Brooklyn, N. Y.; Dr. H. E. Hayd, of Buffalo; Dr. M. Rosenwasser, of Cleveland, and Dr. Robert T. Morris, of New York.

North Branch of the County Medical Society (Philadelphia) Organized.—A number of Philadelphia physicians met on September 19th for the purpose of organizing a branch of the County Medical Society. Dr. Albert M. Eaton presided. It was decided that the North Branch of the County Medical Society should include the physicians residing between the Delaware and Schuylkill rivers. A permanent organization was effected by the election of Dr. Eaton as permanent chairman and Dr. R. L. Pitfield as clerk. At the close of the meeting forty-seven physicians had placed their names upon the membership roll. Permanent quarters have been secured in Bank Hall, and meetings will be held there once a month. The idea in forming the branch of the County Society, it was said, was to provide a convenient meeting place for physicians living in the upper part of the city. It is understood that a like branch will shortly be formed in the southern section of Philadelphia.

Medical Society of the State of New York.—The semi-annual meeting will be held in New York on Tuesday and Wednesday, October 15th and 16th, under the presidency of Dr. Henry L. Elsner, of Syracuse, N. Y. The preliminary programme contains the following titles:

A Contribution to the Pathogenesis of Narcolepsy and other Forms of Morbid Sleepiness, by Dr. Heinrich Stern; The Dyspeptic Heart, by Dr. James K. Crook; The Official Relation of the Medical Profession to Private Charitable Institutions, by Dr. Enoch V. Stoddard, of Rochester; Cerebral Apoplexy, by Dr. Edward D. Fisher; The Causes and Treatment of Epilepsy, by Dr. William P. Spratling, of Sonyea; Hallucinations, their Pathogenesis, Clinical Import and Medicolegal Value—Note on the Refinement of the Technics of Spinal Anæsthesia, by Dr. J. Leonard Corning; Tropacocaine in Spinal Anæsthesia, by Dr. Willy Meyer; Therapeutics and the Drug Manufacturer, by Dr. Brace W. Loomis, of Syracuse, N. Y.; Prolonged Medication, by Dr. A. Jacobi; Muscular Atony as the Principal Factor in Uterine Displacements, by Dr. Henry C. Coe; A Brief Outline of the Surgical Procedure in Tubal Pregnancy, with Report of Case, by Dr. H. T. Williams, of Rochester; The Treatment of Chronic Endometritis, by Dr. Herman J. Boldt; Some Facts and Fallacies concerning Pulmonary

Tuberculosis, by Dr. John H. Pryor, of Buffalo; Some Notes on the Early Diagnosis and Treatment of Pulmonary Tuberculosis, by Dr. J. Edward Stubbert, of Liberty, N. Y.; The Association of Pulmonary Tuberculosis with both Primary and Secondary Endocarditis, and the Effect of Valvular Disease upon Lung Tuberculosis, by Dr. J. M. Anders, of Philadelphia; Dysmenorrhœa, by Dr. Matthew D. Mann, of Buffalo; Cancer of the Uterus, by Dr. William R. Pryor; Abdominal Actinomycosis, with Illustrations and Report of a Case, by Dr. Albert Vander Veer, of Albany; Old Age as a Factor in the Cure of Hernia, by Dr. W. B. De Garmo; Problems in the Management of Tuberculous Disease of the Hip, based upon Records in Private Practice, by Dr. Virgil P. Gibney; Mechanical and Operative Treatment of Hip Disease and Disease of the Spinal Vertebrae, by Dr. A. M. Phelps; The Difficulties Encountered by the Sanitarian in Dealing with Smallpox, by Dr. Ernest Wende, of Buffalo; The Clinical Symptoms of Advanced Cardiac Disease, of Cases in which the Right Heart is relatively most at Fault, by Dr. Louis F. Bishop; The Advantages of Stereoscopic Radiography, by Dr. L. A. Weigel, of Rochester; The Diagnosis of Gall-stones and their Aberrances, by Dr. Charles G. Stockton, of Buffalo; Courvoisier's Law, by Dr. Richard C. Cabot, of Boston; The Infections of the Gall-bladder and Bile ducts, by Dr. M. H. Richardson, of Boston; Intestinal Obstruction due to Gall-stones, by Dr. L. S. Pilcher, of Brooklyn; The Technics of Gall-bladder and Duct Operations, by Dr. S. J. Mixter, of Boston; Cholecystectomy, by Dr. C. L. Gibson; Syphilis of the Liver, by Dr. Simon Flexner, of Philadelphia; Tumors of the Liver, by Dr. G. R. Fowler, of Brooklyn; The Physiological and Clinical Action of Normal Salt Solution, with Indications for its Use, by Dr. W. H. Heath, of Buffalo; The Medical Aspects of Appendicitis, by Dr. W. E. Ford, of Utica, N. Y.; Foreign Body in the Lung, confirmed by Radiography (with x-ray photograph), by Dr. Francis Huber; The Ætiological Potency of Heredity in Mental Diseases, by Dr. Carlos F. MacDonald; The Pathology and Treatment of Migraine, by Dr. W. H. Thomson; A Few Uranalysis Deductions, by Dr. Hamilton D. Wey, of Elmira, N. Y.; Method of Incision, Searching, and Suturing the Kidney for Stone, by Dr. Howard A. Kelly, of Baltimore; The Technics of Nephropexy, by Dr. George M. Edebohls; Morcellement and Bisection of the Uterus in Complicated Abdominal Hysterectomy, by Dr. W. G. Macdonald, of Albany; The Immediate Repair of the Injuries of Parturition, by Dr. A. L. Beahan, of Canandaigua, N. Y.; A Small-pox Epidemic in an Orphanage, by Dr. F. C. Curtis and Dr. H. L. K. Shaw, of Albany; Report of a Case of Non-traumatic Perinephritic Hemorrhage, by Dr. Arthur Booth, of Elmira, N. Y.; Are the Tonsils to be Regarded as One of the Normal Organs of the Body, by Dr. F. H. Bosworth; The Early Diagnosis and Treatment of Acute Mastoiditis, by Dr. T. H. Halsted, of Syracuse, N. Y.; History and Presentation of a Case of Cerebral Abscess complicating Chronic Otitis Media, by Dr. Robert Lewis, Jr.; Some Conditions Antecedent to Cancer of the Breast, by Dr. B. F. Curtis; Ligation of the Abdominal Aorta for Aneurysm, by Dr. Robert T. Morris; Observations on the Treatment of Croupous Pneumonia, by Dr.

J. C. Wilson, of Philadelphia; The Clinical Evidence of Myocardial Conditions, by Dr. John L. Heffron, of Syracuse, N. Y.; A Case of Intermittent Claudication terminating in Gangrene, by Dr. I. H. Levy, of Syracuse; The Present Status of Ophthalmic Science and Art, by Dr. D. B. St. John Roosa; The Beneficial Effect on the Eyes from the Use of the Stereoscope, by Dr. A. Edward Davis; Glaucoma Simplex and its Treatment, by Dr. Peter A. Callan; The Evolution of Typhoid Fever Theories, by Dr. Richard Stein; and The Plastic Use of the Uterus in Operations for Cystocele, by Dr. Joseph Brettauer.

Hospital Buildings and Endowments.—It is expected that the new Emergency Hospital building, Buffalo, N. Y., will be completed and ready for occupation by the latter part of next month. The building has three stories and a basement, is constructed of brick, and will be fireproof throughout. Many new improvements and additions have recently been made to St. Mary's Hospital, Milwaukee, Wis. The new \$15,000 chapel cornerstone at St. Joseph's Hospital, Milwaukee, Wis., was laid on August 11th with impressive ceremonies, in the presence of several thousand people. Work has begun on a new \$10,000 hospital at Bessemer, Mich. The building will occupy a whole block. The new St. Joseph's Hospital, at Savannah, Ga., is expected to be completed and ready for the reception of patients before September 1st. The new hospital is a three-story building on a basement surrounded by 5,900 square feet of porches, and contains twenty-six rooms for patients. The building will have cost, when finished, about \$40,000. The improvements to the Medico-Chirurgical Hospital, Philadelphia, upon which \$70,000 is to be expended, have been begun, and within sixty days it is promised that the institution will be as completely equipped as any in the United States. The cornerstone of the Mount St. Rose Hospital for Consumptives was laid on August 17th near St. Louis, Mo. Contracts have been let for a five-story brick and stone addition to the Passavant Hospital, Chicago, to cost \$15,000. The new Mercy Hospital, at Jeffersonville, Ky., will soon be completed. Its cost was \$10,000. The Monmouth (N. J.) Memorial Hospital will shortly erect a nurses' home, to cost \$12,000. Extensive improvements, to cost \$70,000, have been begun to the Medico-Chirurgical Hospital, Philadelphia. They will be completed in October. Ground has been purchased by the Bethesda Hospital Corporation, Cincinnati, O., for \$17,000 on which a maternity hospital will be erected. The will of Henry Whitman, of Boston, contains a bequest of \$10,000 to the Massachusetts General Hospital. Bids are invited for the construction of a wing to the Cadet Hospital at West Point, N. Y. Leopold Moss, of New York, has bequeathed \$500 to the Mt. Sinai Hospital, of that city. Ground will shortly be broken for the new hospital at Richmond, Va. By the will of Mrs. Elizabeth N. Thompson, widow of Dr. Austin W. Thompson, the sum of \$25,000 is given to the Cooley Dickinson Hospital, of Northampton, Mass., the bequest to take effect upon the death of Mrs. Thompson's stepdaughter. Trustees of the German Deaconess' Home and Hospital, Cincinnati, O., have altered the

plans for their new institution so it will cost \$60,000 instead of \$100,000. Funds will soon be available by which Boston's hospital service will be augmented by millions. The donors were Peter B. Brigham, who left property which has reached a value of about \$4,000,000, and Robert Brigham, whose property is worth now nearly \$2,000,000. Ground has just been broken for a new and modern building for the Hahnemann Hospital, Rochester, N. Y. Work will be actively pushed and it is expected the building will be ready for occupancy before winter. It is estimated that when completed the cost will approximate \$20,000. The hospital will enter upon its new career entirely free from debt. Robert McMurray, of Rosedale, Man., has bequeathed \$500 to the Winnipeg (Man.) General Hospital. An emergency hospital is to be built in San Francisco at a cost of \$8,000. Negotiations have been opened for the property of the St. Paul's Orphan Asylum, at Pittsburgh, Pa., and it is probable that it will be remodeled for use as a hospital. A number of physicians are interested in the scheme. Robert Lebaudy, of France, has subscribed \$10,000 to the building fund for the hospital of the French Benevolent Association, of New York. This brings the amount in hand to \$55,000, raised toward the erection of a building to cost \$150,000. Work on the building is expected to be begun next March. Of the beds in the hospital, one hundred will be free and fifty pay. There will be an ambulance service connected with the institution. The new St. Joseph's Hospital at Savannah, Ga., was opened early in September. The New York Post-Graduate Medical School and Hospital has taken title to the house No. 305 East Twentieth Street. The house adjoins the hospital. Plans for the Winchester (Va.) Memorial Hospital have been accepted. The building will cost about \$10,000. It will be erected at once. The trustees of St. Luke's Hospital, St. Louis, Mo., are preparing to expend \$400,000 for the new structures of the institution, for which several plans have been submitted, but no choice made. The general design will probably consist of an administration or central building with wings on either side. A new contagious ward for the City and County Hospital of St. Paul, Minn., is to be erected this winter. Louis Thurston Hoyt, of New York, has bequeathed one thirty-second part of the residue of his estate to St. Luke's Hospital, of that city, for the treatment of consumptives. The new City Emergency Hospital at Boston will be ready to receive patients on October 1st. The cornerstone of the Mount St. Rose Hospital for Consumptives, in St. Louis, was laid recently. The building is to be 110 feet long by 50 feet wide, and four stories high. The National Sanatorium Association of Canada is building the Gravenhurst Free Hospital for Consumptives near Gravenhurst, Ontario. It is surrounded by a beautiful wooded park of fifty-five acres on the shore of Lake Muskoka. A new hospital will shortly be erected in Richmond, Va. A bequest of \$100,000 to the Massachusetts General Hospital and \$50,000 each to the Children's Hospital and the Massachusetts Charitable Eye and Ear Infirmary were found in the will of Charles W. Hayden, late of Boston, recently filed in the Probate Court. An entirely new system of plumbing is being placed in the City Hospital,

Louisville, at a cost of \$4,000.—The will of Henry A. Turner, of Boston, contains a bequest of \$10,000 to the New England Hospital for Women and Children.—Plans have been filed for the erection of two 1-story frame hospital buildings on North Brother Island, New York, to cost \$9,500, and to be used for contagious diseases.—Plans are being prepared for a large training school for nurses for Mt. Sinai Hospital, New York. The new structure will be of red brick, with Indiana limestone trimmings. It will be seven stories high and the approximate cost will be \$150,000.—The dedicatory exercises of the new hospital connected with the Presbyterian Orphanage and Farm, Oakland, Cal., took place on September 14th.—The foundation was recently laid for the new emergency hospital in Golden Gate Park, San Francisco. It will cost over \$8,000 and will be completed about January 1st.—The new colony buildings (additions to the Manhattan State Hospital at Central Islip, Long Island, N. Y.) are almost completed and will be opened next month.—The will of Miss Emily Banchor, of Boston, contains a bequest of \$5,000 to the Children's Hospital, of that city.—A wing will shortly be added to St. Catharine's Hospital, Brooklyn.—The Austro-Hungarian Hospital, 324 and 326 East Third Street, New York, was opened on September 16th for the reception of patients.—An appropriation has been made by the city of Boston of \$150,000 for a hospital for consumptives.—The Newark Board of Health will build an isolation hospital in the northwestern section of the city. The land will cost \$17,500. There will be accommodations at once for fifty small-pox patients.—The cornerstone of the St. Anne's Hospital, Austin, Ill., will be laid October 20th. St. Anne's Hospital is a home for consumptives and is being erected by the Sisters of St. Elizabeth's Hospital. The building will cost \$150,000 and will occupy ten acres of ground. When finished it will accommodate 5,000 patients.—The new \$250,000 hospital for the Sisterhood of the Holy Family of Nazareth, in Chicago, is nearing completion. The structure is six stories high, fireproof, of cut stone and pressed brick, with strikingly high porticoed entrances. The ground dimensions are 196 by 87 feet. The operating-rooms are on the top floor.—An annex to cost \$24,000 will be built on the C. H. Buhl Hospital, at Sharon, Pa. The capacity of the hospital is not sufficient to accommodate more than half the cases.—A new hospital, costing \$500,000, is about to be built by the French Benevolent Society in New York. The hospital will occupy the site at Nos. 450, 452, 454, and 456 West Thirty-fourth Street, and will be completed within one year. The building is to be of modern French architecture. It will contain many French ideas in furnishing and equipment new to American hospitals. The hospital will be built by subscription. It will be seven stories in height, and will be built of red brick and limestone and be absolutely fireproof throughout. One of its most striking features borrowed from the French hospitals will be a completely isolated ward for consumptives on the top floor. This will be the only ward of its kind in New York. The kitchen and laundry will also be on the top floor, in the manner of the latest

Parisian hospitals. Another novel feature will be the number of sun parlors. Each ward will have a sun parlor of its own in the rear of the building. A large roof garden attractively furnished will surmount the whole. The French Government has contributed 100,000 francs (\$20,000), together with a valuable Gobelin tapestry, to the hospital fund. The latter is valued at \$50,000 and will be sold for the benefit of the society.—The will of the late Harriet Wilcox, of Brooklyn, bequeaths \$20,000 to the New York Skin and Cancer Hospital and \$10,000 to the Home for Consumptives, Brooklyn, N. Y.—The will of Charles L. Young, of Boston, bequeaths \$5,000 each to the Children's Hospital, the Massachusetts General Hospital and the Boston Lying-in Hospital, of that city.—William J. Palmer and George Foster Peabody, formerly large shareholders in the Pleasant Valley Coal Company, of Utah, an explosion of one of whose mines killed nearly 200 persons in 1900, have given \$10,000 each to the St. Mark's Episcopal and Holy Cross Catholic hospitals, of Salt Lake City and \$20,000 for the establishment of emergency hospitals at the principal camps of the coal company.

Births, Marriages, and Deaths.

Born.

LOVERING.—In Mare Island, California, on Friday, September 6th, to Dr. P. A. Lovering, United States Volunteers, and Mrs. Lovering, a daughter.

Married.

AVIRELL—QUINN.—In Brooklyn, on Wednesday, October 2d, Dr. George W. Averell and Miss Alice Jesson Quinn.

DRAPER—VAUGHAN.—In Roanoke, Virginia, on Wednesday, September 28th, Dr. L. A. Draper and Miss Julia Vaughan.

FISK—BANCROFT.—In Winchester, Massachusetts, on Wednesday, October 2d, Dr. Walter M. Fisk, of Montreal, and Miss Constance Clare Bancroft.

GREENLEAF—HATHAWAY.—In Berkeley, California, on Tuesday, September 10th, Mr. George Ravenscroft Greenleaf, son of Dr. Charles R. Greenleaf, United States Army, and Miss Mary Page Hathaway, daughter of the late Dr. Edmund V. Hathaway.

GROAT—BACON.—In Syracuse, N. Y., on Wednesday, October 2d, Dr. William A. Groat and Miss Nellie Nichols Bacon.

STEWART—HOWELL.—In Washington, on Wednesday, September 25th, Dr. Whitehurst Stewart and Miss Bessie Howell.

WATTS—RICE.—In New Brunswick, N. J., on Thursday, October 3d, Dr. Robert Watts, Jr., of New York, and Miss Helen Woodbridge Rice.

Died.

DUNPHY.—In New York, on Tuesday, October 1st, Dr. James W. Dunphy, in the twenty-sixth year of his age.

FLINT.—In Washington, on Thursday, September 26th, Mrs. Caroline H. Flint, wife of Dr. James N. Flint, United States Navy.

JONES.—In Chicago, on Friday, October 4th, Dr. Samuel J. Jones, of the Northwestern University, in the sixty-fifth year of his age.

MCCLURE.—In Jackman, Maine, on Sunday, September 29th, Dr. F. W. McClure, of Springfield, Massachusetts, in the thirtieth year of his age.

TREXLER.—In Kutztown, Pennsylvania, on Tuesday, September 24th, Dr. J. S. Trexler, in the sixty-ninth year of his age.

WALKER.—In Louisville, on Tuesday, October 1st, Dr. Thomas R. Walker, in the seventy-third year of his age.

Pith of Current Literature.

Philadelphia Medical Journal, October 5, 1901.

A Lecture on Strangulated Hernia. By Dr. Carl Pfister.—The author submits that: 1. Strangulated hernia is entirely within the scope of those conditions which the general practitioner can treat. 2. Not more than a fair modern surgical education is required. 3. No rarely-used instruments are needed. 4. Strangulation is so exceedingly frequent that every physician should inform himself on the technics of its treatment. 5. Simple procedures yield successful results in the vast majority of cases.

The Sanatorium Treatment of Tuberculosis. By Dr. Arthur J. Richer.—The author points out that a most important factor in sanatorium treatment is the education given to the patient, which will allow him to lead a more hygienic life at home, as well as converting him into a teacher in the prevention of disease. The fact that the disease cannot be considered as positively cured unless good health has been enjoyed for at least eight years after the arrest of the disease, demonstrates the imperative necessity of a practical hygienic education.

Orthopædic Treatment of Deformities and Disabilities Resulting from Diseases of the Nervous System—Special Reference to Tendon Transposition. By Dr. B. E. McKenzie.—Many patients who seek the advice of the orthopædic surgeon are suffering from some form of nervous affection, usually chronic. When deformity exists, it should be corrected. When there is lack of balance at a joint, an effort should be made to restore equilibrium. Tendon transposition is an effective means to secure this end in selected cases. Braces and splints should not be employed, except in meeting the clearest indications. Arthrodesis of a "flail" joint is often better than mechanical aid. Amputation of a limb on account of paralytic disability should seldom or never be performed.

Melancholia and its Treatment. By Dr. George Stockton.—The author gives some general rules. He concludes, however, that, in the majority of cases, a hospital or sanatorium is the safest place to treat such cases; a change of surroundings will often accomplish a great deal of good by its influence alone.

The Treatment of Acute Otitis Media. By Dr. Frederick L. Jack.

The Close Relationship Existing between Epilepsy and Dyspepsia. By Dr. Charles D. Aaron.

Boston Medical and Surgical Journal, October 3, 1901.

A Case of Myeloma of the Spine, with Compression of the Cord. By Dr. John Jenks Thomas.—This report is valuable because of the interesting features of a case of spinal surgery, and because of the rarity of this form of new growth, this being the fourth case put on record in this country. The complete relief of the paraplegia by operation is worthy of note, as is also

the presence of the disassociation of disturbance of sensation of temperature, pain, and touch, such as is seen in syringomyelia, in a case of pressure upon the cord from without, as well as the variability in the height of the disturbance of sensation, as seen at the different examinations, and the apparent improvement of the condition in the bones under the use of bone marrow and Coley's toxine treatment.

Hydrotherapy in Chronic Disease. By Dr. Simon Baruch.—The author treats briefly of the subject and trusts that the future may see a more careful study of hydrotherapy, greater precision in the therapeutic administration of water, and greater consideration given to it in the medical curriculum.

Association of Anæmia with Chronic Enlargement of the Spleen. By Dr. Arthur H. Wentworth.

Infantile Scurvy. By Dr. Edward L. Peirson.—Treatment of this affection is simple. The babies are usually bottle-fed, and some proprietary food, condensed milk, or cooked milk, is used. Modified uncooked milk with orange or lemon juice should be given, from one half to a whole lemon or orange being used daily, with fresh beef juice. Iron should be given for the debility and anæmia. Sometimes, in severe cases, the child must be kept quiet on a frame.

Rhachitis. By Dr. Arthur R. Crandell.

Medical News, October 5, 1901.

Acute Rheumatism. By Dr. William Watt Kerr.—A clinical article, and a general consideration of the subject from the present-day point of view. As to the aetiology of acute rheumatism, the author considers with approval the observations and experiments of Poynton and Paine. In twelve consecutive cases of rheumatic fever, these gentlemen have isolated a diplococcus which, when injected into the veins of rabbits, has produced polyarthritides, pericarditis, valvular inflammation, pleurisy, pneumonia, chorea, and nodules; all the lesions were non-suppurative in character. The author regrets that, in a large number of text-books, the joint affections alone are regarded as local symptoms of rheumatism, while the cardiac, lung, and pleuritic changes are described as complications. He points out that the inflammation of the pericardium, pleura, and other serous membranes is just as much a part of rheumatism as is the inflammation of the synovial membrane covering the joints. Referring to the use of sodium salicylate, he lays stress upon the importance of continuing the administration of the remedy for a length of time after all the symptoms have disappeared. In addition to the salicylates, an alkali, such as the citrate of potassium, in twenty-grain doses, should be given, to maintain the alkalinity of the blood. The application of small blisters over the præcordia is advised for the cure of the cardiac lesions, and also as a preventive measure in all cases of acute rheumatism.

Anæsthesia and Analgesia—A Study of Drug Action and Modern Methods. By Dr. William Seagrove Magill.

Lager Beer in Acute Vomiting. By Dr. Louis Kolipinski.—The author furnishes two illustrative cases in which lager beer proved efficacious. In one instance, at the end of a week's debauch of whiskey, a young man was seized with bilious vomiting, insatiable thirst, abdominal soreness, and pain. A glass of beer, repeated at intervals, was effective. In very severe and persistent vomiting, of four days' duration, caused by inflammation of an ovary and Fallopian tube, immediate relief came after the patient had drunk the contents of three bottles of pale beer of inferior and adulterated composition.

Conservative Operation upon the Uterine An-nexa. By Dr. Henry T. Byford.

Acute Œdema of the Uvula, Palate, Pharynx, and Epiglottis, Following the Excessive Application of Adrenal Solution Preserved with Chloretone. By Dr. Solomon Solis Cohen.

Medical Record, October 5, 1901.

The Use and Limitations of the Elastic Ligature in Intestinal Surgery. By Dr. Theodore A. McGraw.—In a large number of operations on dogs, in which animals the intestine is much thicker than in man, the author has met with absolute success. According to the author, this operation is the quickest of all operations for the production of intestinal anastomosis. A few Lembert stitches, the passage of the ligature through the adjacent viscera, the tying of a knot, a few more Lembert stitches, and the operation on the intestine is completed. Shock and pain are reduced to a minimum; the bowel does not slough, but undergoes a process of absorption. Choice should be made of a firm, hard, round rubber cord, at least two millimetres in diameter, and of the best quality of rubber.

The Proper Method of Teaching the Anatomy of the Nervous System. By Dr. L. Harrison Mettler.—The author's analysis of the cerebro-spinal axis shows, not only the limits of the cord's dependence and independence, but by placing the function and developments of its constituent parts prior in importance to the mere anatomical location and relationship of those parts, it enables the student to grasp more intelligently, and therefore to remember more tenaciously, those very relationships. The study of the nervous system is best conducted by tracing its evolution rather than by merely describing it as it appears in the higher forms of life.

Pre-medical Education. By Stanley Coulter, A. M., Ph. D.—The author points out that the time spent by the student in his college course should be expended to the best advantage in acquiring a knowledge of those facts and a technical skill in those branches which are directly fundamental to medicine. These subjects are quite as useful as any others for the purpose of mental training, and may constitute a considerable part of the college course, without any sacrifice of that general culture which is its fundamental and essential purpose.

The Chest Pantograph and the Manometer—Their Clinical Use and Value. By Dr. C. B. Van Zant.

Pistol-shot Wounds. By Dr. Thomas Hayes Curtin.—The author discusses the subject of pistol-shot wounds from a purely medico-legal standpoint, and briefly demonstrates the manner of making examinations in these cases. After a pistol is fired, the barrel is lined with a black deposit of sulphide of potassium and charcoal, and this deposit, when diluted with water, gives a strongly alkaline reaction and has the odor of sulphuretted hydrogen. On the addition of a few drops of a solution of acetate of lead, a deep brown precipitate forms. If the pistol has not been fired for hours or days, the black precipitate changes from the sulphide to the sulphate of potassium, which gives a neutral reaction in a watery solution, and a white precipitate on the addition of the acetate of lead.

Journal of the American Medical Association, October 5, 1901.

The Œtiology and Classification of Cirrhosis of the Liver. By Dr. Victor C. Vaughn.—Atrophic cirrhosis, known also as the cirrhosis of Laennec, is so called because, from its earliest possible recognition, the liver is less than normal in size. Hypertrophic cirrhosis, or the cirrhosis of Hanot, is known as such because at every stage of the disease the liver is larger than normal. The co-existence of both cirrhoses in the same individual may be seen. In atrophic cirrhosis the first thing to do is to discontinue the cause of the trouble, which is most frequently alcohol. The pathologist has abundantly shown that, when the cause is removed, hepatic cells, even when undergoing marked fatty degeneration, may recover themselves. In the author's opinion the only scientific treatment of atrophic cirrhosis is that of Semmola, who reduces the amount of food to a minimum and administers this in a form least likely to tax the hepatic cells. The diet should be confined to milk or milk and eggs. Dilute hydrochloric acid may be given, and the action of the stomach may be improved by bitter tonics. The bowels should be kept in good condition. The heart should be watched, and the administration of digitalis is often indicated. In the treatment of hypertrophic cirrhosis, small doses of calomel, administered according to the method of Nothnagel, have probably given the best results. When there is obstruction of the common duct or when there is stone in the gall-bladder, surgical operation is clearly indicated. The author is inclined to the opinion that the time will come when surgery will be relied upon in the treatment of all cases of hypertrophic cirrhosis, inasmuch as it is possible only by operation to reach and disinfect the biliary passages.

On the Treatment of Cirrhosis of the Liver. By Dr. J. H. Musser.—In ascites the author approves of the use of calomel; one tenth of a grain every three hours, in four or five days brings on diuresis, and gradual reduction by this means, and perhaps by absorption of the fluid. Apocynum cannabinum, in doses of fifteen, twenty, or thirty drops, four times daily, has proved valuable in reducing the ascites. When medication does not relieve the ascites, the fluid must be removed, and the operation should not be post-

poned. If simple tapping is ineffectual, laparotomy and stitching the omentum to the anterior abdominal wall must be resorted to.

A Case of Acromegaly Presenting Certain Features of Unusual Interest. By Dr. Charles Lyman Greene.—The case which the author presents is sufficiently typical to make the diagnosis absolute; but, at the same time, it lacks the marked prominence of the lower jaw, and in certain respects strongly arouses suspicion of myx-œdematous change. The treatment has been solely by thyroid extract, the result being an immediate and marked amelioration of the myx-œdematous condition.

The Increasing Sterility of American Women. By Dr. George J. Engelmann.—The author finds that sterility is fully twenty-one per cent. among the laboring class of St. Louis, twenty per cent. throughout the State of Massachusetts, twenty-three per cent. among the better situated in St. Louis, the same in the city of Boston, even among the laboring class. It increases with the degree of luxury and comfort, and is highest among college graduates. Sterility has increased hand in hand with the much-discussed decrease of fecundity. The conditions are sufficiently serious to indicate an imperative necessity for farther and more extended investigation.

The Mortality of Appendicitis. By Dr. John B. Deaver and Dr. George G. Ross.

Symptomatology of Cerebral Hæmorrhage. By Dr. F. Savary Pearce.

Dangerous Hæmorrhage after Removal of Enlarged Tonsils and Adenoids, with the Report of a Case. By Dr. A. C. Getchell.

Notes on One Hundred and Fifty Cases of Small-pox in Private Practice. By Dr. Albert Soiland.

A Satisfactory Operation for Certain Cases of Retroversion of the Uterus. By Dr. J. Clarence Webster.

American Medicine, October 5, 1901.

Primary Cancer of the Gall-bladder and Bile-ducts. By Dr. W. P. Manton.—Although primary cancer of the gall-bladder and bile-ducts is rare, recent investigations go to show that it is not so uncommon as is generally supposed. As a rule, the onset of the condition is insidious; there are no symptoms developed at an early stage of the disease in either locality, with which we are at present acquainted, which will permit of a positive diagnosis. When such a diagnosis is possible, the disease has already advanced beyond the helpful intervention of surgery. Fever having been observed in so many other conditions of the liver and adjacent organs, is of little or no value as an aid to diagnosis. This same may be said of blood examinations. Emaciation is frequently absent, and the patient may remain in apparently good health until toward the termination of the disease. The absence of malignant disease elsewhere has no diagnostic significance. The only symptom which may, perhaps, prove of service in forming a provisional diagnosis of gall-

bladder and bile-duct malignancy seems to be of gastric origin. In two of the author's cases, and in many cases found recorded in the literature of the subject, disorder of the stomach preceded the local symptoms of cancer. Further investigation along this line is desirable, and all protracted disorders of the stomach which cannot be positively referred to other causes should be viewed with suspicion as a possible indication of beginning malignancy in the gall-bladder or bile-ducts.

The Heredity of Appendicitis. By Dr. F. Forcheimer.—The author contributes a valuable article on this subject, and expresses a just surprise at the fact that, only within the last five or six years has our especial attention been called to the occurrence of appendicular inflammation as the result of heredity or family influences.

Cleft Palate and its Relation to Speech. By Dr. G. Hudson Makuen.—The author points out that, in cases of cleft palate, in spite of all that can be done there always remains a greater or less space between the velum palati and the posterior pharyngeal wall, which space has the same effect upon the voice and speech as has a perforation of the palate. He suggests a few minor surgical operations for the purpose of increasing the available size of the velum and giving it greater freedom. Briefly they are as follows: 1. Separating the adhesions that often exist between the pillars of the palate on either side, and the remnant of tonsils. 2. Forcible stretching of the velum with the finger, after the division of some of the tense fibres of the palato-glossi and the palato-pharyngei muscles. 3. Training and developing the velum palati muscles by means of both direct and indirect voluntary exercises.

A Case of Endocarditis Developed during Typhoid Fever. By Dr. J. A. Scott.

The Efficacy of Quarantine and Fumigation in the Prevention of the Spread of Yellow Fever without Molesting the Mosquito. By Dr. Joseph Waldauer.—The author asserts that, although it has been proved that yellow fever is transmitted by the mosquito, yet there are other methods of conveyance which the chief experimenters have ignored, because the peculiar atmospheric condition and temperature necessary for the propagation of the germ were lacking at the time their experiments were conducted.

On the Agency of Parasitic Vermin and other Insect Pests in the Spread of Disease. By Dr. George Homan.

The Lane Lectures on the Social Aspects of Dermatology. By Malcolm Morris, F. R. C. S., Ed.

Haller and His Native Town. By Harvey Cushing.

Lancet, September 28, 1901.

The Diagnosis of Cancer of the Stomach. By Dr. J. C. Hemmeter.—In this article the author considers *seriatim* the various clinical methods employed for the detection and recognition of carcinoma of the stomach. The most important information from all the physical signs and

symptoms and from the chemical and microscopical investigations may be arranged in order of their diagnostic value as follows: 1. Chronic gastritis or nervous dyspepsia with progressive aggravation in spite of four weeks' proper treatment. 2. Progressive weakening of the peristaltic power. This can only be confused with the benign stenosis of the pylorus, but in the latter case there is, as a rule, a normal or excessive amount of hydrochloric acid. In malignant stenosis there is absence of hydrochloric acid and formation of lactic acid. The diagnosis between benign and malignant stenosis may be difficult at the beginning of the clinical observation of any case, but after from two to four weeks of observation it should present no difficulties. 3. Progressive diminution in the amount of free hydrochloric acid with steady loss of peristaltic power. 4. The presence of large numbers of atypical and asymmetrical mitoses after gastric curetting, together with characteristic histological changes in the peptic glands, their ducts being elongated and dilated, with free cells lying loose in the lumen of the gland. In this schema the diagnostic value of the Oppler-Boas bacilli tumor and lactic acid are not referred to as they are late signs. While the author favors exploratory laparotomy in early cases, yet the inevitable recurrence of cancer after operation for gastric malignant neoplasm shows that surgical operation cannot be the treatment of the future for such diseases. Gastric surgery can only bring symptomatic relief, and after a career boldly and brilliantly begun, has arrived at the height of its capability for technical development after twenty years, and now stands arrested before the natural boundaries of internal medicine, the fundamental pillars of pathology.

Syphilitic Affections of the Stomach. By Dr. W. S. Fenwick.—Syphilis may affect the stomach in three ways: (1) By the formation of gummata; (2) by the production of endarteritis; and (3), by exciting chronic inflammation of its mucous membrane. Of these, the latter variety is by far the most common, and is due either to embarrassment of the gastric circulation from disease of the liver or spleen, to lardaceous degeneration, to nephritis, or to the specific cachexia. It usually takes the form of ulceration. Two errors in diagnosis must be avoided: (1) A gastric ulcer is not due to syphilis, simply because the patient has had the disease at some time in his or her life; (2) Before diagnosing specific gastric irritation in a syphilitic subject, be sure that the symptoms do not arise from injudicious medication.

The general symptoms of syphilitic ulceration of the stomach are those of chronic ulceration from other causes. The great chief point of distinction is the intractability of the disease to ordinary methods of treatment, while its symptoms rapidly subside on the administration of anti-syphilitic remedies. A few days' trial of iodide of potassium will usually clear up any doubt, since, in ordinary cases of gastritis, this drug greatly increases the dyspeptic symptoms, while the contrary result is observed in the specific disorder. Absolute rest is essential and milk should form the staple diet for the first few weeks.

The Infectiousness of the Milk of Tuberculous Cows; the Bacteriological Diagnosis, and the Practical Value of Tuberculin for the Extermination of Tuberculosis among Cattle. By Dr. L. Rabinowitsch.—The extermination of bovine tuberculosis is practically impossible without the aid of tuberculin. Cows affected with tuberculosis of the udder and general tuberculosis must be exterminated, since their milk is, more than all other, to be regarded as infectious. The animals in which the clinical diagnosis can only be established by the aid of tuberculin should be separated from the healthy ones. The questions, whether they should be killed, and as to the proper time for doing so, will depend on the quicker or slower progress of the tuberculous disease. Combined with the clinical and bacteriological examinations, the tuberculin test furnishes us with the safest means of obtaining milk free from tubercle bacilli, as well as of rearing cattle free from tuberculosis.

A Case of Acute Double Pneumonia Treated with Oxygen; Recovery. By G. E. Richmond, M. B.—The author reports a case of acute double pneumonia, occurring in a man aged twenty-three years, in which the administration of oxygen seemed to have been the means of preventing his death. The oxygen administration was begun on the fourth day of the disease, and was given for ten minutes every four hours. The crisis of the disease occurred two days later, and the patient made a rapid recovery. The author holds that the oxygen prevented the further spread of the disease, and acted as a respiratory and cardiac stimulant.

A Résumé of Modern Views on Gastric Digestion. By Dr. H. F. Bellamy.—In obstinate cases of gastric hyperacidity almost immediate relief can be afforded by restoring the normal balance of acid and pepsin in the juice by the administration of a pepsin-forming substance. Thus the excess of hydrochloric acid can be utilized for the benefit of the organism. Such pepsinogenic substances are dextrin and Liebig's food, or dextrin and alcohol, and they are best given per rectum.

A Dilated Superficial Abdominal Vein with a Suggestive History. By Dr. T. Fisher.

The Prospect of Cure in Cancer. By Dr. H. Manders.

A Case of Pneumothorax Shown by the Röntgen Rays. By F. W. Martin, M. B.—The author reports a case of pneumothorax, in which the skiagraph of the chest showed very clearly the presence of air within the chest, and the position of the collapsed lung, diaphragm, etc. There was very positive pressure within the chest, as shown by the downward displacement of the diaphragm, a condition which could not be made out from the physical signs alone.

British Medical Journal, September 28, 1901.

Sixty-ninth Annual Meeting of the British Medical Association.

Section of Dermatology.

Discussion on the Treatment of Lupus Vulgaris and some other Diseases of the Skin by

Finsen's Light Method and X-rays. By M. Morris, F. R. C. S., Dr. Norman Walker, Dr. Sabouraud, and others.—All of those who took part in this discussion spoke favorably of Finsen's method of treatment of certain skin diseases. Mr. Morris has been treating cases in London by this method for the past eighteen months. Of 36 cases of lupus vulgaris, 8 were cured, and 9 were not benefited, while the remainder were still under treatment. The x-rays were found to be of great service in those cases where the disease was not easily accessible to the light rays. Accuracy of focus, and perpendicularity of the rays, were found to be of the first importance. The remedial effect of the light rays was directly proportionate to the intensity of the reaction. The length of time required was found to be one of the chief drawbacks to the method. Finsen's method is also of service in cases of rodent ulcer.

Dr. Sequeira stated that improvement had taken place in every case of lupus he had treated by Finsen's method. He had treated forty-five cases of rodent ulcer by the x-rays, and, in all, the ulcers had healed rapidly and huge cavities had filled up.

Discussion on Seborrhœa. By Dr. T. C. Fox, Dr. Sabouraud, and others.

The Action of Arsenic on the Skin. By H. G. Brooke, M. B.—The author describes the various eruptions observed during the recent epidemic of arsenical beer-poisoning in Manchester. The main action of the arsenic was mainly a stimulation of the growth and functions of the epithelium. The interpapillary pegs were very irregularly enlarged and prolonged downward, the prickle-cell layer increased, the granular layer always thickened, the stratum lucidum abnormally well marked, and the horny layer altered in character and unusually pronounced. Pigmentation was always most marked in the basal epithelial layers. In pronounced cases the stimulation was so great that the cells were unable to recover and atrophy set in. The papillæ flattened and the cells lost their position and special characters until the whole epithelial layer was represented by three or four rows of degenerate cells. The sebaceous glands were not affected except by general atrophy, their fatty contents rendering them immune to the action of the arsenic.

The Action of Arsenic on the Healthy Tissues of the Skin. By Dr. L. Roberts.—The effects of arsenical oxidation upon the healthy skin are as follows:

1. *Pigmentation.* The pigment is the normal melanin greatly increased in quantity, and it is developed within the germinal epithelial cells as a result of the arsenical stimulation.

2. *Hyperkeratinization.* Clinically, there is no more important sign of arsenical poisoning than hyperkeratosis. The skin feels like wet leather, tough and resistant.

3. *Desquamation.* This symptom is highly characteristic of chronic arsenical poisoning. It is universal, but is most pronounced on the chest and abdomen, and may be fine or very coarse.

4. *Atrophy.* This follows the initial hyper-

trophy, the first portions to disappear being the cones, and the last, the sebaceous glands.

5. *Fatty degeneration.* This is constantly to be observed, the change taking place in the horny layer and in the secretory portion of the sweat glands. The action of arsenic is initiated and determined by the tissues themselves; its effects are essentially of a nutritive order brought about by the action of active oxygen. These effects are beneficial when the oxidation is slow, and harmful when it is rapid; and the more highly organized the cell, the more readily does it feel and manifest the action of arsenic.

Epithelioma Supervening on Arsenical Keratosis. By Dr. H. R. Crocker and G. Pernet, M. R. C. S.

Notes on a Case of Purpura Hæmorrhagica Associated with General Tuberculosis. By Dr. E. Pratt.—The author reports an instance of this rare combination of affections, occurring in a Greek sailor, aged twenty-five years. The most marked signs were those of the purpura hæmorrhagica and the pyrexia, the general miliary tuberculosis being discovered only at the autopsy.

The Treatment of Advanced Lupus. By Dr. H. Snow.—The method of treatment advocated by the author consists in scraping away as thoroughly as possible the soft cell growth, and then, so soon as bleeding has ceased, applying to the raw surface lint soaked in linimentum iodi. The latter should be removed on the following morning, otherwise vesication is apt to ensue. Then an emollient dressing is substituted; after this, recurrence is most exceptional.

Multiple Disseminated Lupus Following Measles: Death from Tuberculous Meningitis. By A. Hall, M. B.

Section of Laryngology and Otology.

Discussion on the Treatment of Nasal Obstruction from Intranasal Causes other than Mucous Polypus. By F. Marsh, F. R. C. S., and others.

Practical Points in the Treatment of Nasal Suppuration. By J. Mackie, L. R. C. P.

A Discussion on the Local Treatment of Tuberculosis of the Larynx. By J. M. Hunt, M. B., and others.

The Treatment of Laryngeal Growths in Children. By Dr. G. H. Mackenzie.

Notes on a Case of Recurrent Papillomata of the Larynx in an Adult Treated Locally by Formalin. By Dr. A. Bronner.

Multiple Papillomata of the Larynx. By N. C. Haring, M. B.

Notes of Two Cases in which Chronic Hypertrophic Laryngitis Preceded Papillomata; Cure of One Case by Endolaryngeal Operation. By Dr. W. Lamb.

Morcellement of the Tonsils. By Dr. L. H. Pegler.

A Case of Mastoid Antral, and Two Cases of Frontal Sinus, Suppuration. By Dr. H. Tilley.

Cases of Aural Disease. By G. P. Field, M. R. C. S.

Some Details in Eustachian Catheterization. By Dr. J. D. Grant.

Explanation of Appearances in some Cases of Acute Lacunar Tonsillitis which Simulated Excavating Ulcers. By Dr. J. D. Grant.

Hypertrophy of the Anterior Lip of the Hiatus Semilunaris. By Dr. J. D. Grant.

A Note on the Morbid Conditions Simulating Adenoids. By Dr. W. Wingrave.—The conditions which simulate adenoids in children are: 1. Diminutive choanæ and nostrils. 2. Low pharyngeal vault in ricketty children. 3. Paresis of soft palate and pharyngeal muscles. 4. Prominent crest of the vomer or prolongation backward of the nasal septum. 5. Forward projection of the vertebral column. 6. Retropharyngeal abscess. 7. Undue prominence of the soft parts covering the internal pterygoid plate, and the tuberosity of the palate. 8. Obstruction of the post-nasal space by webs and neoplasms.

On the Removal of Tonsils in Adults. By Dr. H. L. Lack.

Some Practical Points in Connection with the Technique of Skin Grafting in Mastoid Operations. By Dr. W. Milligan.

On So-called Sclerosis of the Middle Ear, Its Causation and Treatment. By M. Collier, F. R. C. S.—The author contends that a very large percentage of cases of so-called sclerosis, or adhesive disease, of the middle ear area concomitant and direct result of ordinary nasal catarrh from simple mechanical obstruction to the Eustachian tube, and that the early recognition and treatment of these cases by restoring this condition and by daily manipulations and movements of the drumhead often results in a satisfactory and permanent restoration of hearing.

Ethyl Chloride as a General Anæsthetic in Nasal Surgery. By J. Mackie, L. R. C. P.

Difficulties and Insufficiency of the Commonly-accepted Theory of Adenoid Deafness. By Dr. D. McKeown.

A Simple and Portable Spray Pump for Disinfection. By Dr. W. L. Mackenzie.

Berliner klinische Wochenschrift, September 2, 1901.

Relation of Bovine and Human Tuberculosis.

Dr. P. Baumgarten says that while he shares in a large measure the views of Koch, he is not in favor of relinquishing or restricting the measures of safety relating to the rigid investigation of the meat and milk of tuberculous cattle. The question, he says, is by no means yet decided.

Surgical Treatment of Peritonitis. By Professor F. Gillet. (Continued article.)

Significance of Basophilic Nuclei and Polychromatophilic Degeneration in the Erythrocytes. By Dr. George Loxton.

Bilateral Necrosis of the Labyrinth. By Dr. J. Kerzfeld.

Tubal Rupture and Tubal Abortion.—Dr. Edmund Falk says that there is no certain sign of differentiation between tubal rupture and tubal abortion. Some cases of the former assume the clinical picture of the slowly advancing hæmorrhage of the latter; and, *vice versa*, some cases of abortion run the clinical course of a rapid and threatening rupture. This is due to the fact, that the main symptom of an interruption of an extra-uterine pregnancy, is that of an internal hæmorrhage, which occurs in both instances, and which may modify the clinical picture according as the bleeding is severe or moderate, and depending upon the condition of the patient. Examination is not always decisive, and the correct diagnosis is usually made only when the abdomen is opened, a procedure which is indicated in either event and always in the face of an internal abdominal hæmorrhage.

Centralblatt für Chirurgie, September 7, 1901.

Gold Wire Sutures in Hernia Operations.—Dr. G. de Francisco says that, in fifty cases, primary union was secured in herniotomies when gold wire sutures were employed. The wire remains permanently in the tissues and appears to provoke no irritation. Several retractors of new design are also described, the purpose of which is to avoid as much as possible the danger of infection.

September 14, 1901.

Surgical Treatment of Thrombosed Varices of the Leg.—Dr. W. Kramer advises the longitudinal incision of the thrombosed vessel through its whole length under local anæsthesia, and carefully cleaning out the clot. In over fifty cases, no evil results were seen, and in some instances no other treatment had been of any avail.

Centralblatt für Gynäkologie, September 14, 1901.

Intra-uterine Treatment.—By Dr. Johannes Füh.

Cocaine in Obstetrics.—Dr. Westphalen reports the successful use of cocaine suppositories (each containing four tenths of a grain), for the reflex inhibition of cramp-like pains during labor. The abdominal contractions were never interfered with. The cocaine seems to regulate the pains and to free them from the cramp-like character which manifested itself in the cases which were subjected to trial. Diminution of the actual pain was never found.

Pathology and Treatment of the Icterus of Pregnancy.—Dr. Miclescu, in a review of the subject, says that the treatment of the grave icterus of pregnancy can be summed up in the words: "Artificial termination of the pregnancy." He reports in detail a case in which recovery followed this measure.

Riforma medica, August 5, 1901.

The Latest Researches on the Poison of Tænia. By Dr. Dante Calamida. In this preliminary note the author gives an account of his attempts to prepare the poison of tapeworm. He obtained some tæniæ (*T. Cocomerina* and *T. Cœnurus*) from dogs that had been killed expressly for this purpose, washed them carefully in distilled water and in salt solution, powdered them with broken glass diluted with physiological salt solution, filtered through a Berkefeld filter, and concentrated the extract on the

water-bath, at 30° C. He tested this extract by various chemical reactions, which he enumerates in detail. All the precipitates obtained with the various reagents were amorphous. Injections into rabbits of solutions of this precipitate, made with dialyzed magnesium sulphate and dissolved in a dilute saline solution, produced grave symptoms of poisoning, such as an abrupt fall of temperature, paresis, especially of the posterior extremities, clonic and tonic convulsions, etc. These symptoms were less pronounced after injections of the precipitate dissolved in ammonium sulphate solutions. The chemical nature of the precipitate is now under investigation. The extract was also found to have strong hæmolytic powers, which were more rapid in the blood of the guinea-pig than in that of the rabbit. Its chemiotactic power was especially marked toward eosinophile cells. Injections of the extract into the liver of rabbits and guinea-pigs produced after twenty-four hours a profound degeneration of the hepatic cells, and after forty-eight hours the liver assumed a "nutmeg" appearance. On microscopic examination the fatty and granular degeneration was found to be diffused throughout the organ. If the blood is examined from time to time after the injection, an intense leucocytosis with predominance of eosinophile cells will be observed after six or eight hours, and if death does not supervene before, many nucleated red cells will be found in the blood after twenty-four hours. The author concludes that there is a specific poison to which the pathologic action of tapeworm is due, and that this poison is directly produced by these parasites themselves.

Gazzetta degli Ospedali e delle Cliniche, August 4, 1901.

On the Pathogenesis of the various Clinical Forms of Lumbricoid Helminthiasis. By Dr. G. B. Girotti.—The author is the communal physician in a district where round worms are very frequent in children. He attributes this frequency to the fact that the diet of the inhabitants consists principally of vegetables in a raw, imperfectly washed state, in the form of salads, and because children are allowed to remain, neglected, on the street during the day.

The author's experience leads him to believe that lumbricoid worms not only produce a chemical, or toxic, effect upon the host, but also act mechanically and reflexly. The ascarides injure the intestinal mucous membrane and act as mechanical stimuli to the nerve endings. In addition to the intoxication resulting from the absorption of intestinal poisons and toxins developed by the ascarides themselves, there result an increased excitability, and a series of reflex disturbances in the central nervous system. It is difficult to separate the symptoms due to the toxæmia from those due to the nerve-irritation. It is well known how susceptible the reflex mechanisms are to excitement in childhood, and how slight disturbances in the intestines may cause general convulsions. There are cases of ascarides in which the patient is so profoundly poisoned, that his condition resembles the typhoid state. The author reports such a case, in which sixty worms were passed in response to calomel, but the toxæmia persisted and the child (three years old) died on the twentieth day of the disease. In another case the reflex symptoms predominated, and the child (four years old)

died after four days during which he had suffered from repeated eclamptic attacks. The autopsy showed ascarides in the upper part of the œsophagus, in the stomach, and the intestines. Ascarides were seen to issue from the mouth and nose of this patient immediately after death, which resulted from asphyxia, as a consequence of the blocking of the larynx by the worms. In a third case, a girl aged three years, was found suffering from acute laryngeal stenosis. A few days before, the child had complained of scratching in the throat, and had had some cough. Tracheotomy was refused and the child died after six hours. A complete autopsy was not permitted, but the child's larynx was opened and a worm of medium size was found to occupy the vocal cleft and the upper part of the trachea, while about ten worms were found in the œsophagus at the level of the larynx. In two other cases there were bronchitis and pneumonia respectively, which were cured quickly after the expulsion of ascarides. The author attributes these lung-lesions to reflex stimuli to the vasomotor nerves of the lungs, which resulted mechanically from the presence of the ascarides. These reflex stimuli caused vasomotor disturbances and thus prepared a favorable soil for the pneumococcus.

Concerning a Recent Article upon the Diuretic Action of Urea. By Dr. Giovanni Setti.—The author calls attention to the fact that the conclusions reached by Carlo Raimondi and A. Moscucchi, in a recent article on the diuretic action of urea coincided with his own views, published in 1897.

Contribution to the Statistics of Tracheotomy in the Laryngeal Stenosis of Croup. By Dr. Silvio Rolando.—The Genoese surgeon who presents these statistics does not mention intubation, and does not seem to have practised this method. His report includes the experiences of a year in the Genoese hospital. During that period he saw ten children with laryngeal diphtheria (styled croup here) who did not require any operative treatment, and who recovered with the use of serum. In five other cases, in spite of the serum, the stenosis was so severe that tracheotomy was necessary. All these children were in desperate condition before the operation. Of the five, three recovered in about a month in each instance, and two died, the first of bronchopneumonia in eight days, the other of heart failure an hour after the operation. Bose's method was used in performing the tracheotomies. In a sixth case recently operated on there was paralysis of the muscles of deglutition three days after the operation. In the three favorable cases there was a distinct and rapid fall of temperature after the operation. The author urges the administration of serum as soon as possible after tracheotomy.

A Hunterotome Forceps (for the Abortion of Syphilis). By Dr. Gaetano Delogu.—The author, who is a surgeon in the Italian army, is convinced that syphilis can be aborted by surgical treatment of the initial lesion. He claims to have practised this method of treatment for twelve years, and advocates its general adoption in the army. Since 1897 he has operated on fifteen cases, in thirteen of which syphilis has been successfully aborted, so that no subsequent manifestations have been observed, though the patients have been watched for two

years. In one case, operated on by his assistant, Dr. Barone, an equally satisfactory result was obtained. In two cases, the author failed to abort the disease, but these were instances of more advanced infection with incipient secondaries. The operation, however, secured a rapid healing of the old chancres. [We regret that the fifteen histories are not given in detail by the author.]

The title of the article refers to an instrument which the author has devised in order to make possible a rapid, convenient, and comparatively bloodless and painless, performance of the operation. For this purpose he has constructed a punch-forceps, somewhat like a perforator or punch used for paper or cardboard. The jaws consist of a pair of stout rings whose edges face each other and form the cutting surfaces. The rings fit into each other, one being very slightly larger than the other. The cutting edges of the punch are so arranged that lesions of various sizes may be conveniently excised by using one of three cutting positions. In the rings of the jaws, around the cutting edges, there are a number of holes for the passage of sutures. If the lesion is situated in a place where the tissues cannot be easily depressed, a straight needle with a silk suture is passed under it and the suture drawn through for a short distance. The suture is then drawn through the branches of the punch and the tissue is drawn up into the instrument. Then the tissues around the lesion are slightly incised with the instrument. With the punch closed, but not cutting, the surgeon passes the necessary number of silk sutures through the foramina in the punch and through the lesion. The jaws are then closed vigorously, taking away all the diseased tissue and some healthy parts surrounding it; the lesion is removed instantaneously. The sutures are tied and the bleeding, which is insignificant, is arrested. The whole manœuvre takes considerably less time to execute than to describe.

Monassei's Method of Epilation in Trichiasis and Distichiasis. By Dr. Ugo Lippi.—The author recommends Monassei's method of electrolysis for the irregularly growing eyelashes in trichiasis and distichiasis. For this purpose he introduces a fine needle into the hair follicle, the needle being attached to one end of a circuit from three, four, or five Leclanché cells, the other, larger, electrode being held in the patient's hand. He has obtained radical cures by this method.

Vratch, August 18 (August 30, New Style), 1901.

"Röntgenoscopy" in the Diagnosis and Treatment of Fractures. By Dr. G. I. Turner.—The author considers the advantages and drawbacks of the Röntgen rays in fractures. While he admits that Röntgen's invention has been of great benefit to the surgeon who wishes to make accurate diagnoses in cases of fractures, and who wants to control his treatment by observation with the x-rays, he emphasizes the fact that this new method has certain disadvantages. If, for example, a surgeon does not possess the apparatus, and is not acquainted with the technics of the Röntgen photography, the patient nowadays can go to an establishment where these photographs are made as a matter of business, and can

thus, with his own photographs, control the diagnosis and secure evidence which may be used in case the result is not satisfactory. The interpretation of skiagraphs, of course, is not always a simple matter, and the layman may thus make grave errors. The author points out that this very question was brought up last year before the American Surgical Association, and that a commission was appointed to investigate the medico-legal status of the skiagraph in cases of fractures. This commission found that a skiagraph may suggest the presence of a fracture where there is none. It must never be forgotten that the skiagraph represents not a picture of the object, but only its shadow. It happens, also, that distinct clinical evidences of a fracture do not find any confirmation in a skiagraph. The exact apposition of the fragments, according to the rules of the art of cabinet-making, is usually impossible.

Ankylosing Inflammation of the Spine and the Large Joints. By Dr. L. M. Poussen.—The author concludes from a clinical and pathological study of the subject: (1) That there are two forms of ankylosis of the spine—namely, that of Bechterieff, styled *kyphose hérédito-traumatique*, and that of Strümpell-Marie, styled *spondylite rhizomélitique*, or spondylitis deformans. (2) The cause of the latter form is not yet known with certainty, but probably infection plays a prominent rôle in its aetiology. (3) *Spondylite rhizomélitique* is identical with the condition formerly described as arthritis deformans. The author reports one case which must be classed as belonging to the Strümpell-Marie type of spondylitis.

The Treatment of Lupus with Blue Electric Light. By Dr. A. V. Minine.—The disadvantages of Finsen's method of treating lupus by means of blue light rays are the painfulness and slowness of this process, and its unsuitability for lesions of mucous membranes. The author suggests the use of a blue electric incandescent bulb in lupus. The inexpensiveness and simplicity of the apparatus and the rapidity of the effects are the great advantages of this method. The following precautions must, however, be observed: The lamp must be held so that its rays fall at right angles to the illuminated place, at a distance of about sixteen inches. The spot is illuminated for from ten to fifteen minutes daily, or every other day for from twenty to thirty minutes. If the itching is intense, the patient must be given a rest for forty-eight hours. In some cases we may try at night a compress of hot boric-acid solution, one per cent., with an equal part of alcohol, and, in the daytime, boric acid and vaseline. The skin should be washed with pure alcohol, but if it is very sensitive, the alcohol may be diluted with a one-per-cent. solution of boric acid. The laryngoscope may be employed to reflect rays into the larynx, etc. Tubercular syphilides, which are often mistaken for lupus, are also amenable to this treatment.

Medical Report for 1900 of the Municipal Lying-in Asylums of St. Petersburg. By Dr. E. L. Pouschkina.—A statistical report on the work of these institutions.

Letters to the Editor.

A CASE OF TRIONAL POISONING.

240 WEST FORTY-SECOND STREET,
NEW YORK, September 22, 1901.

To the Editor of the New York Medical Journal:

SIR: The patient was a married woman, thirty-five years old, suffering from neurasthenia. For the treatment of the persistent insomnia trional was ordered as follows: Ten grains at 8 p. m., to be repeated at 10 p. m. This was ineffectual. A saline was administered in the morning. The following evening twenty grains were administered at 8 o'clock, to be repeated at 10 if necessary. The dose was repeated. At 4 a. m. the nurse reported much restlessness, temperature 99.4° F., pulse 110. At 6 a. m. the patient was very excited and complained of "people whispering" about her. Temperature 99°, pulse 120. At 8 a. m. the nurse summoned me and I found the patient with her face flushed, respirations rapid, skin moist, temperature 97.2°, pulse 120. The bowels moved involuntarily. The patient continued to get out of bed and was delirious.

Hot water bottles were applied to the extremities, hot whiskey was given by the mouth, and 1/20 of a grain of strychnine sulphate was administered hypodermically. In about twenty minutes the patient began to perspire profusely and became more quiet, with the temperature 98.8°, pulse 108, respirations 24. The bowels moved again involuntarily and the patient fell into a quiet sleep. At 10.30 a. m. the pulse was 100 and fairly full, the temperature 98.6°, the respiration 20, and the patient was quiet, but complaining of "feeling sleepy." She slept all day and nearly all the following night. No other after-effects were noted.

An examination of the urine passed at the time of collapse showed nothing besides a slight reddish tinge, *no blood corpuscles*, no casts, albumin about 0.1 per cent., specific gravity 1.030, reaction slightly acid.

Twelve hours later a specimen was examined, showing no albumin; acid reaction, specific gravity 1.020.

I have not been able to find any reported cases of trional poisoning in the literature I have at hand. I merely report this because of the ready response to treatment, which was entirely symptomatic.

EDWARD M. THOMPSON, M. D.

YOHIMBINE AS AN APHRODISIAC.

LAHORE, INDIA, July 15, 1901.

To the Editor of the New York Medical Journal:

SIR: As yohimbine has been but little used at present outside of Germany, it may be of value to note its effect in three cases in which I have had occasion to employ it for neurasthenic impotence.

In one case, that of a young gentleman who consulted me, the effect was marked. He had been married for over two years and had failed during that time to consummate the marriage act, partly through nervousness and ignorance and partly through the erection being exceedingly transient. He was anæmic and out of health and was put on iron and tonic treatment with great general improve-

ment, but no increased ability for intercourse resulted. For eighteen months various drugs had been given a trial in large and continued doses. Strychnine, caffeine, liquid extract of damiana, tincture of cantharides, tincture of capsicum, etc., had all appeared useless. I then procured some yohimbine (Merck's) and administered 10 milligrammes three times daily. By the evening of the first day, after three doses had been taken, there was very marked increase of desire and the act was successfully performed.

This was the more interesting as, in order to avoid any error in estimating the effect of the drug, I had stopped the previous medicines for some time, and put the patient on a course of potassium bromide, and then allowed an interval to elapse before beginning the use of the yohimbine.

That it was not merely due to natural increase after the physiological rest given by such treatment by bromides may, I think, be proved by the fact that, though I had gone through a similar procedure several times during the preceding eighteen months, there had been no effect on previous occasions.

The two other cases were almost identical with the above-described one, except that the impotence had been of briefer duration and responded to doses of half the amount (5 milligrammes).

The only disagreeable effects I have noted in these cases are slight headache and a feeling of nausea, which occurred about an hour after the administration and lasted an hour or two. On one occasion there was mild gastric discomfort lasting almost all one day.

The German physicians who have employed yohimbine recommend it in doses from 5 to 15 milligrammes. Some have recorded the effects as powerful, but comparatively transient. Even a comparatively transient stimulus lasting a few weeks has often proved sufficient in nervous cases, however, as they afterward go on well without any internal medication.

J. RUTTER WILLIAMSON.

VAN ARSDALE'S TREATMENT OF COLLES'S FRACTURE.

805 MADISON AVENUE,
NEW YORK, September 28, 1901.

To the Editor of the New York Medical Journal:

SIR: In my article entitled *The Late Dr. Van Arsdale's Simple Dressing for Fracture of the Lower End of the Radius*, which appeared in your journal for August 24, 1901, from Dr. Gallant's letter, it would appear that I failed to make entirely plain that which gives this dressing its value. Extension of the lower end of the radius after these fractures is best obtained by abduction of the hand, and it is this principle which is carried out in the various forms of anterior splint dressings for Colles's fracture. Dr. Gallant has given a very good fac simile of Roser's dorsal splint dressing as pictured by Albert. But neither from the picture nor from the context of his reference did I find that Roser secured more than flexion of the hand. According to the authority of one of Dr. Gallant's contemporaries with Dr. Van Arsdale, that surgeon did make the loop tight enough to cause abduction of the hand. However,

the thought worth the memory in this matter is to know how to construct such a valuable dressing for Colles's fracture from a straight board splint and a roller bandage.

FREDERIC GRIFFITH, M. D.

Book Notices.

Essentials of the Diseases of Children. Arranged in the Form of Questions and Answers prepared especially for Students of Medicine. By WILLIAM M. POWELL, M. D. Third Edition, thoroughly Revised by ALFRED HAND, Jr., A. B., M. D., Dispensary Physician and Pathologist to the Children's Hospital, Philadelphia, etc. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. to 259. [Price, \$1.]

This volume is No. 15 of Saunders's Question Compends and is designed for students of medicine. It is arranged in the form of question and answer. The work has been well done, the questions are well put, and the statements are clear, definite, but necessarily brief. It will be found a most useful book for students who are beginning the study of pædiatrics.

Royat. Indications thérapeutiques méthodiquement classées. Paris: J. B. Baillière et fils, 1901. Pp. 5 to 96.

The first part of this brochure describes the geographical relations and meteorological conditions of Royat, in Auvergne (Puy-de-Dôme), and the sources and character of its thermal waters. The second part presents the results of the author's observations during ten years of practice at this resort—the indications and contraindications for treatment at Royat in the various types of diabetes (bronchitis, anæmia, dyspepsia, articular gout, other gouty conditions, eczema, asthma, migraine, neurasthenia, the disorders of the menopause, etc.

Das Asthma, sein Wesen und seine Behandlung, auf grund zwei und zwanzig-jähriger Erfahrungen und Forschungen. Dargestellt von Dr. W. BRÜGELMANN, Anstaltarzt in Südende bei Berlin. Wiesbaden: J. F. Bergmann, 1901. Pp. xvii-219.

Since 1895 this monograph has gone through four editions. It has received the honor of a translation into Russian, and is at the present time in preparation for a similar honor in English. Some changes are manifest in the last edition. They relate chiefly to an amplification of the author's views on the nervous origin of the disease, with additional clinical experiences supporting them. The therapeutics of this symptom-complex receives careful consideration.

Transactions of the American Pædiatric Society. Twelfth Session, held in Washington, May 1, 2, and 3, 1900. Volume XII.

This volume contains valuable monographs and articles upon various subjects connected with pædiatrics. Among the most worthy are the president's address, by Henry Koplik, M. D., upon the ambulatory and hospital management of the gastro-intestinal derangements of infancy in the summer months

among the poor of large cities, articles on typhoid fever by Dr. Blackader and Dr. Seibert, studies upon the blood of infancy and childhood, by Dr. Stengel and Dr. White, and hæmorrhage into the suprarenal capsule in still-born children and infants, by Dr. S. McC. Hamill. The volume is well bound and printed and is a creditable addition to pædiatric literature.

The Practice of Charity, Individual, Associated, and Organized. By EDWARD THOMAS DEVINE, Ph. D. (Penna.), General Secretary of the Charity Organization Society of the City of New York. New York: Lentilhon & Company, 1901. Pp. x-186.

While it seems scarcely necessary at the present time to urge the advantages of organization work in the distribution of charity, Mr. Devine has done well to emphasize the underlying principles in this little book. No one is better able than he to have written such a book, and this is proved by its interesting character. It is full of meat, and can only serve to strengthen among its readers a perception of the value of organized charity.

Points of Practical Interest in Gynæcology. By H. MACNAUGHTON JONES, M. D., M. Ch., Q. U. I., Master of Obstetrics (Honoris causa), Royal University of Ireland, etc. With 12 Plates. New York: William Wood & Company, 1901. Pp. ix-124.

Dr. Jones has collected into book form a number of practical papers previously printed in periodical literature. He advocates examination under anæsthesia for doubtful cases and for the avoidance of otherwise probable errors in diagnosis. He favors the rest cure in some forms of menstrual disturbance. The early removal, when possible, of myomatous growths is insisted upon. The operative treatment of the insane is very sanely discussed; when a causal relationship can be established between the sexual disorder and the mental disturbance, and when the pelvic disorder aggravates the insanity, operative intervention is in every sense called for. This interesting volume closes with some clinical reports of more than usual importance. It will repay reading.

Principes du diagnostic gynécologique. Par le Docteur G. FRAISSE. Livre I. Avec figures dans le texte. Paris: Félix Alcan, 1901. Pp. iv-348.

In this first instalment of a new work in gynæcology the author devotes almost the entire volume to the methods of examination in this specialty. In his discourse he points out the means of discovering anatomical lesions in the pelvis, such as the displacements of the uterus and the presence of tumors. Palpation of the various organs is carefully described, but we think the author somewhat too enthusiastic in the universal palpability of the normal ovary. He warns against the too careless use of the sound and devotes considerable space to its correct employment and its abuse. Curetting and the operations upon the cervix end the volume. The illustrations are few but clear.

How to Cook for the Sick and Convalescent. Arranged for the Physician, Trained Nurse, and Home Use. By HELENA V. SACHSE, Graduate of the Philadelphia Cooking School. Philadelphia: J. B. Lippincott Company, 1901. Pp. xvi-7 to 239.

This handbook contains numerous recipes for the preparation of invalid foods, arranged according to their composition. The directions are very explicit, as well for making the dishes appetizing and palatable as for rendering them most digestible. Brief chapters are devoted to the preparation of milk for adults and for infants, to the preparation of various drinks, and to peptonization.

Die periodischen Geistesstörungen. Eine klinische Studie. Von Dr. ALEXANDER PILCZ, Assistant der k. k. I. psychiatrischen Universitätsklinik in Wien. Mit 57 Curven im Text. Jena: Gustav Fischer, 1901. Pp. vi-210.

Periodicity in mental affections is so prominent, and in many so typical, that the consideration of it in regard to the various mental diseases which it characterizes is extremely useful. Circular insanity, periodical mania, melancholia, amentia, and paranoia, periodical impulses, such as dipsomania, and periodical psychoses following the menstrual function, all come in for consideration in this class. Some, like mania, are extremely common; others, like amentia, are rare. All are fraught with great interest and importance for psychiatry.

In the present volume the author has made a thorough and careful study of these conditions and given good descriptions of each of them. He has also described in detail the physical findings in the various mental disturbances. This very excellent monograph terminates with a comprehensive bibliography.

A Manual of Diseases of the Nose and Throat. By CORNELIUS GODFREY COAKLEY, A. M., M. D., Clinical Professor of Laryngology in the University and Bellevue Hospital Medical College, etc. Second Edition, Revised and Enlarged. Illustrated with 103 Engravings and 4 Colored Plates. New York and Philadelphia: Lea Brothers & Company, 1901. Pp. 3 to 566.

The first edition of this manual was favorably noticed in this journal some two years ago. The appearance of a second in this short time proves that there has been a need for such a work, characterized as it is by a clearness of therapeutical suggestion which we consider the strongest point of the book. In the present edition each article has been carefully revised and brought up to date. The number of illustrations has been increased and a new chapter added on The Affections of the Upper Respiratory Tract in the Infectious Diseases.

BOOKS, ETC., RECEIVED.

A Text-book of Bacteriology. By George M. Sternberg, M. D., LL.D., Surgeon-General U. S. Army, Ex-President of the American Medical Association and of the American Public Health Association; Honorary Member of the Epidemiological Society of London, of the Royal Academy of Medicine of Rome, of the Academy of Medicine of Rio de Janeiro, of the Société Française D'Hygiène, etc., etc. Illustrated by Heliotype and Chromo-Lithographic Plates

and Two Hundred Engravings. Second Revised Edition. New York: William Wood and Company, 1901.

A Practical Treatise on Diseases of the Skin. By John V. Shoemaker, M. D., LL.D., Professor of Skin and Venereal Diseases in the Medico-Chirurgical College and Hospital of Philadelphia, Physician to the Philadelphia Hospital for Diseases of the Skin, Member of the American Medical Association of the Pennsylvania and Minnesota State Medical Societies of the American Academy of Medicine, and of the British Medical Association, Fellow of the Medical Society of London. Fourth Edition, Revised and Enlarged with Chromogravure Plates and other Illustrations. New York: D. Appleton and Company, 1901.

The Century Book for Mothers. A Practical Guide in the Rearing of Healthy Children. By Leroy Milton Yale, M. D., formerly Lecturer on the Diseases of Children at Bellevue Hospital Medical College, New York, and Gustav Pollak, Editor of "Babyhood." New York: The Century Company, 1901.

Circumstance. By S. Weir Mitchell, M. D., LL.D. Harvard and Edinburgh. New York: The Century Company, 1901.

New Inventions.

THREE FORMS OF PRESSURE-FORCEPS THAT ARE USEFUL IN OPERATIONS.

By J. S. WIGHT, M. D.,

BROOKLYN,

PROFESSOR OF OPERATIVE AND CLINICAL SURGERY AT THE LONG
ISLAND COLLEGE HOSPITAL.

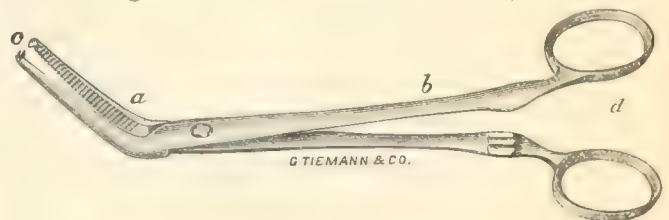
No. 1 is a tenaculum forceps, about six inches in length, with jaws curved from the lock to the end. At *c* are seen the double claws for laying hold of the tissues that are bleeding. This instrument can be used for a *retractor*—one that will hold safely.



No. 1.

It can seize a bleeding surface of considerable extent, in order to facilitate and hasten the steps of an operation. This instrument makes a good sponge-holder.

No. 2 is an angular hæmostat with mouse-teeth at the end of the jaws. The instrument can clamp a bleeding vessel or surface in such a way as to be

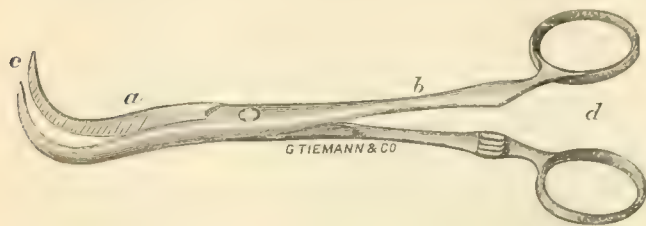


No. 2.

no obstruction to the work of the surgeon. The ends of the jaws are made quite small, and so occupy but little space. They are thus more convenient than jaws with blunt ends.

No. 3 is a hæmostat with curved jaws that end in fine points, being somewhat conical. They are com-

petent to perform fine work, and will be out of the way, like No. 2, after clamping a bleeding vessel or surface. These points can carry a ligature under an artery or vein or under any structure for the purpose



No. 3.

of ligation. They can transfix the tissue, and the jaws can be opened, when the ligature can be seized and drawn through for the purpose of tying. These instruments are made by George Tiemann & Co., New York.

Miscellany.

The Hospitals of Cuba.—Dr. Francis J. Shepherd (*Montreal Medical Journal*, August), who accompanied Sir William Van Horne on a recent trip to Cuba, has much of interest to say in Medical Notes of a Trip to Cuba. He found Santiago "to be quite a model town owing to the wise rule of General Wood. The town is an example to all towns in this or other countries, for, from being the pest-hole of the West Indies, it has become a sanatorium." Yellow fever, he says, has been entirely abolished, no cases at that time having occurred for over eighteen months.

Concerning the hospitals, he says that Santiago is situated at the foot of a beautiful bay and encircled by high hills (2,000 to 3,000 feet). There is a lower and an upper part of the town; in the upper part on a high ridge is situated the General Hospital containing 300 beds, under the charge of Dr. Castillo and his assistants. Dr. Castillo is a brother of the governor of Santiago Province and was a prominent man during the revolution and did much for the cause of liberty in Cuba. He is a man of remarkably fine presence and of brilliant abilities. He was educated in the United States and for a time was a surgeon in the American navy and accompanied one of the Search Expeditions to the North Pole as surgeon. When the Americans took Santiago he was with them, and on the epidemic of typhoid and yellow fever breaking out, this hospital, which had been a Spanish military hospital, was made use of. But as it was thought to be so infected with yellow fever as to be dangerous to Americans it was handed over by General Wood to Dr. Castillo to be used as a general hospital for natives who have practically all negro blood in their veins, and hence are immune to yellow fever. The place is arranged in large pavilions round a central square containing beautiful trees and flowering shrubs. In this part of the country all the buildings are of one story and this hospital is no exception to the rule; there are no problems of ventilation and heating to wrestle with, everything is built for summer. The hospital is clean and well managed and much good work is done. Dr. Castillo has collected

money enough to build a steam laundry and expects to light the place with electricity when he gets his plant for the laundry. He has also nearly completed a very good children's hospital, the money for which he himself has collected.

Dr. Shepherd visited the Leper Hospital in Havana and was most interested therein. It is called Casa Hospital de San Lazaro, and was founded in 1681 by Don Pedro Alegre. The present building and foundation dates from 1823 and, although it gets grants from the government and the city, still it is chiefly supported by bequests and donations. As one goes into the front doorway one finds oneself in the portico of a large church. This part is free to the public. On entering the church one sees, on each side of the chancel, transepts separated from the church by a high iron railing in which the lepers sit and attend service and also at the same time can see their friends who come to the church. The women are on one side and the men on the other. The hospital, the pavilions of which are around a large court, contains 100 patients in all stages of the disease. The ones upstairs are the far advanced cases and confined to their beds, helpless, blind and maimed people, whose sad state makes one shudder to see and whose only hope is a speedy death. The corridors on the ground floor are peopled by lepers who can move about; they eat in a common dining room and seem moderately happy. Dr. Shepherd saw many of the comparatively early cases, chiefly of the anæsthetic tubercular variety. The medical head of the hospital, Dr. Manuel Alfonzo, he did not see, but everything seemed in perfect order and very clean. The nursing department is in charge of a community of nuns who also look after the feeding of patients and dispensing. He was taken out by the Mother Superior and a Sister, the latter a charming woman, bright and talkative, hailing from Limerick. She told him that up to the time the Americans came she had not spoken English for twenty years, and had almost forgotten how to speak it; she had, however, preserved intact a very rich Irish brogue which was delightful to hear in Cuba. She informed him that, since the nuns had charge, not one of them had ever contracted leprosy nor had any of the assistants, although they had been in charge for over seventy-five years. In her experience several cases had been discharged cured, Chaulmoogra oil being the great remedy.

In Havana, one large public hospital in the outskirts is being remodelled and a considerable amount of money is being spent by the government to make the wards and equipment the most modern. This includes a steam laundry, an electric light plant, and a most modern up-to-date operating room. The nursing is in charge of American ladies who are endeavoring to train Cuban girls as nurses. As the hospital was undergoing extensive alterations, Dr. Shepherd did not see it under very favorable auspices, but what he saw impressed him greatly.

There is also another hospital, No. 1, which was occupied by Spanish soldiers during the war. It consists of a number of detached wooden pavilions connected by galleries. It can be made to accommodate 3,000 patients. American nurses reign here also and everything was clean and in perfect order. The operating room is modern, especially as regards

gynæcology. The Yellow Fever Hospital he did not visit, but he visited two private Spanish hospitals, one conducted by the Asociación de Dependientes del Comercio de la Habana. This society has a magnificent hospital in beautiful grounds called the Quinta de Salud de la Purísima Concepción. The hospital consists of separate buildings, a large administration building, a large building containing a complete hydropathic establishment, hot and cold water in every form, and hot air and steam baths with all kinds of douches, which are managed by the director from a kind of pulpit; separate buildings for men and women, and a very fine new operating theatre. This society is very wealthy and has been in existence for years. It started first as a cottage hospital, as its name "Quinta" implies, and soon it grew larger and larger until it reached its present size. Each member pays \$1.50 a month, or \$18 a year, and as there are 13,000 members, their income is about \$234,000 a year. They have a surgeon-in-chief and physician-in-chief, who are each paid \$3,000 or \$4,000 a year, and their assistants in proportion. Each member of the association is entitled to a private ward and free medical and surgical attendance when ill. He can have his own doctor in preference to the regular surgeon or physician of the establishment. He can recommend any one to this hospital, to one bed. Although there are some 200 beds, when Dr. Shepherd visited the place there were only 50 patients actually being treated.

He visited another similar institution kept up entirely by natives of Asturias in Spain. This is not so modern as the last, but has most charming grounds, with a wonderful collection of tropical trees about it and lovely gardens. Dr. Shepherd thinks that such a society for the establishment of an infectious hospital would be of advantage here. Let each member pay a stated sum into the society yearly; this would entitle him to one bed for himself or any member of his household. A membership of say 2,000 at \$10 per annum would give \$20,000 a year, for which a moderately sized hospital could be run. It would be like an insurance against infectious disease, and when such disease did come to us we could send members of our family to a place which would be modern, scientific, properly managed and comfortable. In every town in Cuba these Spanish private hospitals exist.

Another institution he visited was the Foundling Hospital (Maternidad); a very old foundation and apparently very well managed. It is of huge size. There is a turnstile containing a basket in which infants are deposited from the street; on passing through the opening the basket strikes a series of bells, the noise of which arouses the nun on duty. She takes in the waif. They keep the clothes and trinkets found on the babies in a huge glass case for future identification. Some of the clothes were beautifully worked, and some of the trinkets valuable. The foundlings remain in the institution until they learn a trade. The boys learn printing, carpentering, shoemaking, etc., and the girls are trained in house work for servants. The place is under the charge of a community of nuns. The inmates all appeared very happy, and were of all colors, no color line being tolerated there.

Some Aphorisms on Stomach Complaints.—Dr. William Calwell (*Dublin Journal of Medical Science*, May) concludes a thoughtful article with clinical reports, entitled, Notes on Some Stomach Cases, as follows:

"First of all, looking upon gastric ulcer and chlorosis as more or less developmental diseases, I endeavor to warn all young women of fifteen to twenty-five of the extra liability they run and to emphasize the necessity of extreme care; secondly, all cases of chlorosis and of dyspepsia at this time of life are treated as serious, and both are put to bed till all dyspepsia disappears and their chlorosis is improved. Iron is to be continued for three months, with courses of the same drug for several years; thirdly, suppose a case of dyspepsia with symptoms of relapsing gastric ulcer has lasted for two years, and a prolonged rest in bed with regulated diet has proved unavailing as a permanent cure, I advocate an exploratory laparotomy. A gastric ulcer will heal, unless prevented by bad treatment, adhesions, or induration. The adhesions that form are no preventive of a perforation; they impair peristalsis and digestion, they promote catarrh, they give rise to pain, and they constitute a continual source of danger.

"There is, in short, a type of dyspepsia which I venture to call the "adhesion type;" for some months it often follows attacks we deem to be ulcer of the stomach; it also occurs independently of any clear history of ulcer. The symptoms pointing to "adhesion dyspepsia" are: 1. A history of gastric ulcer, or of some inflammatory condition in the neighborhood of the pylorus, particularly of localized pain and tenderness. 2. Freedom from dyspeptic trouble while in bed, or while at rest, with easily-digested foods. 3. The pain being of a dragging nature, and relieved by rest, but increased by exertion. 4. Frequently a history of a sharp, shooting pain on sudden exertion or stretching, such as lifting up a picture; and the intuitive avoidance of certain movements, and of heavy meals. 5. Some comfort from a fairly tight abdominal bandage. 6. The general health is good and appetite is fair, but the patient is afraid to eat.

"When perforation occurs, of course, the way is clear; there is no doubt then that in immediate operation lies the only chance of life. I advocate that we should anticipate this compulsory action, provided that we are satisfied that rest, diet and medicine, with a reasonable time limit, is ineffectual. It is our duty not to let the patient drift about from doctor to doctor, but to explain clearly the necessity of an exploratory operation. The percentages of success then would be comparable with that for relapsing appendicitis during an interval, not with that during an acute attack. * * *

"In cases of chronic dyspepsia in the young female we must endeavor to distinguish four common, but most important and distinct, causes: 1. Chronic dyspepsia kept up by ingesta of an injurious nature; here, want of veracity on the part of the patient may deceive the very elect. This should in all cases be carefully gone into. 2. Hysterical neurosis; here, practically one most important clinical fact stands out. No organic disease exists which is not promptly and consid-

erably relieved—at any rate temporarily—by suitable treatment carefully carried out. In hysteria your specially prepared peptonized milk, and your compound nutrient enemata and rest in bed, are all thrown into discredit. An exploratory operation in such cases should only be undertaken after isolation and massage has been given a fair trial. 3. The presence of ulcer without the usual signs—*e. g.*, hæmatemesis, etc. This is a most difficult and treacherous state of affairs. The full “ulcer” treatment should be adopted with severity for three weeks, then massage and isolation; finally, an exploratory laparotomy. 4. A nervous type of dyspepsia from brain exhaustion and worry. These cases are often made worse by low diet and a gloomy prognosis; a good holiday acts like a charm; the acute forms seem to be more or less complicated by actual catarrh. 5. Hyperchlorrhædia. I am not satisfied as to the existence of such an affection independent of ulcer.

* * * * *

“In venturing to read these notes, my desire is to uphold the following principles: 1. That the general practitioner is too apt to overlook the mechanical causes of chronic dyspepsia, to disregard the chronic sequelæ of gastric ulcer. 2. That these are often remediable by operative measures. 3. That careful examination can often lead to a fairly accurate diagnosis. 4. That, as physicians, it is our duty first to prevent, then to remedy, but scarcely ever to abandon as utterly hopeless.”

Genuine Specialism and Spurious Specialists.—Dr. James P. Tuttle (*Virginia Medical Semi-monthly*, July 12th), in his presidential address at the last meeting of the American Proctological Society, held at St. Paul, Minn., June 4th and 5th, made some trenchant remarks, which, though referring to proctology, are true, *mutatis mutandis*, for most of the specialties. He said that the profession should be educated to realize the fact that there was more in proctology than they now believed. The average practitioner's conception of this subject was that it consisted in tying off piles, cutting through fistulas, and stretching the sphincter muscles for fissure.

Year after year, he said, men attended his clinics who said they were determined to make a specialty of rectal diseases. They expected to become accomplished specialists in from three to six weeks. They wanted to see as many operations for piles as possible during that time. They didn't mind if a fistula or fissure was thrown in for good measure, but “piles” was their conception of proctology. The most carefully prepared lecture on demonstrations of new methods of diagnosis and the teaching of intestinal pathology were all lost upon them, for they were there to learn to treat rectal diseases—*i. e.*, piles. When they had spent three or four weeks in this deep and profound study these men went back home full-fledged rectal specialists, and sometimes were made professors of the branch in some provincial college.

Dr. Tuttle did not wish for one moment to reflect upon those noble practitioners of general medicine who attended post-graduate schools intent upon learning how to diagnosticate and treat

disease. All honor should be given to these men who knew their deficiencies; who sacrificed so much to keep abreast with the progress in medicine, and who went back to their homes and unpretentiously gave their patients the benefits of the knowledge gained by honest study.

But he scored the mushroom specialist and the advertising charlatan, who, he said, were molding public opinion upon proctology. They published their advertisements and scattered their pamphlets everywhere, until the public commenced to make their own diagnosis. The family doctor was said to be partially to blame for this condition of affairs, as he so often diagnosticated these conditions without examination. The advertising charlatan would have the public believe that the regular physicians never made a study of rectal disease; that his instruments were patented, and that successful methods of treatment were known only to him.

Regarding the qualifications for membership in the society, Dr. Tuttle said:

“All over the country there are springing up specialists in rectal diseases, made by short terms of study at some post-graduate school, or by being elected professors of this branch in some small college. As a rule they are without experience or learning in the branch, and accept the position simply on account of the title and emoluments. On the other hand, there are a large number of general surgeons whose hospital appointments require their doing large amounts of rectal surgery. The first class will be knocking at your doors for admission, but they bring no offerings in the fruits of their labors. The latter class will only come by invitation, but when they do, they will bring a rich experience and many practical observations gained in general surgery, but useful to the specialist. Holding a chair in some little medical college does not entitle a man to membership in this society, and being a general surgeon or practitioner should not debar him. Let us select our members with such care that in the future we can never wish that this or that one had not been let in.”

The Disastrous Effects of Ultra-materialism.—The *Medical Press and Circular* for September 18th closes an editorial entitled The Psychology of Assassination, based, of course, on the murder of President McKinley, with the following pregnant remarks:

“And behind the whole history of such deplorable cases lurks the moral of the ‘Vanity of Human Wishes,’ the hitherto complete failure of establishing upon earth a reign of complete ‘Peace among men.’ Poverty, misery, and discontent will as surely be met with in the most advanced democracy as in the most absolute monarchy. So will their consequences, physical and moral. The materialism and utilitarianism of the present age have aimed, and with a considerable amount of success, at stamping out all the higher emotions, as their features and results were visionary and unpractical. Superstition and even faith were to be extinguished, as enemies to reason and physical truth. The frequently unsatisfactory results of medicine and surgery drew off the con-

fidence of that advanced section of the community which must see and feel everything before believing. Passion of every kind must be eliminated; emotion must be absolutely controlled; faith must submit to physical tests. This programme has been worked with increasing demonstrativeness during the last half century, and the opening of the twentieth century has at least shown that, with the rapid growth of physical science and the daily inroads on the mysteries of nature, the human race as a whole is still unsatisfied, while its most advanced and most materialistic sections are probably the most miserable of all. The emotional longings for higher things than those of earth will not be exterminated; the hankering after the mysterious and the unattainable—in fact, the human characteristics which most truly distinguish man from brute—are still living in the human heart. Their volcanic explosions assume forms ridiculous, preposterous, insane, and even criminal. Medical men should recognize the position and contribute what they can to the education of the public. It is of greater interest and importance to them than to most sections of the community to keep continuously in touch with the advanced guard of thought. Unsatisfied longings and disappointed hopes have on one side created a cosmopolitan brotherhood of Anarchists; on the other a crusade of Christian Science healers."

Another Good Christian Science Cure Missed.

—One of the great fields of success claimed by Christian Scientists lies in the alleged improvement of visual defects by their method. We ourselves know of one case that came under our own personal observation. The following letter from Dr. William D. Turner, of Fergusson's Wharf, Va., appeared in the *Virginia Medical Semi-monthly* for September 13th, and affords such an excellent specimen of the kind of cases whereby well-meaning and honest, but technically untrained, persons are "compelled by their experience" to a belief in this quackery, that we reproduce it. Dr. Turner refers to an article in the *Richmond News* of September 3, 1901, with the heading, Charles W. Tanner's Sight Restored, and it Is All Attributed to Christian Science. On this he comments as follows:

"Since I was fourteen years of age, I have had to wear glasses for astigmatism, and as I grew older the stronger the glass and the more constant the use—so much so that after twenty-two years of age I had to wear glasses constantly. About two years ago I consulted an oculist, and he prescribed new glasses. When they came from New York, they were all wrong, and I saw with them everything in a wedge shape. I wore them about one-half day, and had to take them off, and returned to the glasses I had been wearing. I could not see through them, and found I could see better without them. For over eighteen months I went without glasses at all, and could see as well as any one. When I read, I use glasses, but when walking or for ordinary purposes, I do not need glasses at all, although once or twice during the last two months I have had to use glasses for ordinary seeing.

"Now, suppose I had taken 'Christian Science treatment' at any time prior to this restoring of my sight—even ages before—then that science would have had all the credit for this miraculous recovery of sight, which was wrought in about five or six hours. I simply write this to show that there are others who get well without resort to Christian Science."

The Treatment of Acute Intestinal Obstruction.—G. A. Syme, M. S., M. B., F. R. C. S. (*Intercolonial Medical Journal of Australasia*, July 20th), in reference to operative technics, in a paper read at a recent meeting of the Medical Society of Victoria (Australia), says:

"Now a few words about some points in the operation itself. I once lost a case of strangulated hernia, just at the end of the operation, from the patient suddenly vomiting without warning a quantity of thin, almost feculent matter, inhaling some of it and dying of suffocation, in spite of immediate tracheotomy, inversion, suction, and artificial respiration. Many similar cases have occurred. Hence it may be often a wise precaution, especially if the obstruction is of some duration, to *wash out the stomach* before operation.

"Next, I believe in a *free incision* in the median line. Saving time in these cases often means saving life, and a free incision means saving time in the long run. It is also important to handle the bowel as little as possible, and for the same reason, if the obstruction is not immediately or easily found, I think it quickest to *eviscerate*, receiving the intestines in soft sterilized gauze, kept constantly wet with hot sterilized normal saline solution. The examination must be thorough. More than one band or adhesion may be present, and is easily overlooked if evisceration be not done.

"Next I hold that, the obstruction relieved, the bowel should be *opened*, emptied of its poisonous contents, and made clean. Further, if the bowel appears much damaged, or the obstruction has been of long standing, it is essential to *resect* the damaged part, and resect freely, especially on the proximal side, . . . and for the same reasons the performance of *enterostomy*, without relieving the obstruction and cause of damage, is absolutely useless if the case be really one of obstruction. Mr. Hinder advocates this procedure in the last number of the *Australasian Medical Gazette*, but it is significant that, in the cases he records, though he did nothing more, the bowels acted spontaneously soon afterward. With regard to the *method* of resection, each operator will perform that which he can do most quickly and efficiently, and in the majority of cases I think Murphy's button the best, notwithstanding my personal preference for Maunsell's method, and the fact that all the cases of intestinal obstruction where I have resected and used Murphy's button have died. *Hahn's plan* of bringing the damaged loop of bowel through the wound protected with gauze, and awaiting events, I have not tried, but possibly in some of my fatal cases it would have been better.

"The *after-treatment* should be that usually adopted after abdominal operations, except that the modern American plan of giving salines after these intestinal operations does not appeal to me. If the

bowel is opened and emptied at the operation, surely the more rest it gets after the better; though equally, I think, morphia should be avoided.

"The *prognosis* in these cases is necessarily bad, but it has unquestionably improved of late years. As we become more precise in diagnosis, and become more prompt and thorough in operation, I believe it will continue to improve. Many cases die from causes outside the control of the practitioner. In a case seen not long ago with Dr. Box, which I regarded as obstruction from a band, I operated, relieved the band, and the obstruction, and the patient seemed all right for a fortnight, and then suddenly collapsed and died before anything could be done. *Post mortem*, it was found a duodenal ulcer had perforated. In a number of cases, owing to the inherent nature of the condition, death is inevitable, but on the other hand many cases die from preventable causes. In the *Annals of Surgery* for December, 1900, is a paper by Dr. C. L. Gibson, giving an exhaustive analysis of 1,000 cases of acute intestinal obstruction and hernia (a paper that should be carefully studied). He finds that in 118 cases the cause of death was some fault of the operator, generally failure to completely remove the cause of obstruction, or faulty technique in resection (13 per cent. of resections were faulty). A remark of Dr. Gibson's I think worth quoting: 'It is perhaps unusual to introduce the personal element of the surgeon as a factor in prognosis. The careful detailed study of this extensive material has, however, impressed the writer that it is an element that deserves special recognition. The possession of 'good surgical judgment' is very essential; mere manual dexterity is useless unless based on this quality, which depends much on the personal characteristics of the individual.'

"Let me conclude by saying that the remarks I have made are based on my own personal experience, and if I may have appeared in the slightest degree to reflect disparagingly on fellow-practitioners, I assure you that such is very far from my intention. I am too painfully conscious of my own mistakes in recognizing and treating this condition. But we ought to learn from our mistakes, and it is in the hope of learning something from a free discussion of this subject that I have ventured to bring it before you in the way I have."

The Treatment of Inflammation.—Dr. J. D. Loring (*Fort Wayne Journal Magazine*, September), in a paper read before the Kankakee Valley Medical Association, says that nitrogenous food is the most permanent of all heart stimulants, maintaining the heart's action far better than any drug. The withdrawal of this class of foods will cause a marked reduction in the heart's action and a corresponding improvement in the character of the inflammatory process. The use of those drugs that depress the heart's action, by reducing either the frequency or the force of the heart's action, is not to be advised, for while they accomplish this result in a marked degree, they also depress the general vitality of the cells, and hence what they accomplish in one way they more than lose in another. Another thing to be feared, and a worse one, too, than an over action of the heart, is the direct reverse, a weak heart.

This may have the same unfavorable action on inflammation as a strong heart, and be the cause of stasis and thrombosis. This is to be overcome by the action of such remedies as will increase the force of the heart's action; strychnine and digitalis are the remedies usually employed, but, in the author's opinion, they are entirely inferior to good nitrogenous food. Cold is a remedy of great value in some cases of inflammation, but it is also one that can do harm, and a word of caution is requisite. Although cold, for instance, will tend to diminish the calibre of the enlarged vessels, especially in the periphery of an inflamed area, thus obviating the dangers of slowed circulation, yet it exerts a depressing influence upon the vitality of the cells and somewhat condenses the tissues. It thus lessens the size of the plasma channels and certainly diminishes the amoeboid movement of the leucocytes, both inside and outside the circulation, hence favoring stasis and thrombosis of the vessel, and engorgement of the tissues with cellular exudate at the focus of inflammation. Judgment is, therefore, requisite to decide whether the evil at the focus will not outweigh the good at the periphery. Cold should be employed, when used at all, in only a moderate degree, and should be continuous in its action. Heat is a remedy of far more benefit than cold. Its primary effects is to dilate the vessels, but its continuous action will contract them. Great good may follow the application of heat, for, by temporarily dilating the vessels in an inflamed area, we relieve the engorgement, and in this way allow the blood current to assert its action, and wash out toxic material and so improve the nutrition of the part, and very favorably affect an inflammatory process.

The Comparative Virulence of the Tubercle Bacillus from Human and Bovine Sources.—Dr. Mazyck P. Ravenel (*University of Pennsylvania Medical Bulletin*, September) sums up an exhaustive article on his experimental investigations into this subject, as follows:

In view of the foregoing experiments, and of the evidence quoted, it seems justifiable to conclude: 1. That the tubercle bacillus from bovine sources has, in culture, fairly constant and persistent peculiarities of growth and morphology, by which it may tentatively be differentiated from that ordinarily found in man. 2. That cultures from the two sources differ markedly in pathogenic power, affording further means of differentiation, the bovine bacillus being very much more active than the human for all species of experimental animals tested, with the possible exception of swine, which are highly susceptible to both. 3. That tuberculous material from cattle and from man corresponds closely in comparative pathogenic power to pure cultures of the tubercle bacillus from the two sources, for all animals tested. 4. That it is a fair assumption from the evidence at hand, and in the absence of evidence to the contrary, that the bovine tubercle bacillus has a high degree of pathogenic power for man also, which is especially manifest in the early years of life.

Special Articles.

OPERATIVE PREPERITONEAL RUPTURE OF THE BLADDER, WITH THE REPORT OF A CASE.

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Rupture of the bladder, intraperitoneal or extra-peritoneal, during a surgical operation, and resulting from the effort to distend this organ in order to reach it by the suprapubic route, is of rare occurrence, or, if occurring, the accident does not come to the notice of the profession through the reports of societies or in the journals. The surgical rupture of this organ into the preperitoneal region has occurred only once to my knowledge, and this case is herewith reported. Intraperitoneal rupture of a bladder more or less distended by urine, from a blow upon the abdomen or due to fracture of the pelvis, a much more formidable accident, has recently been dealt with in a most instructive paper by Professor Samuel Alexander, of New York, in the *Annals of Surgery* for August, 1901, and I sincerely hope that some one equally competent may gather up the cases of preperitoneal rupture, especially those due to retention of urine, without external violence, and the still rarer instances of surgical rupture of this organ.

A man, thirty-one years old, a carpenter by trade, was admitted into the Polyclinic Hospital on the 10th of July, 1901. The previous history recorded measles and mumps at the age of sixteen and at eighteen an attack of erysipelas. Eight months before his admission he had a skin disease, the eruption extending over the entire body. The exact character of this eruption could not be ascertained. He had at the time of his admission a granular conjunctivitis, and was not in good physical condition. There was nothing in his family history bearing upon the lesion for which he was admitted. He denied ever having had a specific urethritis or any constitutional disease. The trouble with his bladder began four and a half or five years ago and came on gradually, the first symptom being inability to hold the urine for any ordinary length of time. This condition prevailed for six months before he began to notice any pain. The pain then was described as being severe, both during and at the end of micturition. About three years after the first attack he began to notice the urine changed in color, and this, he learned afterward, was due to the presence of pus. As he was under local treatment at this time, it is not clear whether the pus was due to surgical infection or was a pyogenic infection from within. Eight months ago he passed bloody urine for the first time and noticed this discoloration for about a month. After this ceased he felt better, was prac-

tically free from annoyance, and was able to go to work. At the present time he has to empty the bladder every half-hour during the day and about every three quarters of an hour during the night. If he turns on his side he is compelled to urinate. There is constant pain at the neck of the bladder when the urine accumulates, but all pain ceases after he has emptied this organ, and does not return until the urine again collects.

On July 15th I undertook to establish drainage through a suprapubic incision. The patient was under ether, and as I was describing the technics to the class at the New York Polyclinic Medical School and Hospital the house surgeon was directed to inject the bladder preparatory to the operation. As directed by me, he had thrown in fourteen ounces by measurement in order to lift the bladder so that the peritonæum could be easily avoided. The distention of the bladder was now perceptible by a slight elevation of the abdominal wall just above the symphysis pubis, but before I could make the prescribed incision this subsided, indicating that the bladder had been ruptured. Cutting rapidly through the intervening tissues, and guiding the point of the knife by my finger to the anterior wall of the bladder, I opened into this organ, which contained by this time not more than four ounces of fluid. On entering the prevesical space, a very considerable quantity of the injected solution escaped. Fortunately the rupture was discovered. It was about three quarters of an inch in extent, a little to the left of the median line in front, but entirely within the prevesical space. Fearing that some of the fluid might have been forced through the soft circumvesical fat to the posterior surface of the bladder, and in order to be assured that the peritonæum was not ruptured, I opened through the median line of the abdominal wall and explored carefully the peritoneal cavity, and was gratified to find that no fluid had found its way here. This wound was closed immediately, and the vesical wound treated by the drainage-tube in the ordinary method.

The patient's temperature before the operation was 100° F. About eight hours afterward it reached 102.4°; the next morning at 8 it fell to 99.8°, but from this time on it began to rise, and on the following evening was as high as 104.6°. As I was absent from the city at this time, being notified by telephone, I advised that the peritoneal cavity be opened in order to be sure that no peritonitis existed. A slight inflammatory process was reported by the operator, and, to arrest this and prevent a further spread in the general peritonæum, the lower portion of this cavity was flushed out with hot salt solution, and a gauze drain inserted. This was at 8 o'clock p. m. on the fourth day after my operation. Three hours later the temperature dropped to 102°, but again rose by 1.30 a. m. to 105.5°. On the following morning a well-marked infiltration in the perineal region was discovered, and this was incised freely under an anæsthetic and drained. The temperature fell at once and the patient has continued to improve, making a good recovery without any surgical incident of interest or importance.

I have performed suprapubic cystotomy between sixty and seventy times, and in every case sterile water has been injected, the minimum quantity vary-

ing from twelve to fourteen ounces, and, in bladders which have been distended by retention, at times twenty-four ounces have been employed. In no other case than this now reported has rupture occurred. I have advised the injection of as much fluid as can be safely carried, in order to give the operator as much room as possible between the vesical peritonæum and the symphysis pubis. In cases where the habit of frequent micturition has prevailed through several years, leaving the bladder in a more or less permanently contracted condition, it would be advisable to contend with the difficulties and possible dangers of operating through a narrower incision, with from eight to ten ounces of injected liquid, rather than run even the very small risk of rupture of this organ by employing the greater quantity.

Original Communications.

THE LANE LECTURES ON THE SOCIAL ASPECTS OF DERMATOLOGY.

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LECTURE VI.

Delivered at the Cooper Medical College, San Francisco, September 4, 1901.

The Light Treatment; Effects of the Chemical Rays of Light on the Skin; Finsen's Method; the Light Institute at Copenhagen; Finsen's Results; Introduction of the Method into England; the Author's Results; Notes of Cases of Lupus in which the Light Treatment was Used; Remedial Action of the Rays; Difficulties in their Application; the Prospect of Cure; Some Conditions of Success; Duration of Treatment; the Question of Recurrence; the Light Treatment in Epithelioma of the Skin; the X Rays.

Although in these lectures I deal only incidentally with the treatment of diseases, it seems appropriate after considering tuberculosis to give some account of a new method which, particularly in lupus, has already given very satisfactory results and which gives promise of a brilliant future. This is the light treatment, the introduction of which into medical practice we owe to Professor Niels R. Finsen, of Copenhagen. As long ago as 1859 Charcot suggested that it was the chemical and not the heat rays of the sunbeam that produced sunburn, and that the dermatitis caused by a powerful electric light was identical with erythema solare. The chemical rays produce erythema and as a secondary chronic effect pigmentation of the cutaneous surface. Pigmenta-

tion must be regarded as a protective process, as the coloring matter prevents the light rays from penetrating into the thickness of the skin.

THE EFFECTS OF THE CHEMICAL RAYS.

The acute effects of the chemical rays on the human skin range in degree from slight redness to inflammation followed by peeling. The severity of the lesions depends on the intensity of the light and the proportion of chemical rays which it contains and on the duration of exposure; it is influenced also by the greater or less amount of pigmentation, and perhaps by the thickness of the epidermis. The irritating effects of the rays are best seen in persons of blonde complexion and are particularly marked in albinos. The proof that these effects on the skin are due to chemical rays we owe to Professor Widmark, of Stockholm. By passing the light rays through water he eliminated the heat rays, while by passing them through a plate of ordinary glass he eliminated the ultra-violet rays. Observing the effect on the skin produced by the exclusion of the heat and chemical rays alternately, he proved that it was not the heat, but the chemical and especially the ultra-violet rays which acted on the skin.

FINSEN'S METHOD.

That light has a bactericidal effect has long been a matter of common knowledge. In 1878 Downes and Blunt showed experimentally that this effect was mainly if not exclusively due to the action of the chemical rays. On this property of light is based the new treatment of lupus and other superficial affections of the skin caused by bacterial infection. In the application of this method to lupus, Finsen was, as he confesses, not absolutely the first in the field. A few empirical attempts had been made to apply "burning glasses" to the treatment of lupus, but such random and unsuccessful trials in no way detract from the scientific priority of Finsen. His method is based on the principle that, as ordinary light takes a long time to kill bacteria, it must for effective therapeutic application be concentrated by means of mirrors and lenses, while at the same time care must be taken to exclude the heat rays (ultra-red, red, orange, and yellow), which in a concentrated state would burn the tissues. The exclusion of these rays diminishes only to a very slight extent the bactericidal effect of light. Finsen gets rid of them by passing the beam of light through water colored by methylene blue or amoniocal sulphate of copper. In this way a blue or blue-violet light is obtained which has a powerful microbicidal effect. Sunlight is unquestionably the best, but as in northern latitudes we cannot trust to that luminary, we must needs have recourse to artificial, especially electric, light. For this purpose Finsen uses exclusively electric arc lamps, as the light from incandescent

lamps is too poor in chemical rays. But before it is directed on the skin it must first be cooled. Two objects have therefore to be fulfilled by the apparatus required for the treatment; the light must be made stronger and cooler. In the summer time, when there is bright sunshine, the apparatus consists of a lens about 20 to 40 centimetres in diameter and composed of a plane and a curved glass fixed in a brass ring and containing between them a bright blue ammoniacal solution of sulphate of copper. This liquid cools the light which passes through it, because the water absorbs the ultra-red rays, while the blue color excludes a considerable proportion of the red and yellow rays, which have great heating and but slight bactericidal properties. The lens is hung on a support in such a way that it can be raised and lowered and turned around a vertical or a horizontal axis at will. Thus the lens can easily be placed perpendicularly to the sun's rays and at the right distance from the part of the skin to be treated.

When the electric light is used, an arc lamp of 50 to 80 ampères is employed. But, as the rays of electric light are divergent, they must first be made parallel before they are conveyed, concentrated, and cooled for use. The apparatus for the purpose resembles a telescope in constitution; the big end is placed next to the lamp, having lenses made of quartz or rock crystal, which itself can absorb heat rays. Between two such lenses there is a length of tube filled with distilled water (copper sulphate solution not being needed, as the chemical rays are so plentiful) around which cold tap water circulates in a sort of water jacket that absorbs still more of the heat rays. The local effects of the light from the electric arc lamp have been found by experience to have rather greater therapeutic efficacy than those from the sun, while at the same time the rays have much less heating power. Full details of the apparatus, which is very complicated, with illustrations, will be found in a paper by Dr. Valdemar Bie, Professor Finsen's chief assistant, which appeared in the *British Medical Journal* of September 30, 1899, and, I think, simultaneously in the *Philadelphia Medical Journal*.

As the presence of oxygen is necessary to enable the light to exert its bactericidal action, and as the blood is the constituent part of the tissues which contains that gas in richest abundance, Finsen thought at first that the production of an artificial hyperæmia in the parts exposed to the action of the light would be an advantage, but he soon found that this was not the case. In fact, if a piece of ordinary silver chloride photographic paper is placed on one side of the lobe of the ear, and if a cone of blue violet light is allowed to fall on the other surface, even after five minutes no reaction is perceptible on the sensitized paper. If, however, the lobe of the ear is com-

pressed between two plates of glass till it becomes bloodless, it will be seen that in twenty seconds the photographic paper has become black. As it is clear, therefore, that the blood is an obstacle to the penetration of the chemical rays through the tissues, Finsen prepares the parts to be treated by first emptying them of blood. This he does by pressure applied by means of slightly convex plates of glass of varying size and shape framed in a metal ring with projecting parts for the attachment of elastic ribbons by which the apparatus is fixed so as to exert uniform and continuous pressure on a given point.

The following is Finsen's own description of the manner in which the treatment is carried out in Copenhagen: During a period varying from some days to several weeks a portion of the skin measuring from 1 to 3 centimetres is exposed daily for at least two hours to the action of the light rays; next another area of equal extent is treated in the same way, and so on till all the affected part has been brought under the influence of the concentrated chemical rays. If then some suspicious places can still be seen, they must be treated again. The patients are examined at intervals of from one to several months and submitted once more to treatment if new foci are discovered. Each patient is in charge of a nurse whose business it is to regulate the apparatus in such a manner that the light rays always fall on the same region and perpendicularly to the pressure-glass fixed on the patient. The action of the strongly concentrated chemical rays always produces a redness (erythema), greater or less, according to the intensity of the light and the susceptibility of the patient. Sometimes there is noted a serous discharge or the formation of vesicles followed by desquamation. When a patch of lupus has been submitted for a sufficiently long time to the action of concentrated chemical light, its edges, which before were raised, subside, the redness progressively diminishes, the skin recovers its normal color, and ulceration, when there is any, heals. The scars present an excellent appearance.

Finsen pointed out that patches showed no tendency to spread from the time the treatment was begun, provided care was taken to begin at the edge and to direct the light so that it should act at the same time on the apparently healthy skin immediately surrounding the seat of disease.

With regard to recurrence, Finsen in 1898 had never seen what he considered to be a real example after the light treatment, but at that time his experience did not extend further back than two years.¹

THE LIGHT TREATMENT AT COPENHAGEN.

Finsen's researches, biological and therapeutical, excited so much interest in his native country that

¹*La Photothérapie*. Paris, 1899.

in 1896, mainly by the liberality of two Danish philanthropists, an institute was founded in Copenhagen for the purpose of making investigations on the action of light upon living organisms, chiefly for the purpose of applying their results to the service of practical medicine. The "Lys Institut" receives a subvention from the State, and patients with lupus and various other skin affections are received there for treatment, not only from Denmark, but from other countries.

FINSEN'S RESULTS.

At the date of Bie's paper, just referred to, the number of cases of lupus vulgaris treated in Finsen's institute amounted to about 350. The first patients were treated wholly and solely by light. This is still done in slight cases, but in the more serious cases the effect of the light is assisted by pyrogallic-acid ointment in order to make the skin smooth and easily penetrable by the rays. While one portion is under the light treatment, the ointment is applied to another; when the cauterization produced has been healed by zinc ointment the same area is treated by light. In not one of the cases had the treatment failed utterly, but in a few improvement was very slow. In the vast majority of the cases the good results of the treatment had been so certain and so constant that Bie goes so far as to say that the accuracy of a diagnosis of lupus vulgaris may be doubted when the light treatment proves ineffective. Many cases, however, have to be submitted to a second course of treatment on account of the appearance of fresh nodules. It is not clear whether these represent an actual recurrence of the disease or whether they could be recognized earlier; and Bie thinks this question of little importance. The principal thing, he says, is that till now there have always been a few scattered nodules, which disappear after a short further course of treatment.

Finsen's treatment has also been used at Copenhagen in lupus erythematosus, and the result in many cases has been permanent recovery with firm scars. But the effects of the treatment are strikingly inferior to those seen in lupus. It has also been tried in alopecia areata with results described as promising.

Last year I visited the Lys Institut at Copenhagen and was most courteously received by Professor Finsen, who gave me full details as to the method, demonstrated the apparatus employed, and showed me the cases under treatment. Having seen much of lupus, I was not inclined to be optimistic as to any new method of dealing with it. I had suffered many disillusionings by finding remedies vaunted as the sovereign'st things on earth by oracles of science prove useless in my hands. But I confess that what I saw at Copenhagen made me inclined to say,

as Dr. Warren said on that memorable 16th of October, 1846, after the first successful anæsthetization by ether, "Gentlemen, this is no humbug!" I had already introduced the treatment into England, but it was a considerable time before I was able to overcome the difficulties of one kind or another that arose in my path. For some eighteen months now the light treatment has been carried out in a fully equipped establishment in the West End of London under my direction, with the able assistance of Dr. S. Ernest Dore. A department for the application of the light treatment has also been for some time in existence at the London Hospital. No reports of the work done there or by one or two physicians in London who practise the method privately has, as far as I know, been published. A paper by Dr. Dore and myself, embodying the results of a few cases then under treatment, appeared in the *British Medical Journal* of February 9th of this year. I take this opportunity of bringing a brief statement of our work up to a more recent date before the profession of this country.

The apparatus employed is identical with that used by Professor Finsen, but, as the sun is like Horace in his worship of the gods, "sparing and infrequent" in his appearances in our British sky, we use only electric light. The method of applying it is also in essentials the same as that enjoined by Finsen, but there are a few points in the technique as to which our experience has taught us some practical lessons which may perhaps be useful to other workers. Thus, in respect of *current*, we have found one of about 75 ampères and 60 volts sufficiently strong to produce the effect required in most cases; and it has been thought better to shorten the time of exposure rather than to lessen the intensity of the light.

In order to get a powerful light, it is most important that care should be taken that (1) the lenses, especially the bottom one, are clean and bright; (2) the water is clear and free from floating particles; the bottom lens should be thoroughly cleansed and polished every day, and this is greatly facilitated by having it made detachable. The water should be changed every day. Ordinary tap water has been found to serve as well as distilled; its theoretical disadvantages are more than compensated for by its practical utility—that is to say, it can be changed and the lenses cleaned daily instead of every three or four days.

As regards *focus*, accuracy is of the first importance; and if the disease is so situated as to make this impossible, the result is not satisfactory. In such cases, as will be seen later, the Röntgen rays prove of service. The area treated is, as a rule, kept well within the focus of the light, but a smaller focus, if it can be borne, has a greater effect.

Thumb-screws are more convenient than ordinary ones for focussing. It is very important that the tubes should be kept in a straight line with the light rays, so that none of these are lost by impinging on the side of the telescope; and we have found a new adjustment which gives a larger range of movement of service in this respect.

It is essential that the rays should fall perpendicularly on the compressing glass, and to insure this we have found the use of screens advantageous, especially when the attendant is a person of little experience. By the use of cardboard or metal screens fixed to the end of the tubes, the slightest deviation of the glass will be at once revealed by the fact of its throwing light on the screen, and can at once be rectified.

Up to July, 1901, the total number of cases treated was sixty. In thirty-six of these the disease was lupus vulgaris, in six lupus erythematosus, in thirteen rodent ulcer, in one doubtful rodent ulcer, in two alopecia areata, in one cheloid, and in one epithelioma. Of the cases of lupus, eight may be mentioned as instances of cure; in three the treatment was abandoned on account of failure of health; while in six the result was unsuccessful or unsatisfactory. The remainder are still under treatment. Of the rodent ulcer cases, seven were cured; in two the unsatisfactory state of the patient's health made it impossible to go on with the treatment; and two are still under treatment. Of the cases of lupus erythematosus, in two the result was satisfactory, in three the treatment had to be discontinued, and one is still under treatment. Of the cases of cheloid and epithelioma nothing definite can yet be said.

CASES OF LUPUS.

In the successful lupus cases, the number of sittings varied from eight to more than 370. They were mostly favorable cases in which the disease was superficial and of small extent. The following brief notes of the cases will suffice to indicate their general characters.

R. B., aged twelve.—This case was favorable in that the boy was young and there were only two or three nodules. It had, however, been excised five times and "cauterized once or twice a week for two or three months," so that the resulting scar was against him. He had eight sittings.

Miss T.—In this case there was only one nodule of two years' duration. It, however, came on the top of a mole. Treatment was continued until the lupus and the mole had disappeared. There was no scar. Fourteen applications.

Mrs. W.—The disease was superficial and small in extent. The greater part had been previously removed by operation. Nine applications.

Miss G.—Small patch on the chin $1\frac{1}{2} \times 1\frac{1}{2}$. Untreated, but considerably infiltrated. She had sixty-one applications.

Miss B.—Small erythematous patch with diffuse superficial infiltration of lupus. Seventeen applications.

Miss L., aged nineteen.—Very anæmic, which was probably in her favor as regards the treatment. One hundred and ninety applications, now nearly well.

Annie P., aged thirty-two.—Thin skin and fair complexion. Always reacted well. Three hundred and seventy odd applications.

CASES OF RODENT ULCER.

The following are brief notes of the cases of rodent ulcer in which the treatment was successful:

Mr. W., aged forty-four.—Small rodent ulcer of three years' duration on the cheek. Cured in seven applications.

Mrs. W., aged thirty-five. Small rodent ulcer of nine years' duration on the cheek. Twelve applications.

Mr. E., aged seventy-three.—Superficial spreading rodent ulcer of seven years' duration. Thirteen applications on the forehead.

Mr. H., aged eighty-three.—Small rodent ulcer of two years' duration, at the inner canthus of the right eye, seven hours and a half.

Mr. W.—Excavating ulcer of the cheek, infiltrating growth near the right ala of the nose and the right angle of the orbit. Thirteen years' duration. Thirty-five applications of Finsen; finished with x rays.

Miss F.—Rodent ulcer on the lower lip, had been excised twice; eleven applications.

Mrs. P.—Rodent ulcer on the upper lip, of eight years' duration, excised once. Twenty-two applications.

CASES OF LUPUS ERYTHEMATOSUS.

Of the two cases of successful treatment of lupus erythematosus, in one (that of Mrs. B., aged forty-three) the disease was of fifteen years' duration and was very extensive and superficial; the areas formerly covered by the disease are now occupied by a fine white scar tissue. In the other (that of Mr. W.), the disease was more chronic and there was deeper scarring.

In regard to one of the cases of rodent ulcer successfully dealt with, it was noted that the x rays had been applied by way of reinforcement of the light treatment. The x rays are of great service in cases where the disease is not easily accessible to the light rays, as, for instance, in the interior of the nose, where, as was said in a previous lecture, the primary focus of lupus of the face is generally situated. This combined method is based on the fact that, while the light rays cannot be made to act on any but plane surfaces, the x rays, owing to their power of penetrating soft tissues, irrespective of focus, can be directed on mucous membranes lining the cavities of the body. As an instance I may cite a case in which *lupus* of the cheek implicated the nasal fos-

sæ. In treating this case we had the advantage of the cooperation of Dr. H. Low, honorary secretary of the London Röntgen Ray Society. A mask made of cardboard and lead foil was applied to the face and an aperture cut in it corresponding to the part on which we wished to direct the rays. A 6- or 7-inch spark was employed, and a series of exposures, each lasting from ten to fifteen minutes, was made till a reaction was produced, when treatment was suspended for a few days. After about fifteen or sixteen exposures, a decided improvement was visible.

REMEDIAL ACTION OF THE RAYS.

Having thus stated our results in bald statistical form—the *fait brut* beloved of Magendie—I proceed to describe the manner in which the light rays produce their remedial effect on the diseased skin, and this will bring us to the consideration of the difficulties that interfere with their action.

The application of the light is followed by an inflammatory reaction consisting in hyperæmia and redness, followed by the formation of a bleb which breaks and dries in about a week into a thick yellow crust. Healing is complete in ten days or a fortnight. In places where the tissues are loose, for instance, near the eye, there is often great swelling of the neighboring parts. The intensity of the reaction varies in proportion to the intensity of the light and also according to the structural peculiarities of the patient's skin, and especially according to the local conditions produced by the disease. In persons with a thin skin, the reaction is greater, while it is less marked in coarse, thick skins. The reaction comes on from five to six to twenty-four hours after the application of the light. It is usually slight at the beginning of the treatment, and sometimes becomes greater as it is continued. Even after prolonged treatment it still shows a tendency to increase rather than diminish. The Danish physicians say the treatment is painless, but this is not strictly accurate. There is, indeed, seldom anything that can be called pain at the time the light is applied, though sometimes a feeling of heat is experienced in the part and pressure over a bony prominence is painful. But the after-smarting is often considerable, and the inflammatory phenomena constituting the reaction are also more or less painful. There is seldom any constitutional disturbance. In the case of ulcerated surfaces there is, of course, no blistering or crusting; a much larger number of consecutive applications can therefore be made without inconvenience to an ulcer than to an area of intact skin. Reaction is manifested by redness and soreness, which are sometimes accompanied by some swelling of the surrounding parts and great tenderness on pressure. These effects are seen about the

fourth or fifth day, and if the applications are kept up, the skin around the ulcer becomes inflamed.

According to our experience, the remedial effect of the light rays is directly proportionate to the intensity of the reaction; the production of a considerable reaction should, therefore, always be aimed at. If the disease extends into the deeper parts of the skin, and if there is much scarring, this forms an obstacle to the penetration of the light rays. Another circumstance which makes the passage of the rays increasingly difficult as the treatment is prolonged is the pigmentation caused by the frequently repeated applications of light.

DIFFICULTIES IN THEIR APPLICATION.

From what has been said it may be gathered that a thin skin is a favorable circumstance for the treatment; a coarse, thick skin is less readily penetrable by the light rays. The amount of pigment naturally present in the skin must also be taken into account. Brunettes are not such good subjects as blondes, and the darker they are the less amenable are they to the light treatment. Hence there are great difficulties in applying it to patients of black or mixed race. When the disease extends deeply and there are great thickening and infiltration of the tissues, it is difficult for the light to penetrate, and a large number of exposures is required to make an impression on the mass of diseased tissue. In the elephantiasis-like forms of lupus, sometimes seen on the ears, on the cheeks, and elsewhere, the reactions may be so severe that they cannot be borne by the patient. In hypertrophic cases the use of pyrogallac-acid ointment, alone or combined with salicylic acid, may reduce the thickening and allow a freer penetration of the light. In other cases the internal administration of thyroid extract is useful in reducing thickening and œdema.

The large extent of the area involved is sometimes a most serious difficulty as only a small spot can be treated at a time, and thus it is scarcely possible to deal with all the nodules as they develop on the edge of the patch. The only hope of keeping pace with the disease in such cases is to retain the patient under treatment two or three hours daily. This is seldom possible, as the patient cannot spare the time or he cannot bear the prolonged immobility required. Moreover, the reactions tend to become so severe that they cannot be borne. Cases in which mucous membranes are involved are unfavorable because (1) the disease is often inaccessible, being situated on the palate, the gum, or the floor of the mouth; (2) they are often badly ulcerated and do not seem to have the same aptitude for repair as skin; and (3) they are always moist and offer a good breeding-ground for micro-organisms. The first of these difficulties can be got over by the use

of the x rays to supplement the light, but the others it is beyond our power to obviate. It may be mentioned that there are parts besides the cavities of the mouth and nose which are difficult of access; for instance, it is not easy to get into corners such as the internal canthus. In several cases under my care the eyelids have been treated, and it has been found possible to keep up considerable pressure on the eyeball without doing any harm to the eye or seriously inconveniencing the patient.

THE PROSPECT OF CURE.

In estimating the prospect of a cure by means of the light treatment in a given case of lupus, a number of circumstances have to be taken into account. Cases that have not been treated are, other things being equal, the most suitable for the light method. In old cases in which the patients have suffered many things from many physicians, the seat of disease is likely to be so deeply scarred by the cauterizations and scrapings it has undergone as to be almost impenetrable to light. If the disease is recent, if there is no scarring or thickening, and if the configuration of the part is such that the pressure-glass can be accurately applied to it (a most important point in practice), there is every reason to look for a thoroughly satisfactory result. If the disease is extensive, the treatment must at the best be tedious. It should be applied daily on six days a week, if there is nothing, as, for instance, excessive reaction, to make interruption necessary. In cases where there may be a special urgency, the treatment may be carried out twice a day without any ill effect. That, at any rate, is my experience.

SOME CONDITIONS OF SUCCESS.

I think it right to say that the success of the light treatment depends more on the attendant who has the actual management of the details than on the doctor who has the supervision of the case. Her duties require not only intelligence and skill, but devotion, for the work places an enormous tax on the patience. Another condition of success is in the patient himself, to whom the absolute passivity enforced during an hour or an hour and a half daily is apt to be exceedingly irksome. And he must continue to submit to this restraint for months together. One of my patients who was originally under treatment in Professor Finsen's institute has persevered for two years.

DURATION OF TREATMENT.

The length of time over which the treatment has to be prolonged is, indeed, one of the chief drawbacks of the method. As regards the time required, it may be said in general terms that in an extensive case, in which, for instance, the disease involves both sides of the face, a year, with intervals of rest, will

be required. In such a case progress is necessarily slower than when smaller areas have to be dealt with, for, as already said, when one spot is destroyed several others spring up or at least come into view. The use of pyrogallic acid, by reducing thickening and thus allowing an easier passage of the light, helps to shorten the treatment. We have used it in a few cases in an ointment of the strength of five per cent. applied daily for a week; then the part is allowed to heal and the light treatment is resumed.

FUTURE DEVELOPMENTS.

If I am asked as to future developments of this method, my answer must be that I am a thorough believer in the sound principle enunciated, I think, by one of your statesmen, "Never to prophesy unless you know." It would be easy to conjure up before the mind's eye a vision of the light slaying the tubercle bacilli, not only in the skin, but in the lungs and in the bones, and even of its curing cancer. At present we must be content to know that we have in the light rays the best remedy for lupus that has yet been found. This remedy, however, is by no means infallible, and it has a comparatively limited field of application even on what may be called its own ground. The disease in which, next to lupus, it has been most successful in my hands is rodent ulcer—a fact which cannot be explained by the bactericidal properties of light, as there are no specific bacilli to be killed. In lupus erythematosus it does some good, but in alopecia areata I have not had the success which is alleged by Dr. Bie. On the whole, however, my results go to confirm his statements.

THE QUESTION OF RECURRENCE.

As to the question of recurrence in lupus, I have not had my cases under observation sufficiently long to say anything definite. I have quoted what Dr. Bie says on this subject, and, though his opinion in this matter seems to me somewhat optimistic, it is that of a man who has had a very large experience of the treatment, and it is therefore entitled to respect.

LIGHT IN CUTANEOUS EPITHELIOMA.

Dr. Bie has recently published a brief report of sixteen cases of epithelioma of the skin treated by concentrated light. In three cases there was no improvement; in five there was improvement, but not cure; in one, after apparent cure, recurrence speedily took place; in seven the result is described as a "cure," which has been maintained respectively for two years and a half, eleven months (two cases), nine months and a half, and six months (three cases). Professor Finsen concludes from the cases so far treated that the cases of epithelioma which

can be dealt with successfully by means of light are superficial well-defined forms in accessible situations.

An apparatus for which it is alleged that it is much less costly, while the loss of chemical rays is less than in Finsen's, was brought before the Académie de médecine by MM. Lortet and Genoud in February, 1901. A full description of its construction, with notes of nine cases treated by means of it, is given by E. Lepeut in a *thèse* presented to the University of Paris on July 17, 1901. He maintains that the treatment with his apparatus and the results are better than with Finsen's.

THE X RAYS.

Mention has been made of the combined use of the light treatment and the x rays in lupus. The x rays alone have been used with success by Dr. J. H. Sequeira, of the London Hospital,² in several cases of rodent ulcer. Stenbeck, of Stockholm, seems to have been the first who adopted this procedure. Dr. Margaret M. Sharpe³ has used the x rays with some success in lupus and in a case of exuberant growth of the end of the nose. Dr. Thurstan Holland⁴ has treated two cases of lupus in the same way with excellent results. Dr. A. Everett Smith, of Olean, N. Y.,⁵ has reported a case of lupus vulgaris of fifteen years' standing which he cured by exposure to x rays. I have myself used the x rays in three cases of very advanced rodent ulcer with great excavation. The result in all was a complete cure. It is right to mention that in two of those cases I had the advantage of the technical skill of Dr. Low. I confess I expect a more brilliant future for this method than for the light treatment, though I am scarcely inclined to follow Dr. Schiff and Dr. Freund, of Vienna, according to whom the scope of this method embraces all dermatoses caused by parasites and all skin affections in which removal of hairs is an important step in treatment (favus, ringworm, etc.). The x-ray treatment is, therefore, according to them, indicated in (a) lupus vulgaris, mycosis of the skin, etc., (b) hypertrichosis, sycosis, favus, folliculitis, furunculosis, acne, etc., (c) lupus erythematosus.⁶

Perhaps with regard both to the light-ray and the x-ray treatment we have only caught a glimpse of a new ocean of therapeutic enterprise, and our attitude should be that of

" * * * stout Cortez when with eagle eyes
He stared at the Pacific—and all his men
Look'd at each other with a wild surmise—
Silent upon a peak in Darien "

¹British Medical Journal, February 9, 1901.

²Archives of the Roentgen-Ray Society, May, 1901.

³Ibid.

⁴Philadelphia Medical Journal, December 1, 1900.

⁵Die gegenwärtige Stand der Radiographie, Separatabdruck aus der Wiener klinische Wochenschrift, 1900, No. 37.

A BRIEF STATEMENT OF THE SANITARY WORK SO FAR ACCOMPLISHED IN THE PHILIPPINE ISLANDS AND OF THE PRESENT SHAPE OF THEIR SANITARY ADMINISTRATION.*

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In presenting to you a statement outlining sanitary conditions in the Philippine Archipelago, it should be borne in mind that the methods adopted since the American occupancy have been tentative in character and designed mainly with a view to the preservation of the health of the troops, and as the city of Manila was for a considerable length of time the only place occupied by troops, the regulations then issued applied only to that city. As other parts of the country came into our possession the scope of work was enlarged and general regulations governing the whole archipelago, with special instructions for municipalities, were issued. Even in this extension of work, nothing of a permanent nature was attempted, since it was known that the civil authorities would sooner or later assume control and establish a permanent system and a definite code for the sanitation of the islands.

The condition of Manila at the time of our occupancy was about the same as that of other Spanish cities in Cuba and Puerto Rico which came under our control. But little attention had been given to sanitation from the outbreak of the insurrection of the Filipinos against the Spaniards until after the surrender of Manila to the Americans; the state of affairs can therefore be better imagined than described. Immediately following the surrender, the general commanding gave orders for the establishment of a board of health in connection with the Provost Marshal General's Bureau, and medical officers were detailed for its organization. Work was promptly commenced by the employment of a sanitary force to clean the streets, alleys, and public parks, remove garbage and excreta, cleanse the prisons and other public buildings, and put the city in as good order as possible. A hospital for contagious diseases was established, and, as small-pox was epidemic in the city, a system of compulsory vaccination was instituted. After the reestablishment of order the work of the board was extended by the appointment of inspectors for the markets and of the food supply, and, later, attention was given to overcrowded tenements, segregation of prostitutes, cleansing of the sewers, etc. An examination of the Spanish laws on sanitation showed that in most in-

*Read before the American Public Health Association, at Buffalo, N. Y., September 17, 1901.

stances they were well drawn, but had not been properly executed, and the board found that under press of active military operations and in the absence of a sufficient revenue there was much difficulty in carrying out even the American additions; this was especially true in regard to the disposal of garbage and excreta, since funds were not available for the construction of cremating furnaces or for a renovation of the sewer system; but arrangements were made by which garbage was placed in scows and dumped into the bay, an objectionable method, as the tides returned a portion to the shore; but it served temporarily the purpose in view and was the best that could be done. Fortunately the water supply of the city was ample, and although its quality was not above suspicion, the measures taken to sterilize it for drinking purposes left but little cause for apprehension.

Early in 1900, the troops having advanced into the provinces, and the city being somewhat relieved of its overcrowding, the details of the original plans were amplified, additional inspectors appointed, and municipal ordinances passed to insure the proper execution of the work. To enforce the regulations for the sanitation of houses, legal procedures against the owners were authorized, and they who, after due notice, failed to rectify reported defects were mulcted in the cost, the work being performed under direction of the board of health. The result of this systematic service was very gratifying, and, although the health authorities were working in the face of a population that was bitterly hostile to them and to their methods, it was not long before the city was comparatively clean and the inhabitants had learned that American methods and energy led to conditions of comfort hitherto unknown.

It then became necessary to consider the health of the pueblos and barrios which the troops occupied in the provinces, and for this purpose the functions of a Superior Board of Health for the archipelago devolved upon me as chief surgeon of the division. I accordingly recommended to General MacArthur, the military governor, that the commanding officers of the troops occupying these places should be instructed to use every effort to put them in proper order and to require the medical officer serving with the command to act as health officer, following a line of general instructions based on the methods followed in Manila, special orders being given for the vaccination of the population of the towns and neighboring barrios so far as the people could be reached. Funds were provided for the purchase of medicines to be used with the indigent sick, and the presidentes were enjoined to make provision for their hospital accommodation when necessary.

At seaports, the local medical officer, in addition to his military duty, served as quarantine officer, and

followed the methods of inspection and quarantine laid down by the Marine-Hospital Service. About this time attention was drawn to the large number of lepers who had been turned loose throughout the country by the closing of the institutions in which they had been sheltered, reports from the provinces indicating that about 30,000 of these unfortunates were to be found in the islands, for whose care there were but two organized hospitals, one in Manila and one in Cebu. As their presence was a menace to the public health and the necessity for their early segregation was obvious, it was deemed best to recommend it by colonization, after the manner of the leper settlement in the Sandwich Islands.

A board of officers was accordingly convened to examine certain islands with a view of selecting one or more, for the purpose of preparing plans and estimates of cost for building for the administrative personnel, and for the formulation of a scheme for the general conduct of the colony. The report, which was exhaustive on the subject, was submitted to the Civil Commission and has doubtless by this time been acted upon. The fertility of soil and salubrity of climate in these islands make the establishment and maintenance of such a colony easy and inexpensive, and with a relatively small allotment of funds for administrative affairs it should in a short time be self-supporting. The proposed regulations provide for the compulsory isolation in this colony of all lepers, but a preliminary residence in detention hospitals of those in the incipient stages of the disease is authorized, in order that a cure may be attempted. General MacArthur took great interest in the preparation of these administrative measures, and by his prompt and vigorous action their success was assured.

In the provincial towns, the labors of the health officers were actively assisted by the local authorities, who became deeply interested in the work, and, through their knowledge of the people and place, expedited measures that would otherwise have been slow in accomplishment.

The most crying need in the early days of our occupancy of the provinces was to check the ravages of small-pox. Virus for vaccination was scarce, and, as it was brought from the United States, much of it had become inert. The vaccine farm that had been organized in Manila for propagating lymph from caribao calves was utilized, and in a short time an abundant supply of fresh virus was obtainable and issued as called for by medical officers. Native vaccinators were employed, and when a large population was to be protected, men skilled in performing the operation were sent from Manila; these made house-to-house inspections and vaccinated all who were not immune from small-pox. This work was by no means devoid of danger, and several in-

stances occurred where the vaccinators were captured by insurrectos or kidnapped by the inhabitants and killed. In many places distant from the vaccine farm the work was much hampered by the rapid deterioration of the virus by the heat, but as ice machines were installed in various parts of the country this difficulty was measurably overcome by depositing the stock in cold storage and drawing upon it as wanted. The success of the Manila vaccine farm was so pronounced that similar farms were established in other parts of the archipelago and soon obtained like results. Over a million units of virus were issued from the Manila farm during the past year. The effect of this wholesale vaccination was quickly apparent in the disappearance of small-pox from many localities where it had previously committed great ravages, and by a falling off of about 80 per cent. in the number of cases among the troops. In all cases where the disease continued, it was found that the work of vaccination had been carelessly done or had been in some way interfered with. The effect among the school children was very marked, and reports of cases occurring among them, that before had been of almost daily occurrence, are now very rare.

To facilitate the work of the board of health, a pathological laboratory had been established in a modest way, to which additions were made from time to time, and it is now thoroughly equipped, and under the direction of Dr. Calvert has produced excellent work, notably in bubonic plague. A chemical laboratory has also been added and an efficient chemist placed in charge for the purpose of analyzing food supplies, liquors, etc. On behalf of the army, I established and equipped a pathological laboratory in Manila and placed Lieutenant Strong in charge. His work is doubtless well known to you and his contributions to the pathology of tropical diseases, especially intestinal parasites and dysenteries and diarrheas, have been of inestimable value. I also instituted a special study of the water supply for Manila, which included water furnished from the several distilling plants that had been installed for the use of the troops. At an early date the board of health instituted measures to secure a registration of marriages, deaths, and births, and established a Division of Vital Statistics, the record of which will appear in its forthcoming report for the past year. Examining boards were organized to determine the professional fitness of physicians, dentists, and pharmacists, and midwives were required to furnish evidence of their fitness to pursue their calling. All the people of these professions were required to procure licenses to practise. The examining and renovating of cemeteries was also made a special work, and the numerous defects in the old systems were corrected.

An idea of the work performed by the board of health during the past year can be best given in the following brief extract from its forthcoming report: "The important work of taking a census of the inhabitants of Manila was begun January 1st, and ended in April. It was made under the personal supervision of, and practically by, First Lieutenant Harry L. Gilchrist, assistant surgeon, U. S. army, chief of the sanitary division, board of health, and is believed to be the first accurate census of the city of Manila.

"The total population of the city, exclusive of officers and men of the army and navy, was found to be 244,732, divided as follows:

"Americans.	8,461
"Filipinos.	181,361
"Chinese.	51,567
"Spaniards.	2,382
"Other nationalities.	961
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"Total.	244,732

"In connection with the census a complete sanitary map of the city was prepared 'on which is checked every house, hut and outhouse; separate sanitary plans are also made for each premise, with population by age, sex, and nationality.'

"The number of deaths, including still-births, is 8,671, an annual rate of 42.54 per 1,000, exclusive of army and navy. Twelve cemeteries and one crematory are in charge of the board of health.

"Burial permits are required and certificates of deaths, when not furnished by attending surgeons, are made by municipal physicians, after examination of the dead body. A careful check is kept on the permits and cemetery reports; mistakes are investigated and are very rare.

"For the purpose of sanitary inspection, the city is divided into ten districts; the member of the board in charge of this bureau has a force of one interpreter, one chief inspector, ten district inspectors, and sixty inspectors; ten are Chinese and the rest are Filipinos. Irrespective of special work in epidemics, these men are required to make a weekly inspection of every house in the city, and report daily on the conditions found; they search for contagious disease, distribute rat poison, and disinfect when necessary. They have made in the period of ten months 114,032 inspections of premises, disinfected 722 houses, and cleaned 864 premises. A sanitary card is posted in each house, on which is noted the condition found by the inspector, with date of visit. The work done by the inspectors is thus checked by the chief and district inspectors.

"The people evince a most gratifying willingness to accept the sanitary instructions of the board of

health, and the sanitary condition of the city is excellent, as far as the inhabitants can make it so, and the many unhygienic conditions remaining can only be remedied by the municipality and by the expenditure of much money.

"Improvements most urgently needed are (1) a system of drains and sewers; (2) dredging and cleaning moats and canals; (3) a water supply pure and ample.

"Licenses involving physicians, pharmacists, and dentists, the sale of food and drink, offensive trades and lodging-houses, are referred to the board of health, and no license is granted or renewed unless approved by the board of health. Tenements and lodging-houses are apt to be overcrowded under present conditions, but a limit is to be established, and lodging-house licenses will be issued for a maximum number, and inspections made to see that the law is complied with.

"The board of health has had to contend with the following infectious or contagious diseases: Bubonic plague, small-pox, tetanus, typhoid fever, tuberculosis, whooping-cough, measles, mumps, beri-beri.

"Compulsory notification is required of each case of the above-mentioned diseases, except beri-beri and tuberculosis.

"Cholera has, fortunately, not gained an entrance, though present at Singapore and on shipboard at Hong Kong.

"Bubonic plague exists in Manila and is dealt with in the most stringent manner; 254 cases, with 199 deaths, have occurred.

"Last year the disease reached its maximum in March; this year in April. Experience shows that the disease increases with the hot weather, reaches its maximum before the maximum temperature is reached, and declines with the rainy season to almost nothing.

"The following method of dealing with the plague is in use: Medical officers, usually acting assistant surgeons awaiting transportation to the United States and temporarily reporting to the board for duty, are stationed in the infected districts, each having an office with telephonic connection with the board office; every case of illness and every death in the district is reported to them, and they visit every case and inspect the dead; when necessary they send the patient or body to the General Plague Hospital or the Chinese Plague Hospital in an ambulance used for this purpose, and summon a disinfecting cart at the same time; an inspector accompanies each patient or corpse to its destination; another takes charge of the house until the disinfecting cart arrives; the floors are wet down with 5-per-cent. carbolic acid; all clothing and articles which have been in contact with the infected person, and every-

thing not easily disinfected, are burned in the street; other articles are sent to the steam disinfector. The house is systematically treated with the carbolic solution, which is thrown into all crevices by a force pump; all occupants of the house take a disinfectant bath, and exposed persons are sent to the detention pavilions. The house-owner is compelled to make such alterations and repairs as may be needed, and the house is placarded and visited daily until twelve days have passed. The disinfecting carts are specially constructed and have a metal-lined compartment for articles to be sterilized, besides room for apparatus, etc. Bodies are removed in metallic caskets, to be burned or buried in quick lime; inspectors are on duty day and night.

"Experience shows infected districts to be about the same as last year. A system of depopulation is being actively carried on; infected houses and unsanitary hovels in their neighborhood are attacked and cubicles and partitions are removed, outhouses and structures built in yards and unfit for human habitation are destroyed, letting in sun and air; sewers and drains are flushed by the fire department, under supervision of the board; all evicted people are given shelter in tents until they can find dwelling places.

"These measures will have to be carried on unremittingly, but the very extensive municipal sanitary improvements already mentioned must be accomplished before Manila can be considered a healthy city.

"Every precaution is taken to prevent the spread of plague from Manila to the provinces; all passengers leaving by ferries and inter-island boats are inspected in conjunction with the Marine-Hospital Service, and a medical officer inspects all passengers leaving by train.

"Small-pox has been very mild, with one hundred and one cases and two deaths; vaccinations have been very effectually carried out, and 22,590 children and 43,128 adults have been vaccinated during the period.

"One hundred and fifty-nine lepers are under treatment in Manila, and twenty-seven died during the period.

"Much valuable work has been carried on in the Municipal Laboratory, principally on plague, although leprosy, beri-beri, typhoid fever, and tuberculosis have been studied and encouraging experiments made in preparing serums protective against plague, typhoid fever, and tetanus.

"Rinderpest, which is prevalent among the cattle of the Philippines and bears directly, of course, on the public health, by affecting the meat and milk supply, is being studied here also; an immunizing serum is being tried and results are promising.

"Repeated bacteriological examinations of the

water supply of Manila, of the Mariquina River and Laguna de Bay, have been also made in the laboratory as a preparation for the contemplated work of providing the city with a pure and ample water supply."

The board is now much embarrassed in its operations by the scarcity of American doctors, who, through permanent employment, would be interested in the work and carry it on with increased efficiency, and dependence has to be placed mainly on medical officers of the army, who, from the conditions of the military service, are subject to constant change. The native doctors are, as a rule, intelligent and more or less efficient, but are seriously handicapped by lack of knowledge of the English language and consequent inability to comprehend the instructions given them. This difficulty will now be rectified in a measure since many volunteer medical officers have remained in the islands after muster out from the service, and are available for this duty and have been so employed by the board.

About the time that the governmental control of the islands was transferred to the Civil Commission, that body by legislative enactment created a Department of Public Health, to consist of a commissioner, a superintendent of inspection, a sanitary engineer, a superintendent of government laboratory, and a secretary. These officers, in addition to the specific duties assigned them, act as a superior board of health for the Philippine Islands. The chief surgeon of the military division, the chief officer of the Marine-Hospital Service, and the dean of the Association of Physicians and Pharmacists of the Philippine Islands are made honorary members, but not entitled to a vote. There was also created a Department of Government Laboratories, of which the superintendent above referred to is made the head. The commissioner of public health is the chief executive officer of the bureau and has general supervision and control of its branches, of hospitals for contagious and infectious diseases, and of the measures necessary for combating epidemic diseases.

The superintendent of inspection has supervision and control over municipal sanitation, and the sanitary engineer considers and reports on mechanical sanitary apparatus and plans for sewers, drainage, and water systems.

The superior board of health, which also serves as a local board of health for the city of Manila, is charged with the general supervision over all the interests of the public health in the Philippines and the study of their vital statistics; it is also to investigate into the causes and pathology of diseases and the means of preventing them, including those of public animals; to disseminate useful information regarding them among the people; to draft and recommend to the central legislative body suitable sanitary laws

and laws governing the admittance of persons to the practice of medicine and its correlated specialties; for the control of offensive and dangerous industries or occupations; and to prepare and recommend suitable provisions for the extension of the service of the bureau into the departments, provinces, and municipalities; it is given power to require reports and information from all public institutions, to order the abatement of nuisances, to enforce interior quarantine, and to decide on suitable locations for the necessary laboratories for the production of vaccine virus, serums, and prophylactics, and to distribute these products for use under its direction. The superintendent of government laboratories has general charge of the construction and equipment of all government laboratories in the islands and the purchase of apparatus and supplies for them, and may be the director of any one of them. He is to establish a biological laboratory for the investigation into causes, etc., of diseases of man and domestic animals or of animals utilized for food, and the methods of combating them; also a chemical laboratory for investigation as to the purity of foods and drinks, the properties of medicinal plants and herbs native to the Philippines, and such other chemical work as may be required by the board of health; and also laboratories for the production of vaccine virus, serums, and prophylactics necessary for the safeguarding of the public health.

It will thus be seen that the Philippine Islands are provided with a systematic sanitary organization and a well-considered sanitary code. In the hands of men of ability, whom I am sure the commission will obtain, it is certain that the interests of the public health will be well cared for, and that the profession at large will benefit by the result of their labors, especially in the biological and pathological department, from the study of the tropical diseases incident to man and animals and of the natural history of that country.

Under the authority conferred on the board to recommend suitable provisions for the extension of the service into the provinces, it is proposed to establish boards of health in each municipality, with an organization and sanitary code suited to the locality, but based on the general lines of the superior board; a health officer at the headquarters of each provincial government will have general supervision of the municipal boards throughout the province, communicating with the superior board on all matters of importance, transmitting with comment their regular reports, and controlling their general administration with a view of securing cooperation and harmonious action on all matters of common interest. It is the policy of the administration to favor the autonomy of municipalities and to avoid any general action that may be oppressive or inapplicable.

able to special localities; but the general principles of sanitation, as already established and in operation by the military authorities, will be carried out, natives gradually being placed in the positions now occupied by army officers, as the civil government of municipalities becomes established. At the important seaports the same general principle will be applied, and marine and inland quarantine regulations strictly enforced. Every effort will be made to instruct the people in the benefits to themselves and to their business of the maintenance of public health, and in the necessity for properly caring for their own indigent sick. This will take time, since heretofore such matters have been almost entirely in the hands of the ecclesiastical authorities, and the people are unaccustomed to responsibility in the case of the sick.

The most important subjects with which the superior board has now to deal are: 1. The establishment of a thorough system for the vaccination and revaccination of the non-immune population of the islands and the disinfection of infected buildings and clothing. Small-pox has been so common a disease that the people have ceased to fear it; with them it is a children's disease, since they are practically the only susceptible persons, the adult population being, as a rule, immune and representing the "survival of the fittest;" but foreigners will continue to become infected until the sources of the disease are eradicated. 2. The establishment of methods for the disposal of excreta, in order that the purity of the water supply may be assured. Diseases of the intestinal tract claim the largest number of victims, both among natives and foreigners, and show the highest death rate of any other class. Dysenteries and diarrhœas, specific and non-specific, typhoid, and the disorders produced by intestinal parasites, are rife. As the organisms which propagate them are invariably water-borne, the necessity for preventing their access to this supply is self-evident. The habits of the provincial natives are very primitive in respect to calls of Nature; receptacles for excreta are practically unknown, and it follows that there are no artificial methods for its disposal; as a result, it either disintegrates and returns to the soil, desiccates and is blown away by the winds, or is washed by rains into the streams; and it is safe to say that there is scarcely an unpolluted water course in the islands, except high in the mountains and in uninhabited regions. At present, safety can only be assured by sterilizing all drinking-water, and in communities where this is understood water is boiled or distilling plants are installed. 3. To check the progress of and to eradicate, if possible, *beri-beri*, which is very prevalent among the natives. 4. To attempt the destruction of the mosquito larva and check the progress of malaria. This subject

has been carefully considered and in certain places successfully dealt with, but the vast extent of country under rice cultivation, where the use of petroleum is impracticable, makes it doubtful if its general application is feasible. 5. To control the progress of venereal disease. The influx of a foreign population, Asiatic, European, and American, has made large increase in this class of disease, which is spreading from the seaports as centres outward into the provinces, and in time a large number of native women will be affected, and with less prospect of cure than their sisters in the cities; the native women outside of the cities are, as a rule, free from disease, but it is they, without opportunity, knowledge, or means sufficient to obtain treatment, who will, when infected, become the greatest sufferers and the greatest menace to the public health. The segregation of this class of women to a certain portion of the towns, a supervision of their health, and a duly recorded treatment of the diseased should be systematically carried out, lest an irreparable injury be done to the people of these islands by those whose object it is to help and elevate them. This subject must be looked at squarely in the face, and dealt with like any other contagious disease.

"Wrecked health, mental and physical decay, a host of local disability which may affect almost any part of the body, and the transmission of the disease to those yet unborn, sap directly and indirectly the vigor of the race; why all this should generally be avoided as a topic unfit for public discussion, and only to be indirectly alluded to, is one of the mysteries that no one can explain. Our English-speaking race, usually so direct, frank, and practical, have on this point carried commendable modesty, and a pardonable aversion to discuss unpleasant subjects in public, to such an extreme that we are credited by other nations with being insincere and hypocritical.

"We spend thousands to prevent the spread of small-pox and yellow fever; we would take any necessary precautions, no matter how stringent, to prevent the spread of bubonic plague or leprosy in our midst, and yet we let this evil increase and gain new victims because public opinion forbids us to openly recognize that a certain class in the community gains its livelihood by a profession older than the days of Abraham, and to take steps to regulate this calling, as we should immediately do with any other noxious trade or business hurtful to the public health."

In the city of Manila a very important and still unsolved problem is the sanitation of the moats that surround the walled city and the "esteros," or creeks, that intersect other portions of the main city. There are two moats, parallel with each other, and approximately three thousand yards long and two

hundred feet wide, and from four to six feet deep, and about a dozen "esteros," of various lengths, from one quarter of a mile to two miles, about fifty feet wide and from four to five feet deep. Although the water in them ebbs and flows with the tides of the bay, it is always polluted by sewage and other filth, by rank vegetation and fungoid growths, while the mud and ooze on the sides and bottom are the home of endless organic impurities from which at all times there is an unbearable stench; these should be cleansed, and either converted into regular sewers, with concrete beds, or filled with earth and made into roadways.

Finally, I can fully endorse the statement made in the last report of the Philippine Commission, "that no tropical islands in the world enjoy a better climate than do the Philippines"; but that certain "classes of diseases have to be reckoned with here." As to the disease, if proper laws are enacted and enforced to govern the public health, the intelligent foreign visitor or resident may enjoy almost perfect immunity from sickness, provided he will only take care of himself. The native, however, does not know how to take care of himself; not only is he ignorant of the first principles which govern the preservation of health, but he has never had anybody sufficiently interested in him to instruct him in these principles. It has been a part of our duty to so instruct him.

When we reflect that some of the diseases found among these people are virulent in the nature of their infection, and in other tropical countries quickly develop into epidemics which are attended with frightful mortality, and that these people have been living under conditions of hardship and suffering that form ideal causative factors in producing epidemics, it is a subject for profound congratulation that, although frequently threatened, the advance of disease has been controlled and no epidemic has occurred, and, moreover, that the amount of sickness and mortality has never exceeded what would naturally be looked for under the circumstances. Among the foreign population, which has numbered more than 100,000 souls, including the army and navy, the average monthly rate of sickness during the past eighteen months has not exceeded eight per cent. and has been as low as five per cent., a rate not obtained in the tropical possessions of any other nation.

I have no hesitancy in saying that these remarkable results are mainly due to the faithful and conscientious manner in which the officers and enlisted men of the medical department performed their self-imposed sanitary duty, and to the intelligent cooperation that was accorded them by the officers of the line, with whom they served. This object lesson in one of the most important characteristics of the

American people, humanity in war, has made a deep impression on the Filipinos, and has been an important factor in winning their allegiance to our government. It is a privilege to do honor to the men who have followed so faithfully the Golden Rule, and who have served their country so well.

THE ADVISABILITY OF EARLY OPERATIVE INTERVENTION IN ACUTE MASTOIDITIS; REPORT OF A CASE.

By EDWARD BRADFORD DENCH, M. D.,

NEW YORK,

PROFESSOR OF OTOTOLOGY AT THE UNIVERSITY AND BELLEVUE HOSPITAL MEDICAL COLLEGE; AURAL SURGEON TO THE NEW YORK EYE AND EAR INFIRMARY; CONSULTING OTOTOLOGIST TO ST. LUKE'S HOSPITAL AND TO THE NEW YORK ORTHOPÆDIC DISPENSARY AND HOSPITAL.

It seems rather absurd, in these days of advanced aural surgery, to burden the readers of any current medical journal with the report of a case of simple mastoiditis. The present case, however, is so unique, so far as my experience is concerned, that I beg to report it in detail.

The patient was a young woman, about twenty-eight years of age, who was referred to me by a colleague, with the following history: About four months before I saw the patient, she had suffered from an acute inflammation of the left middle ear, complicating an attack of influenza. Free discharge was present, and the patient, apparently, made a complete recovery. Two months after the first attack there was a return of the pain in the ear, and the hearing, which had been improving gradually since the acute attack, became progressively impaired. There were sensations of fulness in the ear, varying with the position of the head, but especially when the patient inclined the body forward. At the time of the acute attack there had been considerable mastoid tenderness, and there was also a history of post-aural tumefaction. My colleague, who referred the case to me, had not actually seen the post-aural tumor, but, when the patient came for examination, he found that there was some mastoid tenderness. When the otalgia returned the second time, there was also some post-aural tenderness for a few days, but no tumefaction of the tissues over the mastoid process. The patient was referred to me on account of the hearing growing progressively worse, in spite of the fact that all acute symptoms had disappeared—that is, there was no tenderness on pressure over the mastoid, and there was no pain in the ear. An examination revealed all of the landmarks of the membrana tympani obscured, with a sinking of the upper and posterior wall of the canal and of the corresponding portion of the membrana tympani. Inflation by means of the catheter showed that there was no fluid in the middle ear.

I regarded the case as one of acute inflammation of the tympanum in which resolution had been unusually slow. I also believed that, at the time of the

first attack, there had been some involvement of the mastoid antrum, and that the delayed resolution was due to an extension of the inflammation into the pneumatic structures adjacent to the middle ear.

After examining the case carefully, I advised catheter inflation twice weekly, and gave as an opinion that the patient would make a slow, but fairly good, recovery. I did not see the patient again until about two months and a half later, when her physician called upon me to say that he had seen the patient only a few days before, and that, at that time, she had a fluctuating swelling behind the ear, which he had incised, and that about a half a drachm of pus had been evacuated. It seems that the history of the case, after I saw the patient, was somewhat as follows:

The medical attendant had followed my directions carefully, and, as the result of systematic inflation, the hearing had gradually improved. The patient had then passed from observation for a few weeks, and finally had returned with the post-aural tumefaction already mentioned. I saw the patient the day after the incision had been made, and, by means of the probe, detected roughened bone at the bottom of the incision. Upon inspecting the canal there was but slight sinking of the upper and posterior wall and of Shrapnell's membrane; in other words, the evidences presented upon otoscopic examination were no more indicative of an inflammation of the mastoid process than they had been at the time when I first saw the patient, four months before. In spite of this fact, the patient had slowly developed a suppurative process, undoubtedly originating in the mastoid cells, which had evacuated itself spontaneously through the mastoid cortex, thus forming a post-aural abscess.

The patient was immediately prepared for operation, and a typical mastoidectomy was performed. On exposing the mastoid cortex, a large perforation was found in the bone, and a probe introduced into this opening could be passed downward and forward through the mastoid antrum into the middle ear. The mastoid cells were completely filled with a mass of granulation tissue. The trabeculae between the cells were carious, and the entire mastoid process was, in fact, converted into one large cell filled with granulation tissue. The entire mastoid cortex was removed, and the walls between the various pneumatic cells were broken down. The tip of the mastoid process was taken away, and, even in this part, the bone was found very much softened. After all softened bone had been removed, the bony cavity was carefully packed with sterile gauze, the lips of the cutaneous incision were approximated but not sutured, the usual sterile dressing was applied, and the patient returned to bed.

The further history of the case was uneventful, and the patient has made an uneventful recovery.

I report the case for the following reason: Some time ago, in a paper before the Otological Section of the Academy of Medicine, I strenuously advocated early operative intervention in all cases of suspected mastoiditis, and emphasized the point that, in doubtful cases, an exploratory operation upon the mastoid was perfectly justifiable. In a second article, read before the Laryngological and Otological Section of

the American Medical Association, held at St. Paul, June 4, 1901, I advised the same procedure in the treatment of mastoiditis.

In taking a stand so radical as that taken in these two articles, I have been frequently confronted by the statements of eminent men, that they have seen cases of undoubted mastoid inflammation recover without operation; that they have even observed cases in which there has been, not only pronounced mastoid tenderness, but also a fluctuating swelling behind the ear, and that, under the expectant plan of treatment, both the tumefaction and the tenderness have disappeared, and the patients have made a complete recovery. It has always been my view that, whenever there is an inflammation within the mastoid cells sufficiently severe to cause a fluctuating post-aural swelling, operative intervention is invariably indicated, and spontaneous recovery is absolutely impossible.

The history above detailed seems to bear out this point. This patient had undoubtedly suffered at the time of the first attack of acute otitis media, from an inflammation of the mastoid cells, as evidenced by the history of exquisite tenderness over the mastoid process, and the development of a fluctuating tumor behind the ear. All of these symptoms had subsequently disappeared when I first saw the patient, although my colleague had recognized at an earlier date a certain amount of tenderness over the mastoid process, except from the previous history of the case, I had nothing to lead me to suppose, at the time of my first examination, that there could possibly be any involvement of the mastoid cells aside from the sinking of the upper and posterior wall of the canal and the corresponding portion of Shrapnell's membrane. As there was no fluid in the middle ear at that time, as proved by catheter inflation, I was inclined to disregard this evidence of an inflammation of the mastoid, although I have always considered it one of the strongest physical signs of mastoid involvement. In spite of this fact, extension to the mastoid process was found at the time of operation, six months after the primary attack of acute otitis media.

It seems to me that we can have no stronger argument for the advisability of early operative intervention upon the mastoid process than the history of a case such as this. It should be remembered that, under aseptic precautions, the opening of the mastoid process is a procedure absolutely devoid of danger. On the other hand, delay in a doubtful case may lead to most serious complications. Had the case, the history of which is narrated above, been neglected for a longer period, it is not only possible, but exceedingly probable, that infection of the intracranial structures would have followed, and that the patient would have lost her life.

While this case is unique in my experience, somewhat similar cases have been reported. At the last meeting of the Section on Laryngology and Otology of the American Medical Association, held in St. Paul, on June 4, 1901, Dr. Hiram Woods, of Baltimore, reported three cases in which infection of the mastoid process had apparently occurred as a late complication of an acute middle-ear inflammation. While my own case did not occur until after I had listened to Dr. Woods's paper, I gave it as my opinion in the discussion of his able article, that the infection of the mastoid was either coincident with, or followed very closely upon, the middle-ear infection, but that the germs were not sufficiently virulent to develop until after the subsidence of the inflammatory process within the middle ear. It seems quite probable that this was the pathological process in the case I have already narrated.

We know from literature that an otitic brain abscess, for instance, may remain latent for a long time, but may be excited into renewed activity by some recent infection, such as an acute inflammation of the middle ear. It seems not improbable, therefore, that when we have an acute purulent otitis media, some of the micro-organisms may find their way into the mastoid cells. Here they may lie dormant for some time, or they may at first give rise to symptoms indicative of a mild mastoiditis. Under proper local treatment all of these symptoms may subside and the germs may lie dormant for an indefinite period. From some exciting cause, leading to a congestion of the tympanic mucous membrane, these germs may again become virulent and capable of infecting the deeper structures of the mastoid. For this reason, I believe that, in every case where we have any evidence of mastoid involvement, it is safer for the patient that the surgeon should advise immediate operation, simply for the purpose of exploration, rather than attempt to abort the inflammatory process by the local abstraction of blood, the application of cold, and kindred measures.

17 WEST FORTY-SIXTH STREET.

The New York Academy of Medicine.—The Section on Surgery met on October 14th, at 8.15 o'clock. The order of business was as follows: Presentation of Patients: (1) Trephining for Traumatic Epilepsy, by Dr. Charles H. Peck; (2) Removal of Foreign Body from Urinary Bladder, by Dr. John A. Hartwell. Paper of the Evening: Practical results in 1,000 cases of Nitrous Oxide and Ether Narcosis, by Dr. H. W. Carter; Discussion by Dr. De Garmo, Dr. Lloyd, Dr. Fuller, and Dr. Squier. Presentation of Instruments: An Adjustable, Automatic Mouth-gag, by Dr. H. W. Carter.

REPORT OF THE MEDICAL STAFF ATTENDING THE LATE PRESIDENT WILLIAM MCKINLEY.

The following report has received the approval of, and is issued by, the undersigned, the medical staff attending the late President, William McKinley.

P. M. RIXEY,
MATTHEW D. MANN,
HERMAN MYNTER,
ROSWELL PARK,
EUGENE WASDIN,
CHARLES MCBURNEY,
CHARLES G. STOCKTON.

October 12, 1901.

HISTORY OF THE CASE.

President William McKinley was shot by Leon F. Czolgosz in the Temple of Music at the Pan-American Exposition, Buffalo, N. Y., at about seven minutes past four on the afternoon of Friday, September 6, 1901. Two shots were fired. One bullet struck near the upper part of the sternum, and the other in the left hypochondriac region. The President was immediately conveyed to the Emergency Hospital on the Exposition grounds by the motor ambulance, where he arrived at 4.18. Dr. G. McK. Hall and Mr. Edward C. Mann, medical student, of the house staff, were in charge of the ambulance, Medical Student T. F. Ellis being the driver.

On arriving at the hospital, President McKinley was at once placed upon the table in the operating room and undressed. During the removal of his clothing a bullet fell out and was picked up by Mr. Ellis. Dr. Hall placed a temporary antiseptic dressing over the wounds, and Mr. Mann ordered a nurse to administer 0.01 gramme of morphine and 0.002 gramme of strychnine hypodermically.

Dr. Herman Mynter, who had been telephoned from police headquarters to report immediately at the Exposition Hospital, was the first surgeon to arrive, at 4.45 o'clock. At that time Dr. P. W. van Peyma and Dr. Joseph Fowler, of Buffalo, and Dr. Edward Wallace Lee, of St. Louis, were present. Dr. Mynter brought with him Dr. Eugene Wasdin, of the United States Marine-Hospital Service.

Dr. Mynter inspected the President's wounds, and immediately saw their serious nature. He told the President that it would be necessary to operate, and at once set about making preparations, aided by the house staff and nurses and Dr. Nelson W. Wilson, sanitary officer of the Exposition, who at that time assumed charge of the hospital in the absence of Dr. Roswell Park, the medical director of the Exposition. The President's pulse on the arrival of Dr. Mynter was 84; he had no particular pain in the abdomen, and no apparent loss of liver dulness. He was evidently slightly under the influence of the morphine.

Dr. Matthew D. Mann arrived at the hospital at 5.10 p. m., having been telephoned for by Mr. John C. Milburn. He was followed, five minutes later, by Dr. John Parmenter.

An examination was at once made, followed by a short consultation between Dr. Mann, Dr. Mynter,



Dr. P. M. Rixey.

and Dr. Wasdin, which resulted in the decision to operate at once. The necessity for the operation was explained to President McKinley, and he gave his full consent. Immediate operation was decided upon because of the danger of possible continued internal hæmorrhage and of the escape of gastric or intestinal contents into the peritoneal cavity, and because the President's pulse was getting weaker. Moreover, the daylight was rapidly failing. Dr. Roswell Park, who, by virtue of his office, had been present, would have performed the operation, was at Niagara Falls, and although a special train had been sent for him, it was uncertain when he would arrive.

Dr. Mann was selected to do the operation, with Dr. Mynter as his associate, by the common consent of the physicians present and at the request of Mr. Milburn, president of the Pan-American Exposition, who stated that he had been requested by President McKinley to select his medical attendants. Dr. Mann selected Dr. Lee and Dr. Parmenter as assistants.

At 5.20 Dr. Mann directed the administration of ether to President McKinley, and requested Dr. Wasdin to administer it. Ether was chosen as being, on the whole, the safer anæsthetic. While the anæsthetic was being given the surgeons who were to take part in the operation prepared their hands and arms by thoroughly scrubbing with soap and water and immersing them in a solution of bichloride of mercury.

The operation began at 5.29. Dr. Mann stood upon the right-hand side of the patient, with Dr. Parmenter on his right-hand side. Dr. Mynter stood upon the left-hand side of the patient, and on his right was Dr. Lee. To Dr. Parmenter and Dr. Lee were assigned the duties of sponging and the care of the instruments. Dr. P. M. Rixey, U. S. N., President McKinley's family physician, having been detailed by the President to accompany Mrs. McKinley to the Milburn home, did not arrive until 5.30, when he gave very efficient service by guiding the rays of the sun to the seat of the operation by aid of a hand-mirror, and later by arranging an

electric light. Dr. Roswell Park arrived just as the operation on the stomach was completed, and gave his aid as consultant. Mr. E. C. Mann had charge of the needles, sutures and ligatures. Mr. Simpson, medical student, was at the instrument tray.

The nurses, under the charge of Miss A. C. Walters, superintendent of the hospital, were Miss M. E. Morris and Miss A. D. Barnes, with hands sterilized; Miss Rose Baron, Miss M. A. Shannon, and Miss L. C. Dorchester, assistants, and Miss Katharine Simmons attending the anæsthetizer.

Besides those immediately engaged in the operation, there were present Dr. P. W. van Peyma, Dr. Joseph Fowler, Dr. D. W. Harrington, and Dr. Charles G. Stockton, of Buffalo, and Dr. W. D. Storer, of Chicago.

DETAILS OF THE OPERATION.

President McKinley took the ether well, and was entirely under its influence in nine minutes after the beginning of the anæsthetization. The abdomen was carefully shaved and scrubbed with green soap, and then washed with alcohol and ether and the bichloride solution.

Inspection showed two wounds made by the bullets. The upper one was between the second and third ribs, a little to the right of the sternum. The use of a probe showed that the skin had not been penetrated, but that the bullet had probably struck a button or some object in the clothing which had deflected it. The lower wound made by the other bullet—a 32 calibre—was on a line drawn the nipple to the umbilicus. It was about half-way between these points, and about five centimetres to the left of the median line. A probe showed that this wound extended deeply into the abdominal walls, and that the direction was somewhat downward and outward.

An incision was made from the edge of the ribs downward, passing through the bullet wound and nearly parallel with the long axis of the body. A deep layer of fat was opened, and followed by incision of the fascia and muscles to the peritonæum.



Dr. Matthew D. Mann.

After cutting through the skin, a piece of cloth, unwound, and the bullet wound in its posterior wall doubtfully a bit of the President's clothing, was removed from the track of the bullet, a short distance below the skin.

On opening the peritonæum, the finger was introduced and the anterior wall of the stomach palpated. An opening was discovered which would not quite admit the index finger. This opening was located near the greater curvature of the stomach, and about two centimetres from the attachment of the omentum; its edges were clean-cut and did not appear to be much injured.

The stomach was drawn up into the operation wound, and the perforation very slightly enlarged. The finger was then introduced and the contents of the stomach palpated. This was done to see if the stomach contained food, and also with the hope that possibly the bullet might be in the stomach. The stomach was found to be half-full of liquid food, but no evidence of the ball was discovered. In pulling up the stomach a small amount of liquid contents escaped, together with a good deal of gas. The tis-

sues around the wound were carefully irrigated with hot salt solution and dried with gauze pads. The perforation in the anterior stomach wall was then closed with a double row of silk suture (Czerny-Lembert). The sutures were not interrupted with each stitch, but four stitches were introduced before the ends were tied. The loop was then cut off and the suture continued. About eight stitches were used in each row. The silk used was fine black silk, the needle being a straight, round sewing needle.

This opening was closed in the same way as the anterior wound, but with 'great difficulty, as the opening was down at the bottom of a deep pocket. A short curved surgical needle was necessary here. Little or no gastric contents appeared around this opening, but after it had been closed the parts were carefully irrigated with hot salt solution.

The operation on the stomach being now finished, Dr. Mann introduced his arm so as to palpate carefully all the deep structures behind the stomach. No trace of the bullet or of the further track of the bullet could be found. As the introduction of the hand in this way seemed to have a bad influence on the President's pulse, prolonged search for further injury done by the bullet or for the bullet itself was desisted from. The folds of the intestine which had



Dr. Herman Mynter.



Dr. Roswell Park

sues around the wound were carefully irrigated with hot salt solution and dried with gauze pads. The perforation in the anterior stomach wall was then closed with a double row of silk suture (Czerny-Lembert). The sutures were not interrupted with each stitch, but four stitches were introduced before the ends were tied. The loop was then cut off and the suture continued. About eight stitches were used in each row. The silk used was fine black silk, the needle being a straight, round sewing needle.

In order to examine the posterior wall of the stomach, it was necessary to enlarge the incision, which now reached about fifteen centimetres in length. The omentum and transverse colon were pulled well out of the abdomen. The omentum was enormously thickened with fat and very rigid. In order to reach the back wall of the stomach, it was necessary to divide about four inches of the gastrocolic omentum, the cut ends being tied with strong black silk in two masses on each side. In this way the stomach could be drawn up in the operation

been below the stomach were inspected for injury, but none was found. The entire gut was not removed from the abdomen for inspection, as the location of the wound seemed to exclude its injury. To have made a satisfactory search for wounds in the President's back, it would have been necessary to have entirely eviscerated him. As he was already suffering from shock, this was not considered justifiable, and might have caused his death on the operating table.

Before closing the abdominal wound, Dr. Mann asked each of the surgeons present, whether he was entirely satisfied that everything had been done which should be done, and whether he had any further suggestions to make. Each replied that he was satisfied. The question of drainage was also discussed. Dr. Mynter was in favor of a Mikulicz drain being placed down behind the stomach-wall. Dr. Mann, with the concurrence of the other surgeons, decided against this, as being unnecessary.

As the last step in the operation, the tissues around

the bullet track in the abdominal wall were trimmed, in order to remove any tissue which might be infected. The abdominal wound was then closed with seven through-and-through silkworm-gut sutures, drawn only moderately tight, the superior layer of the fascia of the rectus muscle being joined with buried catgut. The edges of the skin were brought together by fine catgut sutures. Where the bullet had entered there was slight gaping of the tissues, but it was not thought advisable to close this tightly, as it might allow of some drainage. The wound was then washed with hydrogen dioxide and covered with aristol powder and dressed with sterilized gauze and cotton, which were held in place with adhesive straps. Over all was put an abdominal bandage.

The President bore the operation very well. The time from the beginning of the administration of the anæsthetic until its discontinuance was exactly an hour and thirty-one minutes; the operation was completed at 6.50 p. m., having lasted from the time of the first incision, an hour and twenty-one minutes. At the beginning of the operation President McKinley's pulse was 84. At 5.38, 0.002 gramme of strychnine was administered hypodermically. At 5.55 the respiration was 32 and the pulse 84—both good in character. At 6.09 the pulse was 88. At 6.20 it was 102, fair in character; respiration 39. At 6.22, 1.50 gramme of brandy was administered hypodermically. At 6.48 the pulse was 124, the tension good but quick; respiration 36. At 7.01, after the bandage was applied, the pulse was 122 and the respiration 32. At 7.17, 0.004 gramme of morphine sulphate was administered hypodermically.

At 7.32 the patient was removed from the hospital in the ambulance. Dr. Rixey asked Dr. Park and Dr. Wasdin to go in the ambulance, as his duty called him to go at once to inform Mrs. McKinley of her husband's condition and to prepare a room for his reception. Dr. Mann and Dr. Mynter, with friends of the President, followed in carriages immediately after. President McKinley had not then recovered from the anæsthetic. He bore the journey to Mr. Milburn's house exceedingly well, but it was found necessary to give him a small hypodermic injection of morphine during the transit, as he was becoming very restless. On arrival at the house of Mr. Milburn, 1168 Delaware Avenue, he was removed from the ambulance on the stretcher, and carried to a room in the northwest corner of the house, where a hospital bed had been prepared for him.

REMARKS ON THE OPERATION.

BY MATTHEW D. MANN, M. D.

The difficulties of the operation were very great, owing partly to the want of retractors and to the failing light. The setting sun shone directly into the room, but not into the wound. The windows were low and covered with awnings. After Dr. Rixey aided us with a hand mirror, the light was better. Toward the end of the time a movable electric light with reflector was put in use. The greatest difficulty was the great size of President McKinley's abdomen and the amount of fat present. This necessitated working at the bottom of a deep hole, especially when suturing the posterior wall of the stomach.

The operation was rendered possible and greatly facilitated by a good operating table and the other appliances of a hospital, and by the presence of many trained nurses and assistants. Still, the hospital was only equipped for minor emergency work, and had but a moderate supply of instruments. Unfortunately, when called I was not told what I was wanted for, and went to the Exposition grounds entirely unprepared. Dr. Mynter had his large pocket case, the contents of which were of great use.

As has already been noted, further search for the bullet was rendered inadvisable by the President's condition. The autopsy shows that it could not have been found, and that the injuries inflicted by the bullet after it passed through the stomach were of such a nature as to render impossible and unnecessary any further surgical procedure. A bullet after it ceases to move does little harm. We were often asked why, after the operation, we did not use the x ray to find the bullet. There were several reasons for this. In the first place, there were, at no time any signs that the bullet was doing harm. To



Dr. Eugene Wasdin.

have used the x ray simply to have satisfied our curiosity would not have been warrantable, as it would have greatly disturbed and annoyed the patient, and would have subjected him also to a certain risk. Had there been signs of abscess-formation, then the rays could and would have been used.

My reason for not draining was that there was nothing to drain. There had been no bleeding or oozing; there was nothing to make any discharge or secretion; the parts were presumably free from infection, and were carefully washed with salt solution. As there was no peritonitis and the abdomen was found *post mortem* to be sterile, we may safely conclude that no drainage could have been provided which would have accomplished anything. My experience teaches me never to drain unless there is a very decided indication for it, as a drain may do harm as well as good.

In conclusion, I wish to thank all the gentlemen who so kindly and skillfully assisted me. They were all surgeons of large experience in abdominal

surgery, and their aid and advice were most valuable. Especially I wish to acknowledge my great obligation to my associate, Dr. Mynter. Not only was he an assistant, but he was much more, and helped me greatly by his skill and, as a consultant, with his good judgment and extensive knowledge of abdominal work. Although called first, he waived his claim, and generously placed the case in my hands, willingly assuming his share of the responsibility.

The anæsthetic was most carefully administered by Dr. Wasdin, and the knowledge that he had charge of this very important duty relieved me of any anxiety on that score.

In the eventful week that followed the operation, Dr. Park and Dr. McBurney were towers of strength in helping to decide the many difficult questions which came up.

Dr. Rixey was in constant charge of the sick-

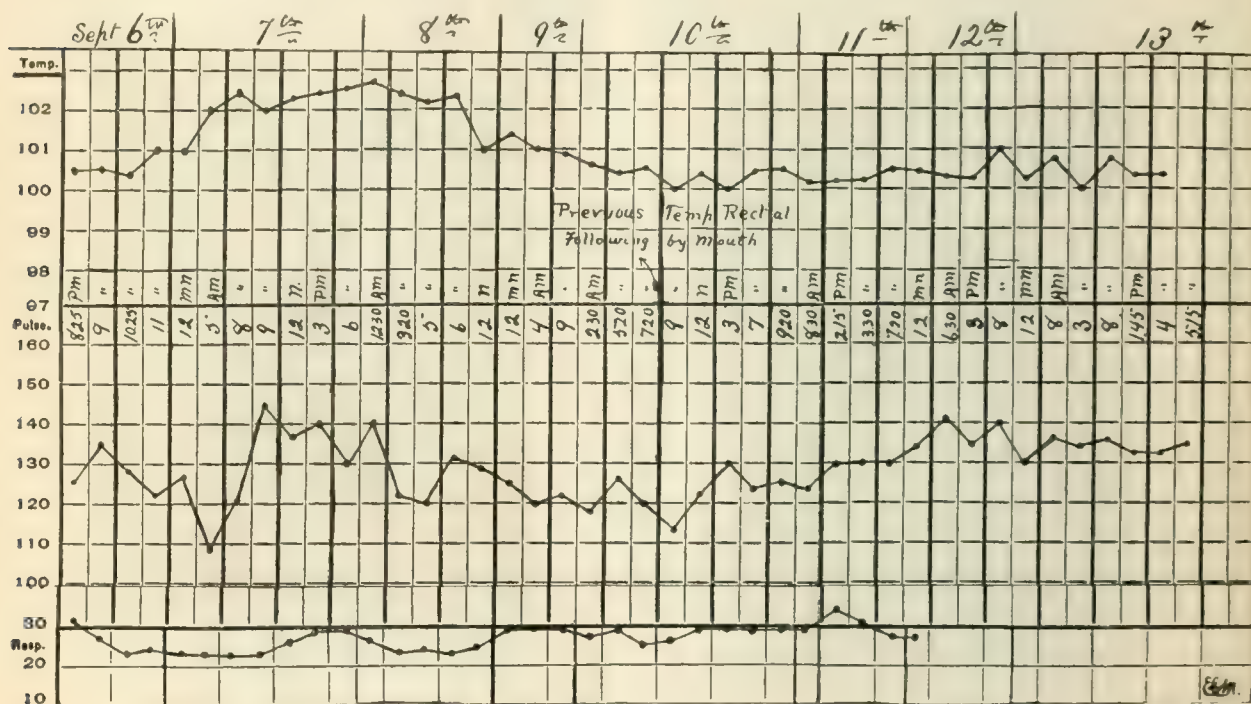
Hospital. Soon after his arrival, at 8.25, he was given morphine sulphate, 0.016 gramme, hypodermically. There was slight nausea. The pulse soon improved. During the evening the patient slept at intervals, vomiting occasionally, but rallied satisfactorily. A slight discoloration of the dressings was noted at 10.45. There was occasional and slight pain. Ninety cubic centimetres of urine were voided, and an enema of salt solution was given and retained.

Second Day, Saturday, September 7th.

After midnight the patient slept a good deal; he was free from pain and quite comfortable.

At 6 a. m., the temperature was 102° F.; pulse, 110; respiration, 24.

Gas in large quantities was expelled from the bowels. A saline enema was given as before. Miss



At 6.30 p. m., the pulse was 130; temperature, 102.5° F.; respiration, 29.

During the day the digitalis, morphine, and saline enemas were kept up at regular intervals; four grammes of somatose were added to the water at 10.30 p. m. At 11.15 p. m. the President passed from the bowels 240 cubic centimetres of a greenish colored fluid and some particles of faecal matter.

The total amount of urine for twenty-four hours was 270 cubic centimetres.

FIRST URANALYSIS, BY DR. H. C. MATZINGER.

Quantity..... 30 cc.
Color..... dark amber.
Reaction..... strongly acid.
Urea..... 0.028 gm. per 1 cc. of urine.
Albumin..... a trace.
Phosphates and chlorides..... normal.
Sugar..... none.
Indican..... very small amount.

Microscopic Examination.—The sediment obtained by centrifuge shows a large amount of large and small epithelial cells with some leucocytes and occasional red cells. There is a comparatively large number of hyaline casts, principally small, with some finely granular ones; also an occasional fibrinous one. The amount of sediment is large for the quantity of urine submitted. There were no crystals in the sediment.

Third Day, Sunday, September 8th.

During the early morning the President slept a good deal, but was restless, and at times confused and a little chilly. On the whole, he passed a fairly good night.

He expelled a little gas and brown fluid from the rectum. The digitalis was continued, and at 7.45 a. m., 0.002 gramme of strychnine were given hypodermically. At 8.20 a. m. he was clear and bright, with the pulse strong and of good character.

The wound was dressed at 8.30, and found in a very satisfactory condition. There was no indication of peritonitis. Pulse, 132; temperature, 102.8° F.; respiration, 24.

The dressing on the wound was changed because there was some exudation. The bullet track was syringed out with hydrogen dioxide. There was very little foaming, and there were no signs of pus.

At 10.40 a. m., following an enema of Epsom salts, glycerin, and water, he had a small stool with gas, and another at noon. He was less restless and slept a good deal.

At noon Dr. Charles McBurney joined the medical staff in consultation, having been summoned by Dr. Rixey.

Bulletin 14, 12 m.—The improvement in the President's condition has continued since the last bulletin. Pulse, 128; temperature, 101° F.; respiration, 27.

During the day he continued to improve; he slept four or five hours and his condition was satisfactory.

At 4.45 p. m., he was given a teaspoonful of water by the mouth; also an enema of sweet oil, soap, and water. He passed slightly colored fluid with some little faecal matter and mucus. After this he had a small quantity of water by the mouth, and at 6.20 p. m. a nutritive enema of egg, whiskey and water, which was partly retained. Digitalis and strychnine were both given during the evening.

At 9 p. m. the President was resting comfortably. The pulse was 130; temperature, 101.6° F.; respiration, 30.

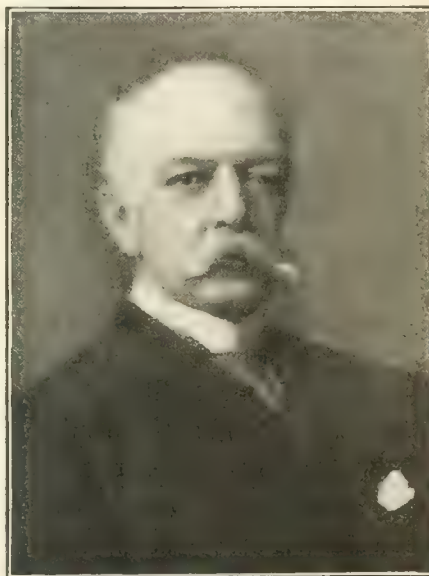
Four hundred and twenty cubic centimetres of urine were passed during the day.

SECOND URANALYSIS.

Quantity..... 450 cc.
Color..... amber, slightly turbid.
Reaction..... strongly acid.
Specific gravity..... 1.026.
Urea..... 0.038 gm. per 1 cc. of urine.
Albumin..... mere trace.
Sugar..... none.
Indican..... abundant.
Sulphates..... increased.
Phosphates..... somewhat increased.
Chlorides..... somewhat increased.

Microscopic Examination.—Microscopic examination of sediment obtained by centrifuge shows fewer organic elements. Some large and small epithelial cells and some leucocytes. Casts are not so abundant as yesterday and are principally of the small finely granular variety. There is a marked diminution in small renal epithelial cells.

Quite a quantity of large crystals of uric acid and bacteria are present.



Dr. Charles McBurney.

Fourth Day, Monday, September 9th.

The bulletins tell the story of the fourth day.

Bulletin 17, 6 a. m.—The President passed a somewhat restless night, sleeping fairly well. General condition unchanged. Pulse, 120; temperature, 101° F.; respiration, 28.

Bulletin 18, 9.20 a. m.—The President's condition is becoming more and more satisfactory. Untoward incidents are less likely to occur. Pulse, 122; temperature, 100.8° F.; respiration, 28.

Bulletin 19, 3 p. m.—The President's condition steadily improves and he is comfortable, without pain or unfavorable symptoms. Bowel and kidney functions normally performed. Pulse, 113; temperature, 101° F.; respiration, 26.

Bulletin 20, 9.30 p. m.—The President's condition continues favorable. Pulse, 112; temperature, 101° F.; respiration, 27.

Codeine was substituted for morphine, as the pain was less. Digitalis and strychnine were stopped. Nutritive enemas were given at 3.20 a. m., at 4.30 and 10 p. m. Hot water was taken quite freely by the mouth.

Attempts to get a good movement of the bowels were successful at noon, when he had a large light-

brown partly-formed stool. This followed a small dose of calomel and a high enema of oxgall.

On the whole, the President's condition improved steadily during the day. He slept a good deal and was fairly comfortable. There was no pain on pressure over the abdomen.

THIRD URANALYSIS

Quantity received.....540 cc.
Color.....amber, slightly turbid.
Specific gravity.....1.026.
Albumin.....a trace.
Indican.....not so abundant as yesterday.
Urea.....0.047 gm. per 1 cc. of urine.
Chlorides and phosphates.....about normal.
Sulphates.....still somewhat high.
Sugar.....none.

Microscopic Examination.—Microscopic examination of sediment obtained by centrifuge shows a decrease in the amount of organic elements and an increase of amorphous urates, but fewer crystals of uric acid. Casts are fewer and only the small granular and large hyaline varieties. The proportion of casts is greater. There are very few epithelial cells, mostly of renal type. A large number of cylindroids are found.



Dr. Charles G. Stockton.

Fifth Day, Tuesday, September 10th.

Soon after midnight the President had a high enema of soap and water, which was expelled, together with some faecal matter. He took hot water frequently, and slept a good deal.

Bulletin 21, 5.20 a. m.—The President has passed the most comfortable night since the attempt on his life. Pulse, 118; temperature, 100.4° F.; respiration, 28.

On awaking he felt very comfortable, and his mind was clear and cheerful. The nutritive enemas were kept up, and water given by the mouth. Had two small stools during the day. The only medicine given was one hypodermic of codeine phosphate, 0.015 gramme.

In the evening the dressings were examined, and as there was considerable staining from the discharge, it was thought best to remove four stitches and separate the edges of the wound. A little slough was observed near the bullet track, covering a space nearly an inch wide, the thickness of the

flaps. The separation seemed to extend down to the muscle. The surfaces, except those mentioned, looked healthy, but not granulating. It was supposed that the infection of the wound occurred either from the bullet or from the piece of clothing carried into the wound at the time of the shooting. The parts were thoroughly washed with hydrogen dioxide and packed lightly with gauze, and held together with adhesive straps.

Sixth Day, Wednesday, September 11th.

Bulletin 26, 9 a. m.—The President rested comfortably during the night. Decided benefit has followed the dressing of the wound made last night. His stomach tolerates the beef juice well, and it is taken with great satisfaction. His condition this morning is excellent. Pulse, 116; temperature, 100.2° F.

Bulletin 27, 3.30 p. m.—The President continues to gain, and the wound is becoming more healthy. The nourishment taken into the stomach is being gradually increased. Pulse, 120; temperature, 100.2° F.

Bulletin 28, 10 p. m.—The President's condition continues favorable. Blood count corroborates clinical evidence of the absence of any blood poisoning. He is able to take more nourishment and relish it. Pulse, 120; temperature, 100.4° F.

The blood count made by Dr. Wasdin in the evening was as follows:

Leucocytes 6,752.
Red cells 3,920,000.

A little after midnight, Wednesday morning, the patient was given four cubic centimetres of beef juice, the first food taken by the stomach. It seemed to be very acceptable. Nutritive enema was given at 2 a. m.; later there was a yellow stool.

From four to eight cubic centimetres of beef juice were given every one to two hours during the day. The rectum was becoming irritable, and did not retain the nutritive enemas well.

At 10 a. m. the remaining stitches were removed, the wound separated and dressed. It seemed to be doing well. Most of the sloughing tissue had separated.

The patient slept much during the day, and expressed himself as feeling very comfortable. The only medicine administered was one hypodermic of strychnine.

In the evening he was changed to a fresh bed. Nutritive enemas were continued.

Urine was passed much more freely—750 cubic centimetres in twenty-four hours.

FOURTH URANALYSIS.

Quantity.....82 cc.
Color.....amber, clear.
Specific gravity.....1.027.
Reaction.....strongly acid.
Albumin.....a trace.
Indican.....abundant.
Urea.....0.04 gm. per 1 cc. of urine.
E. phosphates and chlorides.....normal.
Sulphates.....still a little high.

Microscopic Examination.—Microscopic examination of sediment obtained by centrifuge shows a marked diminution in amount of organic elements, but a great increase in uric-acid crystals.

There are very few epithelial cells—mostly of renal type. There are fewer casts—small and large hyaline—some finely granular.

Cylindroids are more abundant.

Seventh Day, Thursday, September 12th.

The President slept a good deal during the night, and awoke in the morning feeling better. The beef juice was continued and increased, and a little chicken broth added to the dietary. He also had a little whiskey and water.

At 8.30 a. m. he had chicken broth, a very small piece of toast and a small cup of coffee. He did not care for the toast, and ate scarcely and of it.

The wound was dressed and washed with a weak solution of iodine and then with hydrogen dioxide. He was given thirty cubic centimetres of castor oil at 9.20 a. m.

The President now seemed at his best and his condition to warrant the favorable prognosis given out. The time for peritonitis and sepsis had passed. The bowels had moved and gas passed freely, showing that there was no obstruction. The tongue was clear, and the appetite increasing; and he seemed to be able to digest food. There was no pain or tenderness in the abdomen, and he was able to turn easily and to sleep on his side. The urine was steadily increasing. His spirits were good and his mind clear, while his pulse, though frequent, was strong and of good quality, and the temperature low.

The analysis of the urine gave no uneasiness, as the amount of urea was fair; there was no albumin worth considering, and the casts were rapidly diminishing. There were no more of them than are found in a large percentage of cases following a long operation under ether. The excess of indican was taken to mean merely some intestinal indigestion, and to be of no serious import. The only symptom to cause any uneasiness was the frequency of the pulse. Still, anxiety on this score was relieved by knowing that the President had naturally a rapid pulse, and that it was easily excited. The open wound was not considered important. It looked healthy, and, although it would take a long time to heal, in itself it was evidently causing no harm, nor was it likely to.

Dr. McBurney left Buffalo for his home in the morning, having arranged to return at once if his presence was desired.

Toward noon it was noticed that the character of the pulse was not quite so good. Infusion of digitalis, eight cubic centimetres, was ordered, and strychnine, 0.002 gramme.

It was thought probable that there was some intestinal toxæmia, as there had been no free movement from the bowel since food had been begun, the oil having failed to act. Gradually the pulse went to 130, and grew weaker.

Dr. Charles G. Stockton was added to the medical staff in consultation. At 7 p. m. the President was given 0.20 gramme of calomel.

Bulletin 32, 8.30 p. m.—The President's condition this evening is not quite so good. His food has not agreed with him, and has been stopped. Excretion has not yet been properly established. The kidneys are acting well. His pulse is not satisfactory, but has improved in the last two hours. The wound is doing well. He is resting quietly. Temperature, 100.2° F.; pulse, 128.

At 9.30 p. m. a second dose of thirty cubic centimetres of castor oil was given, followed by a high enema of oxgall. This resulted in a large, dark semi-fluid stool, which seemed to exhaust him somewhat. Stimulants were given freely. No more

beef juice or food was given. The pulse grew rapidly worse, but at midnight there seemed some improvement, as bulletin 33 shows. At 11 p. m., 420 cubic centimetres of normal salt solution were given subcutaneously.

Bulletin 33, 12 m.—All unfavorable symptoms in the President's condition have improved since the last bulletin. Pulse, 120; temperature, 100.2° F.

FIFTH URANALYSIS.

Quantity.....	132 cc.
Color.....	light amber, very turbid.
Specific gravity.....	1.025.
Reaction.....	acid.
Albumin.....	mere trace, if any.
Indican.....	less.
Urea.....	0.044 gramme per 1 cc. of urine.
Sulphates.....	about normal.
E. phosphates.....	much increased.
Chlorides.....	normal.

Microscopic Examination.—Microscopic examination of sediment obtained by centrifuge shows fewer organic elements than the last examination. There is less uric acid and a large amount of amorphous phosphates. Renal casts, about as in the last examination, with very few cylindroids.

Eighth Day, Friday, September 13th.

At midnight the pulse was fairly good, 132. Strychnine and whiskey were given at intervals, and hypodermics of camphorated oil.

Bulletin 34, 2.50 a. m.—The President's condition is very serious, and gives rise to the gravest apprehension. His bowels have moved well, but his heart does not respond properly to stimulation. He is conscious. The skin is warm, and the pulse small, regular, easily compressible, 126; respiration, 36; temperature, 100° F.

The wound had been dressed regularly in the manner described three times a day. At 9 a. m. the dressing was changed, and a mixture of balsam of Peru and glycerin put in on gauze after the douching.

Stimulants were continued as before, but more freely. Coffee, 45 cubic centimetres, and clam broth, 60 cubic centimetres, were given; also liquid peptoids.

At 8.30, 1.50 gramme of adrenalin was given hypodermically, and repeated at 9.40.

At 10 a. m., nearly two pints of normal salt solution were given under the skin, and a pint containing adrenalin at 6 p. m. Nitroglycerin and camphor were also injected at various times, together with brandy and strychnine.

Stimulants as detailed above were used freely all day.

3.30 p. m.—Pulse growing weaker.

5 p. m.—Oxygen given and continued for some hours.

6.30 p. m.—Last bulletin, No. 39:

Bulletin 39, 6.30 p. m.—The President's physicians report that his condition is most serious in spite of vigorous stimulation. The depression continues and is profound. Unless it can be relieved, the end is only a question of time.

At 6.35 p. m., and again at 7.40, morphine was given hypodermically, as he was very restless and seemed to be suffering.

9 p. m.—Heart sounds very feeble.

The President continued to sink, becoming weaker and weaker.

At 10 p. m., the oxygen was discontinued. The heart sounds were very feeble and consciousness lost.

The President died at 2.15 a. m., September 14th. Dr. E. J. Janeway and Dr. W. W. Johnston, who, at the request of Dr. Rixey, had been summoned in consultation, arrived too late, but were present at the autopsy. Dr. McBurney also returned on Friday afternoon.

SIXTH ANALYSIS

Color...	amber, turbid, with phosphates
Quantity.....	252 cc.
Reaction.....	acid
Specific gravity.....	1.023
Albumin.....	mere trace, if any
Urea.....	0.047 grammes per 1 cc. urine
Indican.....	a trace.
E. phosphates.....	increased.
Chlorides.....	normal.
Sulphates.....	a little high

Microscopic Examination.—Microscopic examination of sediment obtained by centrifuge, before and after clearing, shows no change from yesterday's sample. Casts, hyaline and granular, both large and small, comparatively few. Cylindroids, a few. Crystals, a large amount of uric acid, some sodium urate, and in the untreated specimen a large amount of amorphous deposit, principally of phosphates. There are a few epithelial cells, small, granular. Occasional red cells and leucocytes.

THE REPORT OF DR. HARVEY R. GAYLORD, PATHOLOGIST TO THE NEW YORK STATE PATHOLOGICAL LABORATORY, ON THE AUTOPSY.

The autopsy was performed by Dr. Gaylord and Dr. Matzinger.

Ordinary signs of death: ecchymosis in dependent portions of the body. Rigor mortis well marked. Upon the surface of the chest, to the right of the midsternal line, a spot 1 centimetre in diameter, dark-red in color, with a slight crust formation covering it, 5.5 cm. from the suprasternal notch; from the right nipple, 10 cm.; from the line of the right nipple, 8.25 cm. Surrounding this spot, at which point there is an evident dissolution of the continuity of the skin, is a discolored area of oval shape extending upward and to the right. In its greatest length it is 11 cm.; and in its greatest width, 6 cm. It extends upward in the direction of the right shoulder. The skin within this area is discolored, greenish-yellow and mottled.

The surface of the abdomen is covered with a surgical dressing, which extends down to the umbilicus and upward to just below the nipples. The innermost layer of cotton is covered or stained with balsam of Peru and blood. On removing this dressing, a wound, parallel to, and somewhat to the left of, the median line, is exposed, inserted in which are two layers of gauze, likewise impregnated with balsam of Peru. The wound is 14.5 cm. in length, and is open down to the abdominal muscles. The layer of abdominal fat is 3.75 cm. in thickness. The appearance of the fat is good, a bright yellow in color. No evidence of necrosis or sloughing. In the left margin of the surgical wound, lying 1 cm. to the right of a line drawn from the umbilicus to the left nipple, 15.5 cm. from the nipple, and 16.5 cm. from the umbilicus, is a partly healed indentation of the skin, and an excavation of the fat immediately beneath it (this is the site of the entry of the bullet), extending down to the peritoneal surface. On making the median incision, starting from the suprasternal notch and extending to a point just below the symphysis, the subcutaneous fat is exposed, which is of bright yellow color and normal appearance except in an area which corresponds superficially to the area of discoloration described as surrounding the wound upon the chest wall. This area marks the site of a hæmorrhage into the subcutaneous fat. The remainder of the subcutaneous fat is firm, and measures 4.75 cm. in thickness on the abdominal wall. On opening the sheath of the right rectus muscle, it is seen to be of dark-red color. (Culture taken from ecchymotic tissue under the upper bullet hole and from between the folds of the small intestine. Three tubes from each locality on agar and gelatin.)

On opening the abdominal cavity, the parietal surface of the peritoneum is exposed, and is found to be covered with a slight amount of bloody fluid; is perfectly smooth and not injected. The great omentum extends downward to a point midway between the umbilicus and the symphysis. It is thick, firm; its inferior border is discolored by coming in contact with the intestines. Below the umbilicus a few folds of intestines are exposed. These are likewise covered with discolored blood, after the removal of which the peritoneal surface is found to be shiny. On the inner aspect of the abdominal wound the omentum is found to be slightly adherent to the parietal peritonæum, and can be readily separated with the hand from the edge of the wound. At this point the omentum is somewhat injected. This adhesion to the omentum is found to extend entirely around the abdominal wound. The parietal peritonæum immediately adjacent to the inner aspect of the abdominal wound is ecchymotic.

On removing the subcutaneous fat and muscles from the thoracic wall, the point which marks the dissolution of continuity of the skin upon the surface, is found to lie directly over the margin of the sternum and to the right side between the second and third ribs. There is no evidence of ecchymosis or injury to the tissues or muscles beneath the subcutaneous fat. On making an incision through the subcutaneous fat, directly through the wound upon the chest, a small cavity is exposed about the size of a pea just beneath the skin which is filled with fluid blood. The subcutaneous tissue underlying the area of discoloration on the surface of the chest wall shows hæmorrhagic infiltration.

On removing the sternum, the lungs are exposed, and do not extend far forward. A large amount of pericardial fat is exposed. Pleural surface on both sides is smooth. There are no adhesions on either side within the pleural cavities. The diaphragm on the right side extends upward to a point opposite the third rib in the mammary line. No perceptible amount of fluid in either pleural cavity. On opening the pericardial cavity, the surface of the pericardium is found to be smooth and pale. The pericardium contains approximately 6 cc. of straw-colored, slightly turbid fluid. (Some taken for examination.)

On exposing the heart, it is found covered with a well-developed panniculus. The heart measures, from the base to the apex, on the superficial aspect, 10.5 cm. The right ventricle is apparently empty. The heart feels soft and flaccid. On opening the left ventricle, a small amount of dark-red blood is found. The muscle of the left ventricular wall is 1.5 cm. in thickness; dark reddish-brown in color; presents a shiny surface. The average thickness of the pericardial fat is 3.5 mm. (Cultures made from the auricle.) The left auricle contains but a small amount of dark currant-colored blood. The mitral valve admits three fingers. The right ventricle, when incised in the anterior line, is found to be extremely soft; the muscular structure is 2 mm. in thickness. The panniculus measures 7 mm. The muscle is dark red in color; very shiny, and the pericardial fat invades the muscular wall at many points.

On opening the right auricle it is found to be filled and distended by a large currant-colored clot, which extends into the vessels. The tricuspid orifice admits readily three fingers. The coronary arteries are patulous and soft; no evidence of thickening.

Lungs are gray color, and contain a moderate amount of cold-dust pigment. Slight amount of frothy fluid escapes from the bronchi; but the pulmonary tissue is crepitant and free from exudate.

On unfolding the folds of intestine, there is no evidence of adhesion until a point just beneath the mesocolon is reached, when, on removing a fold of small intestine, a few spoonfuls of greenish-gray thick fluid flows into the peritoneal cavity.

On the anterior gastric wall is an area to which a fold of the gastrocolic omentum is lightly adherent. On breaking the adhesion there is found a wound about midway between the gastric orifices, 3.5 cm. in length, parallel with the greater curvature of the stomach, 1.5 cm. from the line of omental attachment. This wound is held intact by silk sutures. There is no evidence of adhesion at any other point on the anterior wall. The gastric wall surrounding the wound just mentioned for a distance of 2 cm. to 3 cm. is discolored, dark greenish-gray in appearance, and easily torn. On exposing the posterior wall of the stomach from above, along its greater curvature, the omentum is found to be slightly adherent, a line of silk ligatures along the greater curvature of the stomach marking the site where the omentum

had been removed. On throwing the omentum downward, the posterior gastric wall is exposed. On the posterior wall, a distance of 2 cm. from the line of omental attachment, is a wound approximately 2 cm. long, held intact by silk sutures. The gastric wall surrounding this wound is discolored. On the surface of the mesocolon, which is posterior to the gastric wall at this point, is a corresponding area of discoloration, the portion coming directly in contact with the wound in the gastric wall being of dull gray color. The remainder of the surface of the posterior wall of the stomach is smooth and shiny. Beyond the surgical wound in the posterior wall of the stomach is found an opening in the retroperitoneal fat, large enough to admit two fingers. This opening communicates with a track which extends downward and backward as far as the finger can reach. The tissues surrounding this track are necrotic. On removing the descending portion of the colon, a large irregular cavity is exposed, the walls of which are covered with gray, slimy material, and in which are found fragments of necrotic tissue. Just at the superior margin of the kidney is located a definite opening which forms the bottom of the track traced from the stomach. On stripping the left kidney from its capsule, it is found that the superior portion of the capsule is continuous with the cavity. The weight of the left kidney is 5 oz. 1 gm. The kidney is readily stripped from its capsule; is dark red; the stellate veins are prominent, and along its greater curvature are numerous dark red depressions. On the superior aspect of the kidney is a protrusion of the cortex, dark red in color, and in this protrusion is a laceration 2 cm. long, extending across the superior border, approximately at right angles to the periphery of the kidney and from before backward. On incising the kidney, the cortex and medulla are not easily distinguishable from one another; both are of rose-red color, the cortex measuring approximately 6 mm. in thickness. The vessels in the pyramids of Ferrein are very prominent. Beneath the protruding portion of the surface, the cortex is dark red in color. This discoloration extends downward in pyramidal form into the medulla. The laceration of the surface marks the apex of the protrusion of the kidney substance. Between the spleen and the superior aspect of the kidney is a necrotic tract which extends down and backward, and ends in a blind pocket. The tract which includes the superior aspect of the kidney can be traced into the perinephritic fat to a point just above the surface of the muscles of the back.

The necrotic cavity which connects the wound on the posterior wall of the stomach and the opening adjacent to the kidney capsule is walled off by the mesocolon, and is found to involve an area of the pancreas, approximately 45 mm. in diameter and extending about half through the organ. This organ at its centre forms part of the necrotic cavity. Through its body are found numerous minute hæmorrhages and areas of gray softening, the size of a pea or smaller. These are less frequent in the head portion of the pancreas.

A careful examination of the tract leading down toward the dorsal muscles fails to reveal the presence of any foreign body. After passing into the fat, the direct character of the tract ceases; and its direction can be traced no further. The adjoining fat and the muscles of the back were carefully palpated and incised, without disclosing a wound or the presence of a foreign body. The diaphragm was carefully dissected away, and the posterior portion of the thoracic wall likewise carefully examined. All fat and organs which were removed, including the intestine, were likewise examined and palpated, without result.

The great amount of fat in the abdominal cavity and surrounding the kidney rendered the search extremely difficult.

The right kidney is imbedded in a dense mass of fat; capsule strips freely; it weighs 5 ounces; measures 11.5 cm.; substance is soft; cortex is 6 mm. in thickness; rose-red in color; cut surface slightly dulled. There are a few depressions of the surface, and the stellate veins are prominent.

The liver is dark-red in color; the gall-bladder distended. The organ was not removed.

The autopsy continued for a longer period than was anticipated by those who had charge of the President's body, and we were requested to desist seeking for the bullet and terminate the autopsy. As we were satisfied that nothing could be gained

by locating the bullet, which had apparently set up no reaction, search for it was discontinued.

Anatomical Diagnosis.—Gunshot wound of both walls of the stomach and the superior aspect of the left kidney; extensive necrosis of the substance of the pancreas; necrosis of the gastric wall in the neighborhood of both wounds; fatty degeneration, infiltration and brown atrophy of the heart muscle; slight cloudy swelling of the epithelium of the kidneys.

A matter of no inconsiderable embarrassment to us arose in the objection to our removing sufficient portions of the tissues for examination. We were able to secure only two small fragments of the stomach wall; tissue from around the wound upon the chest wall; a portion of fat from the wall of the necrotic cavity; a small piece of each kidney, that of the left kidney including the portion involved by the original wound; and pieces of heart-muscle from the right and left ventricles. The microscopic examination of these tissues follows:

The piece of retroperitoneal fat, where it forms part of the necrotic cavity, is seen on section to be covered with a thick gray deposit, which has an average thickness of from 4 mm. to 6 mm. Beneath this, and separating it from the fat, is a well-defined area of hæmorrhage from 1 mm. to 2 mm. in thickness. The appearance of this piece of tissue is characteristic of the fat tissue surrounding the entire cavity. A section made perpendicular to the surface and stained with hæmatoxylin-eosin, shows the following characteristics: Under low power there is no evidence of round-celled infiltration between the fat cells, or of fat necroses. The surface of the tissue which, in the microscopic specimen was covered by a layer of grayish material, proves, under low power, to consist of a partly organized fibrous deposit. At the base of this deposit is evidence of an extensive hæmorrhage, marked by deposits of pigment. The surface of the membrane is of rough and irregular appearance, and contains a large number of round cells with deeply stained nuclei. Under high power the organization of the membrane may be traced from the base toward the surface. The portion immediately adjacent to the fat tissue consists of a network of fibrin enclosing large numbers of partly preserved red blood corpuscles. In many areas the red blood corpuscles are broken down and extensive deposits of pigment are found. Extending into the fibrin structure of the membrane are numerous typical fibroblasts and round cells. In some regions pigment is evidently deposited in the bodies of large branching and spindle cells. Here and there, included in the membrane, are the remains of fat cells, and toward the surface of the membrane a large number of round cells scattered through the interstices of the membrane. There are but few polymorphonuclear leucocytes. Here and there in the membrane are fragments of isolated fibrous connective tissue with irregular contours and an appearance suggesting that they are fragments of tissue which have been displaced by violence and included in the fibrin deposit. The fibrin in the superficial layers of the membrane is formed in hyaline clumps. The organization along the base of the deposit is comparatively uniform.

Sections stained with methylene blue, carbol-thionin and Gram's method were carefully examined for the presence of bacteria, with negative results. Even upon the surface of the membrane there are no evidences of bacteria.

The section of the left kidney including the triangular area of hæmorrhage described in the macroscopic specimen, reveals the following appearances. (Section hardened in formalin, stained with hæmatoxylin-eosin.) Examined macroscopically, section represents a portion of a kidney cortex made perpendicular to the surface of the cortex, and including an area of hæmorrhage into the substance of the cortex 1 cm. in length, measured from the capsular surface downward, and presenting a width of from 5 mm. to 6 mm. The capsular surface has apparently been torn.

Under low power the margins of the preparation are found to consist of well preserved kidney structure. There is a slight amount of thickening of the interstitial tissue, and occasional groups of tubules are affected by beginning cloudy swelling. The glomeruli are large and present a perfectly normal appearance. As we approach toward the centre of the preparation, occasional glomeruli are met with in which the capillary loops are engorged and the adjacent tubules contain red blood-corpuscles. A short distance further, the kidney structure becomes entirely necrotic. Here and there the remains of tubules may be made out, and

these are infiltrated with cells. The necrotic area presents a rough, net-like structure. As we approach toward the surface of the kidney, we find that the necrosis becomes more marked. There is the merest suggestion of kidney structure, its place being taken by disintegrated red blood-cells and leucocytes, embedded in a well-defined fibrinous network. There is great distortion of the kidney structure about the periphery of the necrotic area. In this region a considerable amount of pigment is also found in the necrotic tissues.

Under a high power, the characteristics of the necrotic tissues may be better observed. The kidney structure is broken up and torn into irregular fragments, infiltrated by red blood corpuscles and leucocytes. In the portion of the necrotic mass beneath the capsule, the kidney structure is practically obliterated and is replaced by a network of fibrin, which includes large numbers of red blood cells and leucocytes. Scattered through the entire necrotic area are frequent deposits of pigment. In the deeper portions of the necrotic area, the margins of the fibrin deposit are invaded by fibroblasts from the connective tissue structure of the kidney. The organization in these areas is, however, slight.

Sections stained with methylene blue and Gram's method and carefully examined under oil immersion, fail to reveal the presence of any organisms. In preparations stained with methylene blue, the deposits of pigment may be readily observed. Section of the same tissue hardened in Hermann's solution and examined for fat, shows the presence of numerous fat droplets within the epithelium of the tubules which are adjacent to the area of necrosis. In the portions of the preparation more widely distant from the area of necrosis, no fat is present.

Section of the right kidney hardened in formalin and stained with hæmatoxylin-eosin, reveals the presence of areas in which slight parenchymatous degeneration of the epithelium in the uriniferous tubules may be noted. These areas are not extensive, and are confined to single groups of tubules. The interstitial connective tissue of the organ seems to be slightly increased in amount, but there is no well-defined round-celled infiltration. An occasional hyaline glomerulus is to be met with in these cases surrounded by increased connective tissue. The epithelium of the kidney tubules, aside from those in which the parenchymatous degeneration is present, is well preserved. The nuclei are well stained; protoplasm, finely granular.

A fragment of the stomach wall taken from the immediate neighborhood of the anterior wound is in a condition of complete necrosis. The nuclei of the cells are scarcely demonstrable. The epithelial surface is recognized with difficulty. At its base are apparently a few round cells. Examination of the blood vessels reveals nothing characteristic. There is apparently no evidence of thrombosis. A section made through the gastric wall at some distance from the wound, reveals the well-preserved muscular structure of the gastric wall, which presents no characteristic alterations. Superficial portions of the epithelium have apparently been affected by post-mortem digestion. However, in one portion of the preparation, the epithelium is intact, and shows distinct evidence of marked round-celled infiltration between the glandular structures. The blood vessels contained blood-corpuscles with the usual number of leucocytes.

The fragments of heart-muscle which were removed from the right and left ventricular walls, were examined in the fresh state, and exhibited a well-defined fatty degeneration of the muscle fibres, and in the case of the right ventricular wall, an extensive infiltration between the muscle fibres, of fat, was apparent. Sections from these fragments of muscle hardened in Hermann's solution, are taken for examination. A fragment of muscle from the right ventricular wall was removed at a point where the fat penetrated deeply into the muscular structure, the ventricular wall at this point showing an average thickness of 2.5 mm. Under a low power, the muscle fibres are separated into bundles by masses and rows of deeply stained fat cells. The muscle fibres are seen to contain groups of dark brown granules lying in the long axes of the cells. Under a high power, these are resolved into extensive groups of dark brown pigment arranged around the nuclei. The muscle fibres are slender, the cross and longitudinal striation is well-defined. Examined near the margin of the preparation, where the osmic-acid fixation has been successful, all of the muscle fibres are found to contain minute black spherical bodies, extending diffusely through all the muscle fibres about the entire margin of the preparation. These fine droplets are present in sufficient amount to speak of an extensive diffuse fatty degeneration of the muscle fibres. Where the large fat cells

have separated the muscle fibres, these are found to be more atrophic than those in the central portions of the larger bundles.

The examination of the section through the healed bullet wound on the chest walls reveals nothing of importance. The dissolution of continuity is filled in by granulation-tissue, and there is evidence of beginning restoration of the epithelium from the margins. Stains for bacteria give negative results.

In summing up: The macroscopic and microscopic findings of the autopsy, the following may be stated: The original injuries to the stomach-wall had been repaired by suture, and this repair seems to have been effective. The stitches were in place, and the openings in the stomach-wall effectually closed. Firm adhesions were formed both upon the anterior and posterior walls of the stomach, which reinforced these sutures. The necroses surrounding the wounds in the stomach do not seem to be the result of any well-defined cause. It is highly probable that they were practically terminal in their nature, and that the condition developed as a result of lowered vitality. In this connection there is no evidence to indicate that the removal of the omentum from the greater curvature and the close proximity of both of these wounds to this point, had any effect in bringing about the necrosis of the gastric wall, although circulatory disturbances may have been a factor. The fact that the necrotic tissue had not been affected by digestion strongly indicates that the necrosis was developed but shortly before death. The excavation in the fat behind the stomach must be largely attributed to the action of the missile. This may have been the result of unusual rotation of a nearly spent ball, or the result of simple concussion from the ball passing into a mass of soft tissues. Such effects are not unknown. The fact that the ball grazed the superior aspect of the left kidney, shown by the microscopic investigation of that organ, indicates the direction of the missile, which passed in a line from the inferior border of the stomach to the tract in the fat immediately superior to the kidney. There was evidence that the left adrenal gland was injured.

The injury to the pancreas must be attributed to indirect, rather than direct, action of the missile. The fact that the wall of the cavity is lined by fibrin, well advanced in organization, indicates that the injury to the tissues was produced at the time of the shooting. The absence of bacteria from the tissues, indicates that the wound was not infected at the time of the shooting, and that the closure of the posterior gastric wound was effectual. The necrosis of the pancreas seems to us of great importance. The fact that there were no fat necroses in the neighborhood of this organ, indicates that there was no leakage of pancreatic fluid into the surrounding tissues. It is possible that there was a leakage of pancreatic fluid into the cavity behind the stomach, as the contents of this cavity consisted of a thick, grayish fluid, containing fragments of connective tissue. In this case the wall of fibrin would have been sufficient to prevent the pancreatic fluid from coming in contact with the adjacent fat. The extensive necrosis of the pancreas would seem to be an important factor in the cause of death, although it has never been definitely shown how much destruction of this organ is necessary to produce death. There are experiments upon animals upon record, in which the

animals seem to have died as a result of not very extensive lesions of this organ. One experiment of this nature reported by Flexner (*Journal of Experimental Medicine*, Vol. II) is of interest. The fact that concussion and slight injuries of the pancreas may be a factor in the development of necrosis, is indicated by the researches of Chiari (*Zeitschrift für Heilkunde*, Vol. XVII, 1896, and *Prager medizinische Wochenschrift*, 1900, No. 14), who has observed (although a comparatively rare condition) extensive areas of softening and necrosis of the pancreas, especially of the posterior central portion which lies directly over the bodies of the vertebra, where the organ is most exposed to pressure or the effects of concussion. The wound in the kidney is of slight importance, except as indicating the direction taken by the missile. The changes in the heart, as shown by the macroscopic inspection and the microscopic examination, indicate that the condition of this organ was an important factor. The extensive brown atrophy and diffuse fatty degeneration of the muscle, but especially the extent to which the pericardial fat had invaded the atrophic muscle fibres of the right ventricular wall, sufficiently explain the rapid pulse and lack of response of this organ to stimulation during life.

REPORT OF DR. HERMAN G. MATZINGER, BACTERIOLOGIST TO THE NEW YORK STATE PATHOLOGICAL LABORATORY, ON THE BACTERIOLOGICAL EXAMINATION.

It is obvious that the short space of time which has elapsed since the death of the President has hardly been sufficient to prepare a complete and thorough bacteriological report. This report contains all the observations which have been made up to this time:

On September 11th, during the life of the President, cultures were made by Dr. Wasdin from the base of the abdominal wound and from dressings removed at the same time. These were submitted to me for examination, and showed the presence of the ordinary pus organisms: *Staphylococcus pyogenes aureus* and *Staphylococcus cereus* and *albus*, with a gas-forming bacillus which, in pure anaerobic culture on glucose gelatin, forms small, pearly, translucent colonies, with no liquefaction. In litmus milk it produces acid, but no coagulation. Morphologically, it is apparently a capsulated, short bacillus, which takes stains poorly, and which does not stain by Gram's method. Inoculated into the ear vein of a rabbit, which was killed immediately afterward, it produced, after twenty-four hours in the body of the rabbit, a marked accumulation of gas in the organs, and again grew out in pure culture. As yet the organism is not fully identified.

None of these cultures showed streptococci. A bacterium which appears to be one of the proteus group was, however, isolated, which does not stain by Gram, and appears in varying forms, sometimes small oval, and again quite rod-shaped and in short chains. Sometimes it is surrounded with a slimy covering, which remains clear like a capsule when the organism is stained. On slanting agar, it produces a whitish, slimy growth, which gradually runs to the bottom of the slant and produces an odor of decomposition. On gelatin, it grows very slowly with slight and slow indication of liquefaction. In litmus milk, it produces acid and rapid coagulation.

At the time of the autopsy, September 14th, inoculations were made by myself. From the base of the wound, there was again obtained a number of pus organisms, principally a white staphylococcus and the bacterium described above, but no streptococci. Cultures made from the peritoneal surface of the intestines were entirely negative. Cultures made from the under surface of the omentum near the

colon, were entirely negative, both with and without oxygen. Cultures from the blood of the right auricle were likewise negative. A very careful and extensive search for micro-organisms in the contents of the necrotic cavity, behind the stomach, reveals nothing but a short stumpy bacterium, which, so far as the work has been carried at present, appears to belong to the proteus group, and is very like *Proteus hominis capsulatus*, described by Bordoni and Uffreduzzi.

Morphologically, it is not uniform, and sometimes appears almost encapsulated, being surrounded by material that does not stain; is quite refractory to Gram, and produces an odor of decomposition as it grows. It does not liquefy gelatin rapidly and grows slowly, as a glistening white elevated surface growth which slowly sinks; but on agar in the thermostat it grows very rapidly, as a moist, grayish-white, translucent mass. Colonies on gelatin plates have a clean circumference, are granular and quite refractive. In litmus milk it produces acid and rapid coagulation. Animal experiments are still incomplete and cannot be published at this time.

It must be stated that there is occasion for suspecting that this may be a contamination, either from the outer wound or elsewhere, because, quite unavoidably, the techniques of obtaining the material and cultures from the necrotic cavity was not absolutely correct.

Cultures made from the small area of broken-down tissue under the chest wound at the time of the autopsy grew what appears to be *Staphylococcus epidermidis albus*, described by Dr. Welch.

The slimy, gray, necrotic material from the cavity above the transverse mesocolon behind the stomach, was carefully examined microscopically, with the result that very few micro-organisms were found in the fresh state, and no recognizable tissue elements of any kind, no leucocytes or pus-corpuscles, but an abundance of crystals which appeared more like fatty acid than fat crystals. It contained no free hydrochloric acid, and was alkaline in reaction. Experiments as to its digestive power were negative. About 2 cc. of this material was injected into the space behind the stomach of a dog (still living), with no results except quite an elevated temperature for three or four days. Other animal experiments are also still incomplete.

It might be well to state here that the bacteriological examination of the chambers and barrel of the weapon used, as well as of the empty shells and cartridges, ordered by the district-attorney, was entirely negative, except that from a loaded cartridge there was grown an ordinary staphylococcus and a mould. The chemical examination of the balance of the loaded cartridges, made by Dr. Hill, chemist, was also negative.

The absence of known pathogenic bacteria, particularly in the necrotic cavity, warrants the conclusion that bacterial infection was not a factor in the production of the conditions found at the autopsy.

REPORT OF THE SUMMER WORK
OF THE
MILK COMMISSION OF THE MEDICAL
SOCIETY OF THE COUNTY OF NEW YORK.

We are indebted to Dr. Henry Dwight Chapin, M. D., chairman of the commission, for a copy of the following report:

It may be of interest to the members of the society briefly to rehearse the incidents leading up to the formation of a milk commission, before speaking of its work. A year and a half ago an evening was devoted to a discussion of the milk problem, especially in connection with large cities. A number of experts were present, including the chief of the dairy division of the U. S. Department of Agriculture.

The subject seemed one of such importance, and so much interest was aroused, that the society determined to form a commission that should study the best methods of improving the milk supply of New York. The time seemed ripe for such a movement, as the interest aroused and the success of the work have since proved. Moreover, the Medical Society of the County of New York, as the public and legal representative of the medical profession and the guardian of the city's health, seemed the proper body to undertake such a work.

The first meeting of the commission was devoted to a discussion of the problem and how it might best be approached. The milk that is put into a large city must be gathered from diverse and distant sources, transported many miles, and finally distributed after many vicissitudes and changes to the customer, who himself keeps it a certain length of time, under possibly unfavorable conditions, before its use. When we consider that all this happens to a vital fluid that is unstable in its composition, that is sensitive to many unavoidable factors, such as temperature, atmospheric effects, shaking, and, above all, to dirt and dirty utensils, the complexity of the question may be appreciated. Heretofore, most of the work done in a public study of a city's milk supply has concerned itself principally with the chemical ingredients of milk, more particularly the amount of butter fat it contains.

One of the members of the commission having studied this subject for several years, found that the milk of New York, especially as supplied by the best dealers, ran fairly high in butter fat. While the law requires three per cent., an examination of over twenty samples from diverse sources showed an average of about four per cent. to be present, and not infrequently five per cent. was reached by the best dairies. Further examination showed that much was to be desired in point of cleanliness of the milk. Milk is an exceedingly good culture medium for the growth of bacteria of all kinds, and modern studies show that the presence and numbers of bacteria form a good gauge of the general condition of the milk, and the care with which it has been handled. The proper preservation of milk is also involved, as it is well known that the deterioration of milk from acid changes is due to bacterial growth. Ordinary bacteria that contaminate and grow luxuriously in milk come from the dirt that follows a careless handling of the milk, anywhere from its first production to its delivery. It seemed well to the commission to establish an advanced standard of clean milk for the ordinary dealer, and the index of cleanliness would be established by a bacterial count. In other words, a bacterial standard would be applied as a gauge of the condition of milk. As this work was to be entirely voluntary, so far as the dealers were concerned, it was decided to invite them to a conference with the commission, and learn their ideas as to the feasibility of the undertaking. Accordingly, 180 invitations were sent out to dealers in Manhattan and the Bronx, this including all those of any financial importance, as shown by their commercial ratings. The meeting was held on November 16th, at the Academy of Medicine, and about fifty dealers were present. They were invited to give their views freely as to whether part of their milk could not be put out according to an advanced standard for the benefit of infants, invalids, or any who desired a

superior article. While many practical difficulties were urged, the general sense of the meeting seemed to be that with some extra care and expense, many improvements could be made, under proper guidance, in putting out a strictly clean milk. Encouraged by this expression of opinion, as well as by the good will and spirit shown by the dealers, the commission determined to call a second meeting of those who were willing to have their milk examined and certified by the commission. In the meantime a series of suggestions, adapted from the dairy rules of the U. S. Department of Agriculture, were combined in a circular, together with a tentative standard adopted by the commission. The final paragraph explains the latter as follows:

"The Milk Commission of the New York County Medical Society agrees to guarantee or certify the milk of all dealers desiring such certificate. A special label will be furnished for this purpose. The standard required to obtain this indorsement will be that the acidity must not be higher than .2 per cent., and that the milk must not contain more than 30,000 germs, or bacteria of any kind, to the cubic centimetre. This will be tentatively adopted as a standard of clean milk, as bacteria get into the milk through lack of cleanliness during the milking, and careless handling of the milk after the milking, and hence it is a good clue to the care bestowed in the production and general handling of milk. The milk, before testing, must be in its natural state, not having been heated, and without the addition of coloring matter or preservatives. The butter fat must reach 3.5 per cent. Examinations must be made by the experts retained by the commission, with a frequency at their option, according to the season and the general condition of the milk under inspection, and at least once a month. The commission reserves the right to change its standard, in any reasonable manner, upon due notice being given to the dealer. The expense of the examination will be met by the dealer. All reports of examinations will be strictly confidential between the commission and the individual dealer."

About fifteen dealers attended the second meeting, which was understood to include all who were at that time willing to work with the commission. A report was then made to the comitia minora, who authorized the continuance of the work along these lines.

The first examination was made March 4th, for certification, the count showing 58,500, with butter fat, 3 per cent. It may be of interest here to see how the better grades of milk in New York run in bacteria. The following tests, furnished by Dr. Park, will show the amount of bacterial contamination of milk put into New York, during a winter and summer day. The first was taken November 19, 1900, being a mild winter day; temperature during the afternoon was 70° F. and of the night, 50° F. Samples of milk taken from carts, received directly from cars, gave an average temperature of about 52° F., the range being from 50° to 58° F. The number in the six samples ran as follows: 56,000; 128,000; 35,000; 256,000; 13,600; 2,880,000. For a summer day, June 29, 1901, was taken, the day temperature being 90° F. and the night temperature 78° F. Six samples taken at random show as follows: 520,000; 30,000,000; 3,530,000; 12,000,000; 216,000,000; 9,600,000.

Some idea of the extent of the bacteriological work upon milk done for the commission will be appreciated by stating that from March 4th to the present date, 800 separate bacteriological examinations have been made. This laborious undertaking has been accomplished by Dr. Sarah Belcher, to whose zeal and enthusiasm much of the success of the work is due. The commission is also greatly indebted to Dr. Park for valuable oversight and advice, and to the Rockefeller Institute for Medical Research for its cooperation in allowing Dr. Belcher to render these services as part of the work of the institute. Bacterial tests have been made in the Research Laboratory of the Department of Health. After visits to a number of farms and dairies, it was aimed to classify the various sources of contamination, so that each one might be separately inspected and eliminated as the cause of trouble, or corrected, if found at fault. In order to reduce to practical results these bacterial researches, the following factors were considered and carefully studied:

1. Conditions of barn.
2. Condition of cows.
3. The milkers.
4. Condition of utensils.
5. Processes of cooling.
6. Transportation.
7. Condition of cans or bottles when returned from city.

1. Conditions of barn. Dirt and dust, which are usually so abundant in an average barn, readily get into the stream of milk or pail and form a fruitful source of bacterial contamination. The common sources of dust are the hay-loft overhead, cobwebs on walls and ceiling, loose boards, dirty windows, floors of dirt, unclean manure gutters, excessive bedding, storage of grain or feed in the barn, the rations, such as piles of hay placed near the milking, and the storage of farm or other utensils in the barn, which soon become covered with dust. A dirty barn quickly raises the bacteria in milk there collected. Thus, on June 8th a cow was milked in such a barn and an examination of the milk showed 120,000 bacteria to the cubic centimetre. At the same day and hour, another cow, in the same apparent condition, was milked in the adjoining pasture away from the dust of the barn, the milk here showing only 26,000. This experiment, repeated twenty times in various localities, always gave similar results. There is invariably a large increase of bacteria in milk collected in a dirty barn. Even when a barn has been cleaned up, some source of dust may be overlooked and cause trouble. Thus, on June 15th, premises were examined after the barn had been cleaned, as well as the cows. Twelve cows standing in a row in the barn all showed a low bacterial count in the milk separately examined, except the one at the end, which showed 1,000,000. This cow stood next to a pile of dry feed, which was the only factor to account for the contamination. Here was explained an aberration in the milk of this barn that we could not at first understand, as everything had been cleaned according to directions, but this little detail overlooked. Many visits and experiments have thus shown contamination that can easily be avoided if the source is discovered.

2. Condition of cow. Much dirt that gets into milk comes directly from the cow. When the cow is being milked the udder is pulled down, which loosens dandruff, hairs, and dirt from all the adjacent

parts. Particular sources of impurity that are apt to be overlooked in cleaning a cow are the folds between the udder and the flanks and dirt on the tail. Fifty bacterial tests were made in direct relation to the cow. The following will serve as an example in which clean barns and milkers figured in connection with dirty cows. Four dirty cows under above conditions gave an average count of 90,000. Four other cows from the same herd in the same barn were carefully cleaned and then milked by the same man, giving an average count of only 2,000.

3. The milker. A fruitful source of dirt is directly attributed to the milker. The dirt may come from the hair, hands, especially when chapped and scaly, finger nails, tobacco, or clothing. It was found that the milk from certain men always gave a high bacterial count that could invariably be traced to some of the above-mentioned sources. It is better to have the milkers clean-shaven, and, when milking, they should be clad in white duck suits or blue overalls that are frequently washed. Young single men make the best milkers, as they are less apt than married men to carry infection from the home. The details of their living admit of better oversight.

4. The utensils. These include pails, strainers, condition of creamery or dairy room, aerators, stationary vats, portable vats, and bottles or cans. It is sometimes difficult to find which of these factors is at fault, but the condition of the pail or strainer is very important, as, when they were found at all dirty, the bacterial count was always high. Thus in a case where an ordinary pail and strainer was used, the count was 80,000. On the same day, from the same barn and cows, a sterilized pail and strainer being substituted, the count dropped to 5,000. All utensils must be strictly clean, and, if possible, steamed or sterilized. It was found that cleanliness depended both upon apparatus and proper methods of cleaning. (1) In every utensil all seams must be well soldered to avoid hiding places for traces of dirt and coagulated milk. (2) Cold or lukewarm water must first be used, to avoid coagulation of particles of milk, then a cleansing with hot water, with soap or soda, and a final rinsing with hot water. After washing, cans or bottles should be turned bottom up on racks, and, if possible, steamed or sterilized. The following interesting experiment was made: Two samples were taken from the same can of milk—one from the top, showing a count of 5,000, while the one from the bottom gave 80,000. As the can had been standing in ice the lower part was cooler. The milk had also been strained and creaming had not taken place, hence the conclusion was, that the bottom of the can was not clean and had contaminated the milk near at hand. On the whole, it was found that the simpler the pail the better; one than can be milked into quickly and cleaned easily is the best. The plain open pail gave the best results. It was found that metal strainers attached to pails were undesirable, owing to difficulty in keeping them clean. Particles of dirt that might be removed later by straining were broken up by the force of the stream of milk and thus disseminated through the milk. Thus, samples from pails having strainers uniformly gave a higher bacterial count than when strainers were not used, other conditions being as nearly as possible the same. The best general strainers are absorbent cotton, cheese-cloth, or

Turkish towelling, attached to the receiving cans by clothes-pins. If a metal strainer is then used, it should be as simple as possible, and the wire mesh must be carefully cleaned with a stiff brush. If an aerator or vats of any kind are used, they must be cleaned, and, when possible, steamed or sterilized. All joints and seams must be smooth, and the faucets and pipes, likewise, frequently steamed or sterilized. By requiring more apparatus to be kept clean, aeration, as ordinarily practised, increases the danger of bacterial contamination. The following experiment was made on July 22d: It was found that samples of milk from pail and strainer on a certain farm averaged 3,000. After aeration by the farmer, according to his usual method, the samples gave a bacterial count of 1,404,000. Here, a man with clean cows, barns, and milkers, was contaminating the milk by faulty utensils. In the hands of men understanding the importance of strict cleanliness, the aerators are not a source of danger, but if the aerator is not strictly clean and in proper surroundings, the ordinary farmer may lose more than he gains by its use. Dirty ice, flies, floating dust, pipes, and faucets are sources of bacterial contamination. It has been found that with a clean barn, clean cow, and clean milker, the ordinary so-called "cōw odor" is not present.

5. *Processes of cooling.* This we have found to be one of the most important factors in the production of uncontaminated milk. The whole future condition of the milk depends a good deal upon its handling during the first forty-five minutes. The sooner it is brought to a temperature at or below 45° F., at which point the growth of bacteria is greatly inhibited, the better. Many inspections of premises that were clean enough to produce a clean milk gave disappointing results when the milk was allowed to stand for more than an hour without being cooled. Where the milk was brought below 45° F. within twenty or thirty minutes, a low bacterial count *always* resulted, other conditions being right. In an experiment made July 25th, tests were made of milk collected from clean cows in a clean barn, the average count from the pail being 7,000. It was then cooled not lower than 60° F., by a slow process, and after two hours, it was still standing at 60° F., when a bacterial count gave 89,000. Five days later, the milk, under apparently similar conditions, was cooled down to 45° F. within ten minutes from milking, and then showed a count of only 12,000. This experiment has been repeated at six different farms, in various localities, with similar results. We have found the temperature of springs during the summer to vary from 45° F. to 70° F., with an average of about 55° F. Hence this method of cooling is uncertain and defective unless ice is added to the spring. Ice is always necessary to the farmer who is handling milk. When springs are used, the surroundings must be kept clean and the water uncontaminated at its source.

6. *Transportation.* So soon as the milk is put into bottles or cans it must at once be surrounded by ice. If they are kept standing in a vat, the temperature of the water must be at least 40° F., as the milk will then be a few degrees higher. This temperature must be maintained by ice, until the car is reached, if the milk is in bottles; if in cans, by means of jackets. The ordinary freight car should not be used. We have found that refrigerator cars, with doors at the end kept closed, are necessary. The

cars should be loaded and unloaded from the centre. The railroads can cooperate in this important work, by supplying refrigerator cars and ice. When the dealer removes the milk from the car, it should be re-iced on the platform or at the depot, and kept iced until delivered.

7. Much contamination can be avoided if the consumer would *properly cleanse the bottles* before returning them. They should be washed promptly, and never used for any other purpose. We have found cases where drugs, dirt, and even urine has been found in them. In houses with contagious diseases, no bottles should be returned, but they should be broken and thrown away. In apartment houses, it is usually customary to collect the bottles in the basement, where they are afterward sorted out by the dealers. All kinds of impurity thus get in, making it frequently impossible thoroughly to cleanse these bottles. Thousands of bottles every year are collected by Italians from the dumps, and returned to the Bottle Association, which sorts them out, washes, and returns them to the owners.

In our inspection of creameries, it was found that thousands of Croton bugs were returned in bottles and boxes. The cans are, also, often returned with portions of decomposing milk remaining in them, the boxes containing the bottles may be mouldy, with parts of the wood rotten from being smeared with decomposing milk and so forth. The railroads should be requested never to receive bottles, boxes, or cans, containing any fluid milk. We have found that boxes and cans are often thrown off from the train by the roadside, where they may be left for hours, exposed to the sun. Utensils subjected to this treatment are only fit to be used again after sterilization, and farmers usually have no such facilities; the creameries may have, but seldom use them.

The various data here recounted are the results of a summer study of the milk question. The information is the result of thirty visits made to various farms and dairies, some at a distance of 180 miles. Each of these visits consumed, at least, one day, and some several days, so that a thorough study of the matter could be made. In the work of the commission, the individual farm or dairy, and not the milk company, has been regarded as the unit for study and investigation. It was found necessary to work in this manner, in order to get good results; in some cases, several visits were made to a given plant. As an example, a large plant was visited on August 11th; the farm was visited during milking time. The notes show that the cows were fairly clean, the barn was defective, showing hay protruding from the ceiling, which was covered with cobwebs and dirt. Windows dirty. The barn had a southern exposure, so that the sun increased the heat. The manure gutter was not clean; the bedding of shavings had not been removed. Various articles were stored in the barn, such as feed, farming utensils, and the clothing of the men. The cows were getting full rations of hay; the animals were hot and restless, and covered with flies, which necessitated a constant moving of the tail. No means were supplied for keeping the cow standing during milking. The milk was strained in the barn, and with a wire strainer, which was seen to be bent and rusty. The dairy-room was hot and sunny, showing dust and flies. The milk was passed over an aerator, in which the temperature of the water was found to be 60° F.; the receiving vat and stationary vats were

not covered, so that flies and dirt got in. The bottles were standing in ice-water at 50° F. A fair sample of milk produced under these conditions and tested at once, showed a bacterial count of 455,000.

Suggestions as described in the paper above were offered, and four days later a second visit was made. As the result of specific directions, in the barn the walls were whitewashed, windows cleaned, and green shades had been placed at the windows having a southern exposure. The floor was cleaned and the bedding had been removed; the manure gutter was also clean, and land plaster had been sprinkled on the floor and manure gutter. All storage of feed and utensils had been removed. The cows were getting scant grain rations, so that there was not a large pile of hay before the animal, that would fill the air with dust and induce movements of the body. The cows were well cleaned. The barn was cooler, and hence the animals were not so restless. The milk was not strained in the barn, but removed at once to the dairy. The dairy-room was clean, dark and cool, with receiving and stationary vats covered with cheese-cloth. The temperature of the water in the aerator was 40° F. The bottles were standing in ice-water at 38° F. A fair sample of milk thus produced showed a count of only 3,600 to the cubic centimetre. This is not an exceptional condition, as a similar experience was repeated at four different times and places. This shows that an elaborate and expensive plant is not necessary to put out a clean milk. What is needed is intelligent attention to detail. A small, as well as a large, producer can furnish clean milk. The following example will illustrate an experience with a small dealer, the visit being made September 5th. Notes as follows: The cows, barn, and man, fairly clean. Utensils fair. No aerator and no steam. Ice was being used sparingly. Milk drawn under these conditions was placed in water at 70° F., then taken to the creamery for bottling and sent to the city. An examination here showed a count of 89,000. Various suggestions were offered, and the second visit was made in eight days. Result, cows and barn well cleaned, the milk strained through absorbent cotton and cheese-cloth attached by clothes-pins to a forty-quart can, which was kept standing in a box surrounded by ice. This can had previously been steamed for twenty minutes at the creamery. The can was then taken to the creamery and placed in a vat of ice-water, at a temperature of 40° F. In three hours the temperature of the milk stood at 44° F. It was then bottled and sent to the city. A sample of this milk showed a count of 5,400, as the result of the few simple changes suggested. Even a creamery is not necessary for a small dealer to put out milk up to the standard of the commission. As an example, milk was sent from a small farmer, where cooling to 40° F. was practised within fifteen minutes after milking. This milk was sent to the city in forty-quart cans, surrounded by jackets. Samples taken on the platform in New York at 3 a. m. showed a count of only 3,000.

All the visits made to these farms were educational. The whole family, including wife and children, became interested and cooperated in the work. The attention of neighbors was also attracted to the improvements, which were often imitated, and formed the subject of evening discussion at the village grocery store.

The commission has no special method to advise, but asks a hearty cooperation from every one concerned in handling the milk. The methods must vary with each plant. In general, it may be said that the following three heads include the essential conditions: 1st, Strict cleanliness, which includes the barns, yards, cows, milkers, and all utensils. Bacteria which get into the milk by means of dirt are thus thoroughly excluded. 2d, Rapid and sufficient cooling of the milk. The few bacteria that do get in are thus prevented from growing. 3d, Thorough icing around the milk until it reaches the consumer. The production of toxins from the growth of bacteria is thus retarded.

In every case the dealer has been able to reach the standard of the commission without expensive apparatus, by following the indicated details. The one thing always necessary is plenty of ice. At the same time, great labor has been done by farmers and dairymen, as the result of suggestions by the commission. New plumbing has been put in, new dairy-rooms have been built, floors have been cemented, ceilings made tight, and time and endeavor have not been spared. One dealer was so impressed with the subject of right conditions that a special new barn was put up in order to meet them. Two others are planning new barns that will insure hygienic conditions. Even where the milk has not reached the standard for certifying, great advances have been made, and the general output improved. Eight dealers are now putting out some of their milk up to the standard of the commission. They are as follows: Slawson Bros., Briar Cliff Farm, T. W. Decker & Sons, Mrs. Van Zandt, Sheffield Farms, Harlem (Mr. Tuthill), Century Company, Locust Farms, and Mr. Keller. Many others are making changes and applying for a certification, who will doubtless pass the test of the commission.

In spite of the summer having been the hottest in thirty-one years, all those who have been certified have kept up to the standard, under most trying conditions. The thanks of the commission and of the community at large are due to these dealers, who have shown great interest in this work and have not spared labor or sacrifice in keeping up to the standard. The milk of each dealer has been examined about twice a month during the summer, and labels given that can be placed in the mouth of the bottle, as a proof of certification. The bottle for examination is collected from the dealer in the morning, placed in a bag surrounded by ice, and at once taken to the laboratory. If the milk shows a test close to the limit established by the commission, a second examination is made in a few days. In the meantime, an effort is made to find out the source of trouble, in order that it may be corrected.

The commission feels gratified at the interest excited in this movement on the part of the farmers, milk dealers, the daily press, and the dairy journals. It is hoped by this movement to inaugurate a general improvement in the production and handling of milk destined for large cities.

HENRY DWIGHT CHAPIN, M. D.

WALTER LESTER CARR, M. D.

ABRAHAM JACOBI, M. D.

JOSEPH E. WINTERS, M. D.

Commission.

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NEW YORK, SATURDAY, OCT. 19, 1901.

THE "OFFICIAL" REPORT OF THE CASE OF THE
LATE PRESIDENT MCKINLEY.

At last the "official" report, dated October 12th, signed by Dr. Rixey, Dr. Mann, Dr. Mynter, Dr. Park, Dr. Wasdin, Dr. McBurney, and Dr. Stockton, has been given to the medical press. In so far as it gives information not heretofore published, we may summarize as follows: Daylight was failing in the Emergency Hospital at the time of the operation; the rays of the descending sun penetrated the operating-room, but not the deep wound, and consequently Dr. Mann was embarrassed in the steps of the operation by defective illumination, which, however, was improved in the later procedures by the use of a hand-mirror. The wound of the anterior wall of the stomach was very slightly enlarged, in order to allow the operator's finger to be passed into the interior of the organ. It was found that the stomach was about half-full of liquid food. About four inches of the gastrocolic omentum were cut, and the cut ends were tied with strong black silk in two masses on each side.

After the gastric wounds had been closed with Czerny-Lembert sutures, the hand was introduced behind the stomach in search of the bullet, but this procedure seemed to have a bad influence on the patient's pulse, so further search for the missile was desisted from. The tissues lining the track of the ball were trimmed before the external abdominal wound was closed. A small aperture was left for purposes of drainage. Dr. Mynter had advised that a Mikulicz drain should be inserted behind the stomach, but all the others decided against it, and it was not done.

At the post-mortem examination it was found that the perforations of the stomach had been repaired

("closed effectually") and that there had been no leakage of pancreatic fluid. The pancreas had, indeed, not been primarily injured, but the report cites experiments to show that slight injuries of that organ may give rise to extensive areas of softening and necrosis. There was no evidence of peritonitis, and the whole abdominal cavity was found free from bacterial contamination. There were brown atrophy and fatty degeneration of the muscular substance of the heart of an extent amply sufficient to explain the failure of that organ to respond normally to stimulation.

Academically, it might be of interest to know what extent of stomach wall around the wounds was included in the Czerny-Lembert sutures, in order to get well outside the area of probable concussion thrombosis, but practically the question is of no importance now that we know that the wounds had healed. The report gives us no authoritative information as to the real cause of the fatal termination of the case, but it leads us to infer that a condition of lowered general vitality, chiefly occasioned by lack of sufficient exercise during the last ten years of his life, led to the President's death after all that surgery could accomplish had been done for him.

THE VIRCHOW ANNIVERSARY.

The eightieth birthday of the sage of Berlin—but not confined to Berlin, for, like Shakespeare, he is claimed by the whole world—fell on Sunday last. It was observed by medical men throughout a large part of the civilized world. Here in America it was celebrated by a dinner at Sherry's, given on Saturday evening. Dr. William Osler, of Baltimore, presided, and there were present representative physicians from several States of the Union. Dr. Osler was particularly felicitous in his remarks, and so, too, was Dr. William H. Welch, of Baltimore. To say that our own Dr. Jacobi contributed conspicuously to the expressions of appreciation of the great Virchow's achievements and of admiration of his character would be but to set down in cold type what the whole American profession knows must have been the case.

The bond of loving esteem by which Rudolf Virchow holds medical men of all countries encircles not alone those who have had the good fortune to meet him; his writings, especially in the *Archiv für pathologische Anatomie und Physiologie und für*

klinische Medizin, commonly called Virchow's *Archiv*, have bound physicians of all countries as his admirers. He is recognized everywhere, and long has been, as foremost among the leaders of medical investigation and thought for more than half a century past. If we English-speaking people ever think of him as a German, it is only as a grand old *Acht-und-vierziger*; but in reality we think of him only as a man of science. The steady light of his conservatism, no less than the keen insight into physiology and pathology always displayed by him, has long been a powerful agency in anchoring medicine to the firm ground of truth.

Rudolf Virchow is eighty years old. He has well earned the privilege of an old age of retirement, but we have as yet no evidence that he is disposed to avail himself of his title to continued life at the price of inactivity. In his case, we may well picture to ourselves, the oncoming of real senility will usher in the ripening process so feelingly depicted by Sir James Paget; but far off, we believe, is any enfeebled state in a man of his intellectual power. For many a year to come the world will defer to his opinions, and it will never cease to rate his contributions to the progress of medicine at a high value. May he yet live long to round out the picture of a blameless and illustrious career.

THE GENIUS EPIDEMICUS.

This expression, intended to denote some mysterious atmospheric condition favorable to the prevalence of epidemic disease, is nowadays seldom encountered in print, but some decades ago it was not uncommon among medical writers. From time to time attempts have been made to draw aside the veil of mystery from the supposed malign influence. For example, as many of our readers are probably aware, Noah Webster, the great lexicographer, who was a physician, wrote a treatise in which he strove to establish a connection as cause and effect between unusual meteorological conditions, earthquakes, hurricanes, volcanic eruptions, etc., and the outbreak of great epidemics. There is certainly a widespread belief among physicians in the existence of some undetermined influence operating to favor the epidemic prevalence of disease and to heighten its gravity, quite apart from the specific properties of the pathogenic germs themselves.

We are reminded of this subject by an article entitled *The Late Epidemic of Small-pox in the United States*, by Dr. James Nevins Hyde, the well-known Chicago dermatologist, published in the October number of the *Popular Science Monthly*. Dr. Hyde emphasizes the oft-observed apparent connection between a war and an epidemic, and he traces the recent prevalence of small-pox in almost all parts of our country to the war with Spain. Citing previous epidemic visitations following wars, he says: "We fought Great Britain in the Revolution, and soon after were afflicted with maladies some of which had not before tormented our people. Soon after 1780 the daily papers of Boston, New York, and Philadelphia, were filled with advertisements of remedies for the itch, a malady which had never before so multiplied on our soil, water being abundant, soap cheap, and the habits of our forefathers cleanly. The war of 1812 was chiefly naval and its aftermath of disease insignificant, for the reason that, of all afloat, the American war vessel has ever been the most scrupulously clean. But the Mexican war was followed by an epidemic of cholera of severe grade; and the late civil war was the precursor of a succession of typhomalarial fevers that were previously almost unknown save in certain special localities and to physicians there resident. In a similar way the plague followed the Saracen armies under Mahomet in 622; syphilis spread through Europe after the campaign of the dissolute Frenchmen who followed to Italy the standard of Charles VIII., and the English paid a price for the crushing of the last of the Plantagenets on Bosworth field in the epidemic of sweating-sickness that ensued."

Such an enumeration is interesting even if we regard the occurrences mentioned as merely coincidences. We may add to it the facts that diphtheria made its appearance in the United States shortly before the outbreak of our civil war, and that epidemic cerebrospinal meningitis followed a little later. Certain it is, as is stated by Dr. Hyde, that a camp is the favorite focus of infectious disease, and particularly is this true of camps of recruits, but it seems to us quite doubtful if there is any other connection between war and pestilence than what is occasioned by the ex-

traordinary dissemination of pathogenic germs favored by camp life. This idea is in no wise inconsistent with the supposition that the recent prevalence of small-pox in the United States had its origin in the return of volunteers from Puerto Rico, where our troops found the disease rife. Apparently the genius epidemicus, however real it may be, is still of undetermined character; probably, indeed, its character varies at different times.

A PLEDGE OF SECRECY IN A MEDICAL MEETING.

On Tuesday of this week, at the afternoon session of the Medical Society of the State of New York, Dr. Matthew D. Mann, of Buffalo, read certain passages from the "official" report of the case of the late President McKinley, the meeting having previously pledged itself to secrecy. The members and delegates present at the meeting must have felt amused the next morning when they read in the newspapers a very good account of Dr. Mann's recital of the same material previously in Rochester, where also a pledge of secrecy had been exacted. Some of our Rochester friends must have "leaked," and so somebody always will, we believe, when, as in this case, there is no real need of secrecy.

QUININE IN THE TREATMENT OF PUERPERAL FEVER.

There have been some indications lately of a disposition to return to the use of quinine in a number of conditions in which its employment had been superseded, and puerperal fever seems to be among those conditions. Aufrecht (*Therapeutische Monatshefte*, 1901, No. 5; *Centralblatt für Gynäkologie*, September 7th) advises that in every case of puerperal endometritis the uterine cavity be irrigated with a solution of carbolic acid, and then quinine administered subcutaneously. The irrigation is effected through a glass tube as large as the little finger, provided with two small openings and deeply grooved longitudinally on the outside. The solution, of the strength of two and a half per cent., should be from 82° to 86° F. in temperature, to prevent collapse. The injections of quinine are generally to be given once a day for three consecutive days. One part of quinine hydrochloride is dissolved in thirty-four parts of warm water, and a portion of the solution containing seven grains and a half of quinine is injected into the side of the abdominal wall.

AN UNEXAMPLED PATIENT.

On Tuesday afternoon of this week, at a session of the semi-annual meeting of the Medical

Society of the State of New York, Dr. Herman Mynter, of Buffalo, one of the surgeons that were in attendance on the late President McKinley, made some very impressive remarks on the character of the illustrious patient. In all his experience, Dr. Mynter said, he had never met with a patient who had so endeared himself to his physicians, his nurses, and even the orderlies, of whom there was not one who would not willingly have taken the President's place on the bed of suffering, had it been possible. The world, he added, had never known but one other instance of such forgiveness of a betrayer, and that instance had happened some 1900 years ago. And, yet, there are those who say that operative surgery deadens a man's sentiment!

AN INCREDIBLE ACCUSATION.

At a recent political meeting held in New York a speaker, according to the newspaper reports, attempted to discredit the police force of the city by relating the story of a small boy's having been so roughly used by a policeman that his arm was broken. The speaker went on to say that the boy's mother "took him to the hospital, where the physician who looked at his arm inquired the circumstances of his injuries. When told that a policeman had done it, he refused to have anything to do with the case until he had made an investigation on the outside." As to what is meant by "on the outside" we are not quite sure, but we feel very certain that no hospital surgeon would refuse to minister to the needs of an applicant by reason of the assailant's personality or official position. That part of the story seems to us simply incredible, though it was quite as much corroborated as the main statement was by the pseudo-dramatic presence at the meeting of the boy with his bandaged arm. It reminds us of Mark Twain's "if you don't believe it, you can see the oxen."

PREPUTIAL NODULES IN GONORRHOEA.

Such nodules must be set down among the minor accompaniments of gonorrhœa, but they cannot be very uncommon, for in the course of a year Lanz, of Moscow (*Archiv für Dermatologie und Syphilis*, lv, 2, 1901; *Berliner klinische Wochenschrift*, September 16th), observed four cases. In three of them excision was practised. In one of the three an acute and in another a chronic inflammation was present, and the third was in course of spontaneous cure. Through a very fine opening a mixture of pus-corpuscles, epithelia, and gonococci could be squeezed out.

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general, during the week ending October 12, 1901:

Smallpox—United States.			
Alaska.....	Dawson.....	Oct. 1.....	6 cases.
District of Columbia....	Washington....	Sept. 28-Oct. 5....	1 case.
Indiana.....	Michigan City....	Sept. 30-Oct. 5....	1 case.
Massachusetts.....	Boston.....	Sept. 30-Oct. 5....	9 cases.
Michigan.....	Newton.....	Sept. 30-Oct. 5....	1 case.
Minnesota.....	Detroit.....	Sept. 30-Oct. 5....	1 case.
Nebraska.....	Minneapolis....	Sept. 30-Oct. 5....	1 case.
New Jersey.....	Omaha.....	Sept. 30-Oct. 5....	2 cases.
New York.....	Newark.....	Sept. 30-Oct. 5....	2 cases.
Ohio.....	Elmira.....	Sept. 30-Oct. 5....	1 case.
Pennsylvania.....	New York.....	Sept. 30-Oct. 5....	7 cases.
Utah.....	Cleveland.....	Sept. 30-Oct. 5....	4 cases.
	Erie.....	Sept. 21-28.....	2 cases.
	Philadelphia....	Sept. 30-Oct. 5....	40 cases.
	Salt Lake City..	Sept. 30-Oct. 5....	2 cases.
Smallpox—Foreign.			
Austria.....	Prague.....	Sept. 7-14.....	1 case.
Belgium.....	Antwerp.....	Sept. 14-21.....	5 cases.
	Ghent.....	Sept. 14-21.....	1 death.
Brazil.....	Pernambuco....	Aug. 15-31.....	73 deaths.
	Rio de Janeiro..	Aug. 18-Sept. 1..	115 deaths.
Canada.....	Halifax.....	Sept. 22-Oct. 5....	20 cases.
	Winnipeg.....	Sept. 14-21.....	1 case.
Colombia.....	Colon.....	Sept. 30.....	Epidemic.
France.....	Paris.....	Sept. 7-14.....	2 deaths.
Gt. Britain....	Dundee.....	Sept. 14-28.....	2 cases.
	London.....	Sept. 14-21.....	288 cases.
India.....	Bombay.....	Sept. 3-10.....	13 deaths.
	Calcutta.....	Aug. 24-Sept. 7..	1 death.
	Madras.....	Aug. 24-Sept. 6..	4 deaths.
Mexico.....	City of Mexico..	Sept. 15-22.....	8 deaths.
			1 case.
Plague—Insular.			
Philippine Islands....	Manila.....	Aug. 10-24.....	15 deaths.
Plague—Foreign.			
Brazil.....	Rio de Janeiro..	Aug. 18-Sept. 1..	5 deaths.
India.....	Bombay.....	Sept. 3-10.....	275 deaths.
	Calcutta.....	Aug. 24-Sept. 7..	34 deaths.
	Karachi.....	Aug. 25-Sept. 8..	35 cases.
			11 deaths.
Yellow Fever.			
Brazil.....	Rio de Janeiro..	Aug. 18-Sept. 1..	3 deaths.
Costa Rica....	Port Limon....	Sept. 14-28.....	7 deaths.
Cuba.....	Havana.....	Sept. 21-28.....	9 cases.
Mexico.....	Merida.....	Aug. 31-Sept. 14..	1 case.
	Vera Cruz.....	Sept. 22-29.....	5 deaths.
			2 deaths.
Cholera.			
India.....	Bombay.....	Sept. 3-10.....	4 deaths.
	Calcutta.....	Aug. 24-Sept. 7..	9 deaths.
	Madras.....	Aug. 24-Sept. 6..	254 deaths.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending October 12, 1901:

ALFRED, A. R., Passed Assistant Surgeon. Detached from the Marine Barracks, Cavite, Philippine Islands, and ordered home to await orders.

ASSERSON, F. A., Assistant Surgeon. Detached from the *General Alava* and ordered to the *New York*.

BEEBE, D. G., Assistant Surgeon. Detached from the *Marietta* and ordered home to await orders.

BELL, W. H., Assistant Surgeon. Ordered to the *Franklin*.

BENTON, F. L., Assistant Surgeon. Detached from the *Brooklyn* and ordered home.

DENNIS, J. B., Assistant Surgeon. Detached from the Naval Academy, and ordered to the Naval Hospital, New York.

DUNBAR, A. W., Passed Assistant Surgeon. Detached from the Naval Hospital, Mare Island, California, and ordered to the Puget Sound Naval Station.

EVANS, S. G., Passed Assistant Surgeon. Detached from the *Solace* and ordered home to await orders.

FARENHOLT, A., Passed Assistant Surgeon. Ordered to the *Independence*.

FAUNTLEROY, R. M., Assistant Surgeon. Ordered to the Naval Academy.

GUEST, M. S., Passed Assistant Surgeon. Detached from the Naval Hospital, Philadelphia, and ordered to the *Solace* for temporary duty, and ordered to the Cavite Naval Station upon arrival at the Asiatic Station.

GUTHRIE, J. A., Passed Assistant Surgeon. Detached from the *New York* and ordered to duty at Port Isabella, Philippine Islands.

JOHNSON, M. K., Passed Assistant Surgeon. Detached from duty at Guam and ordered to the Marine Barracks, Cavite Naval Station.

LANGHORNE, O. D., Assistant Surgeon. Ordered to the Naval Hospital, Philadelphia.

LUNG, G. A., Surgeon. Detached from the Marine Barracks, Cavite Naval Station, and ordered home to await orders.

McCLANAHAN, R. K., Assistant Surgeon. Detached from duty at Port Isabella, Philippine Islands, and ordered to duty at Poloc, Philippine Islands.

McCULLOUGH, F. E., Assistant Surgeon. Detached from the *Philadelphia* and ordered to the Naval Hospital, Mare Island, California.

MOORE, J. M., Passed Assistant Surgeon. Detached from the *Franklin* and ordered to the *Indiana*.

MORGAN, D. H., Passed Assistant Surgeon. Ordered to the *Philadelphia*.

MURPHY, J. P., Assistant Surgeon. Detached from the *Indiana* and ordered to the *Solace* for temporary duty, and then to the Marine Barracks, Cavite Naval Station.

NORTON, O. D., Surgeon. Detached from the *Monadnock*, and ordered home to await orders.

SEAMAN, W., Assistant Surgeon. Detached from the *Independence* and ordered to the *Solace* for temporary duty, then to duty at Guam upon arrival at that place.

SMITH, C. G., Assistant Surgeon. Detached from the *Alvarado* and ordered to the *Marietta*.

SNYDER, J. J., Assistant Surgeon. Detached from duty at Poloc, Philippine Islands, and ordered to the Naval Hospital, Cavite, for treatment.

SPRATLING, L. W., Surgeon. Detached from the Naval Hospital, Cavite, and ordered home to await orders.

STOKES, C. F., Surgeon. Detached from the *Oregon* and ordered to the *Solace*.

TOLFREE, H. M., Assistant Surgeon. Detached from the *Columbia* and ordered to the *Solace* for temporary duty, and then to duty at Guam upon arrival at that place.

VON WEDEKIND, L. L., Surgeon. Detached from the Puget Sound Naval Station and ordered home to await orders.

YOUNG, R. M., Assistant Surgeon. Detached from the *New York* Navy Yard and ordered to the *Columbia*.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending October 12, 1901:

CALVERT, WILLIAM J., First Lieutenant and Assistant Surgeon, is granted leave of absence for seven days.

CARTER, W. FITZHUGH, Major and Surgeon, will accompany the Third Battalion of Engineers to Washington Barracks, D. C., and then will rejoin his proper station at Fort Totten, New York.

CURRY, JOSEPH J., Captain and Assistant Surgeon, will proceed to the Philippine Islands on the transport *Hancock*, and upon his arrival at Manila he will report to the commanding general, Division of the Philippines.

HERMAN, MYER, Captain and Assistant Surgeon, United States Volunteers, having tendered his resignation, is honorably discharged.

HOLLOWAY, JAMES H., Contract Surgeon. The leave of absence granted him is extended one month.

KNEEDLER, WILLIAM L., Major and Surgeon, is granted leave of absence for one month.

KOERPER, CONRAD E., First Lieutenant and Assistant Surgeon, will report for temporary duty at Washington Barracks, D. C., and by letter to the commanding general, Department of the East.

MORSE, ARTHUR W., First Lieutenant and Assistant Surgeon, is relieved from further duty at the United States General Hospital, Presidio of San Francisco, and will proceed to Fort Walla Walla.

SHILLOCK, PAUL, Major and Surgeon, is granted leave of absence for one month and fourteen days.

SMITH, HERBERT M., First Lieutenant and Assistant Sur-

geon, will proceed from Salem to Fort Monroe, Virginia, for temporary duty.

Society Meetings for the Coming Week:

MONDAY, October 21st.—New York Academy of Medicine (Section in Ophthalmology and Otolaryngology); New York County Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

TUESDAY, October 22d.—New York Dermatological Society (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, October 23d.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society.

THURSDAY, October 24th.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Massachusetts, Society for Medical Improvement (private); Pathological Society of Philadelphia.

FRIDAY, October 25th.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, October 26th.—New York Medical and Surgical Society (private).

Heidelberg's Professor of Surgery on a Visit to this Country.—Privy Councilor Vincenz Czerny, professor of surgery at the University of Heidelberg for the past twenty-seven years, and one of the most eminent authorities on surgery in the world, is in San Francisco on a visit. Professor Czerny will later visit the cancer hospitals of New York, with a view of inspecting them.

The County Medical Society's Report on City Vice.—The committee appointed by the Medical Society of the County of New York several months ago to learn the effect of vice on the public health, has practically completed its labors and is about ready to make its report. Dr. Prince A. Morrow is the chairman of the committee, which has made as thorough a canvass of the city as possible. This canvass was carried on by enlisting the aid of as many physicians as was thought necessary. These physicians were asked to answer a number of queries and to express their opinion on the subject so far as it related to their own practice. Most of the physicians responded, and their opinions, together with hospital records, form the material for the report. It is said that this is the first census of its kind that has ever been taken in this city, and an announcement of the result is awaited with interest by medical organizations in various parts of the world.

An International Health Service.—One of the questions which, it is said, will receive attention at the coming sessions of the International Conference of American States, to be held in the City of Mexico this month, is the establishment of an international health service. Some time ago the American delegates to the conference requested Surgeon-General Wyman, of the Marine-Hospital Service, to submit suggestions, and he sent to ex-Senator Henry G. Davis, chairman of the United State delegation, a provisional plan entitled "International Sanitation -- Pan-American Republics." The plan contem-

plates an international agreement on measures for the elimination of yellow fever from seaport cities or towns which are or have been endemic habitats of the disease. Surgeon-General Wyman proposes the appointment of an international sanitary commission, to consist of five members, no two of whom are to be residents or citizens of the same republic, the duty of which shall be to visit infected towns or seaports and report on needed sanitary measures. The report is to be filed with the president of the republic containing the infected port and with the Bureau of American Republics. It then becomes the duty of the authorities to put into force the measures recommended. To insure execution of these measures, Surgeon-General Wyman proposes the imposition of discriminating tonnage dues on vessels arriving from infected ports where sanitary projects are not completed within one year from date of report by the commission.

Typhoid Epidemic.—Chicago's health department calls attention to the fact that there is an epidemic of typhoid fever all over the United States. In Chicago the record shows that the typhoid mortality for the past three months is four times what it was during the corresponding quarter of last year. In New York the hospitals are crowded with typhoid patients, although the prevalence of the disease there may be due to the general tearing up of the streets. In Boston, Baltimore, Cincinnati, Minneapolis, New Orleans, Philadelphia, Pittsburg, St. Louis and Washington more than the usual autumnal increase is reported.

The Death of Dr. Charles Henry Brown, for many years managing editor of the *Journal of Nervous and Mental Diseases*, the official organ of the American Neurological Association, and the New York, Philadelphia, and Chicago Neurological Societies, took place on October 15th. Dr. Brown was born in New York June 18, 1856. He was a graduate of New York University, in which he took the highest honors. Dr. Brown was a son of Dr. Henry Weeks Brown, who died in 1864, and a grandson of Dr. Stephen Brown, a well-known physician of early days in New York. During his life Dr. Brown was connected with the New York Dispensary, the Post-Graduate, and the Presbyterian hospitals, and the outdoor work of Bellevue Hospital. He was a member of the Medical Society of the County of New York and the New York Academy of Medicine. He is survived by a widow and two daughters.

The Society of Medical Jurisprudence held its one hundred and sixtieth regular meeting on Monday evening, October 14th, in the Academy of Medicine, No. 17 West Forty-third Street. The following candidates were acted upon: George S. Coleman, Abraham L. Gilbert, Julius M. Mayer, Walter M. Rosebault, Louis J. Vorhaus, and John B. Huber, M. D. The paper of the evening was *A Case of Moral Insanity*, by Dr. William B. Noyes.

The Report of the Surgeon-General of the Army was issued on October 8th. It contains the customary financial statement, and deals with the following subjects: Artificial limbs and their

commutation, appliances, trusses, etc.; Providence Hospital, Army and Navy General Hospital, Hot Springs, Ark., and the Army General Hospital for Tuberculosis, Fort Bayard, N. M.; the army medical museum and the library of the surgeon-general's office; medical officers of the army and volunteers, contract surgeons, and dental surgeons; the hospital corps, and army nurse corps; medical and hospital supplies; medical inspections; recruiting, and the identification of deserters and other undesirable men. The health of the army, the prevalence of special diseases, and injuries, receive exhaustive notice. Finally, the boards for the study of the ætiology and prevention of yellow fever and for the investigation of tropical diseases in the Philippines, as also the exhibit of the medical department at the Pan-American Exposition are dealt with. An abstract of the report will be published later.

The Detroit Academy of Medicine.—At the annual meeting, on October 9th, officers were elected as follows: President, Dr. Arthur D. Holmes; vice-president, Dr. Wadsworth; secretary and treasurer, Dr. H. D. Jenks.

The American Skiagraphic Association was organized at a meeting held at the New York Academy of Medicine on October 15th, and the following officers were elected: President, Dr. L. A. Weigel, of Rochester; secretary, Dr. F. N. Wilson, of New York; committee on constitution and by-laws, Dr. Samuel Lloyd, Dr. Carl Beck and Dr. George G. Hopkins, of New York.

A Former New York Physician Appointed Medical Inspector of Schools for Orange, N. J.—Following the example of other cities, the Orange (N. J.) Board of Education has appointed a medical inspector of schools. Dr. D. Warren Poor, the new appointee, was for three years connected with the Willard Parker Hospital, New York, and is surgeon to the Manhattan Eye and Ear Hospital.

The Freedmen's Hospital, Washington.—Dr. William A. Warfield, first assistant surgeon of the Freedmen's Hospital, Washington, D. C., has been appointed surgeon-in-chief, vice Dr. A. M. Curtis, whose resignation was accepted last August. Dr. Warfield has been connected with the institution since October, 1894, at which time he entered the hospital as an interne. The salary of the present position is \$3,000 a year. An assistant to Dr. Warfield will be selected by a civil service examination, to be held October 29th and 30th.

Reported Epidemic of Malaria in Greater New York.—According to many physicians, large numbers of persons in or near New York city are suffering from malaria. The number of victims claimed by the disease is not alarming, but it is keeping scores of physicians busy. Several doctors connected with the board of health say they have seen reports tending to show that malaria is very prevalent in this city. They doubt the accuracy of the reports, however, but any one applying for admission to some of the private hospitals in this city will quickly learn that the number of malaria cases is large, and that most of the private hospitals have decided not to take any more malaria fever cases unless they are extremely urgent. More fortunate in

this respect are the city hospitals, especially Bellevue. In the borough of the Bronx, in certain districts of Brooklyn, and in parts of Westchester County, whole families are said to be suffering from malaria. In Unionport there are many cases. Physicians are divided as to the causes of the present outbreak in this city. Some say the excavations for the subway are mainly responsible; others blame the genus mosquito, which is said to carry the disease from one person to another.

A Testimonial Banquet to Dr. N. S. Davis, Sr.

—Dr. N. S. Davis, Sr., was the recipient of a testimonial banquet on October 5th at Chicago. It is estimated that there were 300 physicians in attendance from the city and various parts of the country. Dr. Frank Billings acted as toastmaster. Dr. James H. Stowell, a member of the committee of arrangements, called attention to the many eminent pupils who had received instruction and had graduated under the distinguished guest. He said that the deans of three of the largest medical schools in Chicago were pupils of Dr. Davis. Dr. Edward F. Wells made a speech and presented a loving cup to Dr. Davis. This beautiful cup, of Grecian design, was, in its lines and proportions, a model of simple, vigorous dignity, and was selected as being peculiarly emblematic of the character and career of the distinguished guest. Engraved upon one side was an excellent likeness of Dr. Davis; upon another was the leaf of victory, and beneath it the inscription, *Palmam qui meruit ferat*; beneath this were the words "Pioneer in local and national medical organizations, and in graded medical instruction." Upon the other side was this tribute: "Presented to Nathan Smith Davis, A. M., M. D., LL. D., in recognition of his long and distinguished services to medicine, in its every field of usefulness, by the members of that profession which he has so conspicuously adorned, and to whose shield he has given an added lustre." Dr. Davis was received with great enthusiasm, and, in accepting the loving cup, expressed his cordial thanks for the demonstration of kindness. Letters and telegrams of regret were received and read from various members of the profession all over the country. The following toasts were responded to: "The American Physician," by Dr. Charles A. L. Reed, of Cincinnati, Ohio; "International Medicine," by Dr. Donald Maclean, of Detroit, Mich.; "Western Medicine," by Dr. Archibald Church, of Chicago; "Medical Education," by Dr. Victor C. Vaughan, of Ann Arbor, Mich.; "Literary Medicine," by Dr. Hobart A. Hare, of Philadelphia, Pa.; "The Physician in Public Affairs," by Dr. Robert H. Babcock, of Chicago. A short, but appropriate, speech was made by Dr. Edwin Ricketts, of Cincinnati, Ohio. Reminiscences of Dr. Davis were related by Dr. John H. Hollister, Dr. Edmund Andrews, Dr. Norman Bridge, and Dr. Frank X. Waxham.

The Conference of Sanitary Officers of the State of New York.—All the health officers and registrars in the State of New York have been invited to attend a conference at the Capitol in Albany on October 24th and 25th. The object of the gathering is to present subjects of practical interest to health authorities by addresses and discussions. The conference will be opened by an evening session

in the Assembly Chamber on the 24th, at which Governor Odell is expected to address the meeting. A morning and afternoon session on the 25th will be followed by a banquet in the evening. As it is proposed by the commissioner of health to have a similar conference annually, a full attendance is desired, not only of health officers, but of all others interested in public health matters, the decision as to an annual conference depending upon the attendance this year. Reduced rates from railroads have been arranged on the certificate plan, one-third fare for return trip. Topics of great interest to local boards of health will be discussed by speakers of national reputation. The following is a partial programme: The Powers and Limitations of Local Health Boards under the Public Health Law, by Robert C. Taylor, Esq., of the New York Bar; Diagnosis of the Exanthemata, by Dr. F. C. Curtis, professor of dermatology in the Albany Medical College; Some Essentials of a Registration System, by Professor Walter F. Willcox, of the U. S. Census Office; Milk Supply of Cities and Villages, by Dr. Ernest Wende, health commissioner of Buffalo; The Attitude of Health Officers toward Tuberculosis in the Smaller Cities and Towns, by Professor Herman M. Biggs, of the health department of the city of New York; Sewage Disposal for Cities and Villages, by Professor Olin H. Landreth, of the School of Engineering, Union College (to be discussed by J. J. R. Croes, president of the American Society of Civil Engineers); Testing the Eyes of School Children, by Dr. P. A. Callan, of New York Eye and Ear Infirmary. Other important subjects will also come forward, and there will be an exhibition of disinfecting apparatus and a demonstration of its use. Also, the new serum laboratory and the bureau of pathology will be described by Dr. H. D. Pease and Dr. George Blumer, who are in charge of these new departments.

The New York State Medical Association.—

The eighteenth annual meeting will be held in New York on Monday, Tuesday, Wednesday, and Thursday, October 21st, 22d, 23rd, and 24th, under the presidency of Dr. John A. Wyeth. The programme contains the following titles: The Correction of Deformities following Osteitis of the Knee, by Dr. Wisner R. Townsend; Echinococcus Disease in North America, by Dr. Irving P. Lyon, of Buffalo; Appendiceal Fistula, by Dr. John B. Deaver, of Philadelphia; The Clinical Course of Cancers with Reference to their Resemblance to Inflammatory and Infectious Processes, by Dr. Albert E. Woehnert, of Buffalo; The Present Status of the Infectious Theory of Malignant Neoplasms, by Dr. George Blumer, of Albany; The Estimation of the Malignancy of Tumors with Reference to the Reported Cures of the Disease, by Dr. James Ewing; The Treatment of Carcinomatous Growths by Caustics, by Dr. Andrew R. Robinson; The Surgical Treatment of Cancer, by Dr. Francis W. Murray; Malignant Disease of the Nose and Accessory Cavities, by Dr. Joseph S. Gibb, of Philadelphia; Intrathoracic Growths, by Dr. Alexander Lambert; Cancer of the Large Intestine, by Dr. James P. Tuttle; Malignant Disease of the Penis, by Dr. Henry M. Morton, of Brooklyn; Malignant Disease of the Uterus, by Dr. William M. Polk; The

Daily Medical Inspection of Schools, by Dr. Frederick W. Loughran; The Ethyl Bromide and Chloride respectively as Surgical Anæsthetics, by Dr. S. Ormond Goldan; The Perforation of Gastric Ulcer, with Report of a Case, by Dr. Lucius W. Hotchkiss; Alcohol as a Therapeutic Agent at the Beginning of the Twentieth Century, by Dr. Frank W. Dennis, of Unionville, N. Y.; Pelvic Inflammation in the Female; its Diagnosis and Management by the General Practitioner, by Dr. Abram Brothers; Skin Diseases of Special Interest, by Dr. Grover W. Wende, of Buffalo; Arteriosclerosis; its Importance, Definition, Ætiology, and Symptomatology, by Dr. Charles E. Nammack; Retinal Findings in Disorders of General Nutrition, by Dr. L. A. W. Alleman, of Brooklyn; Cardiac Manifestations of Arteriosclerosis, by Dr. DeLancy Rochester, of Buffalo; The Management and Therapeutics of Arteriosclerosis, by Dr. Egbert Le Fevre; Blood Examination from the Standpoint of the General Practitioner, by Dr. Frank W. Higgins, of Cortland, N. Y.; Surgical Malposition of the Gallbladder, by Dr. E. D. Ferguson, of Troy; Comments on some New Surgical Methods, by Dr. John A. Wyeth; Iodophilia, by Dr. Richard C. Cabot, of Boston; Laboratory Differential Diagnosis in Surgery, by Dr. Simon Flexner, of Philadelphia; Modifications in the Methods of Operative Surgery resulting from Laboratory Research, by Dr. Joseph D. Bryant; The Use of the Pneumatic Cabinet in the Treatment of Diseases of the Heart, by Dr. Charles E. Quimby; Gunshot Wounds of the Hip-joint by Reduced Calibre Projectiles, by Dr. Louis A. La Garde, United States Army; Asthma of Blood Origin, and not Nerve or Reflex, by Dr. G. N. Jack, of Depew, N. Y.; The Present Status of the Pathogenesis of Concomitant Strabismus, by Dr. Alvin A. Hubbell, of Buffalo; Conservative Surgery in the Treatment of Tuberculous Glands of the Neck, by Dr. Parker Symms; Acne, by Dr. Edmund L. Cocks; Differential Leucocyte Count in Fractures, by Dr. William G. Le Boutillier; Prostatic Obstruction to Urination; its Remedy by Enucleation of the Diseased Parts, by Dr. J. W. S. Gouley; Vesical Emergencies; their Surgical Management, by Dr. Eugene Fuller; Typhoid Cholecystitis, with Report of Cases, by Dr. Charles G. Stockton, of Buffalo; Uterine Prolapse, by Dr. Frederick H. Wiggan; What Percentage of Gouty and Rheumatic Patients develops Fatal Pulmonary Phthisis, by Dr. Thomas F. Reilly; The Diagnosis of Mitral Stenosis, by Dr. H. C. Bushwell, of Buffalo; The Resection of the Cervical Sympathetic in the Treatment of Glaucoma—its Present Status, by Dr. Wilbur B. Marple; A Durham Tube in the Right Bronchus, by Dr. E. D. Ferguson, of Troy; Indications of Treatment in Uterine Myomata, by Dr. George T. Harrison; The Technics of Fixation for Prolapsed Kidney, by Dr. Augustin H. Goelet; Glands, with Report of a Case, by Dr. J. R. Sturtevant, of Theresa, N. Y.; A Case of Gunshot Wound of the Intestines, by Dr. H. van Hoevenberg, of Kingston, N. Y.; and Brief Comments on the Materia Medica, Pharmacy, and Therapeutics of the Year ending July 1, 1901, by Dr. Edward H. Squibb.

Pith of Current Literature.

Journal of the American Medical Association,
October 12, 1901.

Some Unusual Features of Appendicitis and their Treatment. By Dr. Ernest La Place.—See abstract in *New York Medical Journal*, June 22d, p. 1106.

The Knot within the Lumen in Intestinal Surgery, with Report of Nineteen Cases. By Dr. F. Gregory Connell.—See abstract in *New York Medical Journal*, June 22d, p. 1106.

Modern Aspects of Congenital Osseous Malformations. By Dr. Carl Beck.—The author is convinced that the Röntgen rays are predestined to give an impetus for a new operative surgery in this much-neglected field.

Some Suggestions Regarding a Department of School Hygiene. By Dr. Leigh K. Baker.—See abstract in *New York Medical Journal*, July 13th, p. 89.

Diagnosis of the Backward Child. By Dr. A. W. Wilmarth.—See abstract in *New York Medical Journal*, July 20th, p. 139.

Speech as a Factor in the Diagnosis and Prognosis of Backwardness in Children. By Dr. G. Hudson Makuen.—See abstract in *New York Medical Journal*, July 20th, p. 139.

A Plea for the Backward Child. By Dr. C. F. Wahrer.—See abstract in *New York Medical Journal*, July 20th, p. 139.

Section of Ophthalmology. Address of Chairman Delivered at the Fifty-second Annual Meeting of the American Medical Association, Held at St. Paul, Minn., June 4-7, 1901. By Dr. J. A. Lipincott.

Late Implanting of Glass Ball in Orbit, and Epithelial Lip Grafts Transplanted to Orbit. By Adeline E. Portman.

**Case of Primary Syphilitic Lesion of the Fau-
cial Tonsil.** By Dr. George C. Stout.

Medical News, October 12, 1901.

The Endowment of Medicine. By Malcolm Morris, F. R. C. S.—In this address, delivered before the Johns Hopkins University, October 1st, the author points out that, if the supply of doctors is to be proportionate to the needs of the population, the means of an adequate education must be within their reach. It is self-evident that, under the conditions of modern scientific development, a considerable proportion of medical schools required can never be self-supporting. The State alone cannot do this, and the author calls the attention of the rich to the fact that there is no way of applying wealth more usefully to mankind than in helping to secure the completest possible training for those who are to be the guardians of the public health.

The Influence of the Colorado Climate upon Pulmonary Hæmorrhages. By Dr. S. G. Bonney.—Hæmorrhage, by itself, save with few ex-

ceptions, furnishes no criterion upon which to base a choice of climate, the indications for great altitudes in uncomplicated and in not too far advanced cases being highly imperative, independently of this single manifestation. An exceedingly small proportion of recurrences may be expected in Colorado. Recurrences are more likely to result in those cases with hæmorrhage immediately preceding the arrival, hence the wisdom of a short delay following the hæmorrhage before leaving home, and unusual precautions as regards rest upon arrival. Primary hæmorrhages are comparatively rare in Colorado, and usually take place incidentally to a rapid progressive destructive change in cases already of a hopeless prognosis, or as a natural result of some external assignable cause, which, under a proper régime, could have been avoided. Hæmorrhage, while less likely to occur in Colorado than at sea level, is, nevertheless, as a general rule, more severe and associated with greater shock. The avoidance of hæmorrhage, particularly in the early months of Colorado life, demands a most rigid compliance with detailed instructions.

The Tuberculosis Question. By Dr. H. Arrowsmith.—The author asserts that, to those who have the time and facilities to command its aid, there is nothing can give the results, aside from the open-air treatment, that can be obtained with the pneumatic cabinet. If these two agents can be employed in conjunction, almost any case can be benefited, if not seen too late. Antiseptic inhalations are of great additional utility, and while, of course, none of these things have the least specific effect on the bacillus, they do influence materially and definitely the course of pulmonary phthisis as we see it clinically.

The Prevalence and Treatment of Tuberculosis among the Poor. By Dr. H. L. Fancher.—The author agrees with Dr. Knopf that "consumption is not merely a medical but also a social disease," and that "society must come to the aid of the physician." He advocates the establishment, at State expense, of sanatoria. He thinks that in a great many cases of pulmonary tuberculosis, and especially where only one lung is involved, Dr. Murphy's method of injecting nitrogen gas into the pleural cavity is an ideal treatment.

The Crowding of Consumptives into the Municipal General Hospitals. By Dr. William Ridgely Stone.—The author reprobates the practice indicated in the title.

Tuberculous Otitis Media, Mastoiditis, and Meningitis in an Otherwise Apparently Healthy Adult. Brief Report of a Case. By Dr. James Francis McCaw.

The Tuberculin Test: Cases in which It Seemed Justified and Decisive. By Dr. W. E. Casselberry.

Medical Record, October 12, 1901.

Panhysterocolpectomy: A New Prolapsus Operation. By Dr. George M. Edebohls.—The author asserts that the very multiplicity of operations heretofore proposed for the cure of complete prolapsus of the uterus and vagina, is proof

that no operator is entirely and absolutely satisfied with the results of all his prolapsus operations. The author proposes panhysterocolpomy as an operation which, properly and successfully performed, will guarantee a certain and permanent cure of the prolapse. The essentials consist in the complete removal of the uterus and vagina, followed by operative obliteration or columnization of the bed of the genital tract. The tubes and ovaries are not disturbed, if healthy; if diseased, they are removed with the uterus and vagina. Obliteration and columnization of the bed of the removed uterus and vagina is effected by means of from seven to nine buried pursing sutures of chromicized catgut, placed about two centimetres or two centimetres and a half apart, and running parallel to each other. Each suture gathers the raw surfaces from the periphery in circular fashion and draws, or purses, them together in the median line. It is buried by being pushed upward toward the abdomen, while the next suture is being tied beneath it. The effect of the completed operation is to build a solid pelvic floor, from ten to fifteen centimetres in depth, from peritonæum to perinæum, and to establish broad apposition of the base of the bladder and the anterior surface of the rectum, conditions similar to those obtaining in the male pelvis. Four cases have thus far been operated upon by the author, all with perfectly satisfactory results.

Strangulated Hernia in Infants. A Study of Symptoms and Treatment, and a Report of a Third Case Successfully Treated by Operation. By Dr. Charles N. Dowd.—The symptoms in the order of importance are: (1) Tumor; (2) vomiting; (3) constipation; (4) difficulty in urination; (5) restlessness and apparent pain; (6) constitutional depression. The records indicate that delay in the effort to interpret symptoms or reduce the hernia by taxis has been the greatest danger, while early operation has been the greatest safeguard.

A Study in Heredity: In Its Relation to Immunity and Selective Activity in Tuberculosis. By Dr. Herbert Maxon King.—The author finds that the percentage of consumptives having a tuberculous parentage is actually smaller than that having a non-tuberculous parentage, and much smaller than would be more than accounted for by the additional risk of infection to which the former class is subjected. Tuberculosis in the parents renders to no inconsiderable extent an immunity to the disease in the offspring, as is shown by an increased resistance to the progress of the disease and an increased tendency to recovery among this class.

Epilepsy, Its Ætiology and Treatment. By Dr. J. L. Bowman.

Philadelphia Medical Journal, October 12, 1901.

A Case of Gunshot Wound of the Kidney and Stomach. By Dr. John B. Roberts.

A Case of Gunshot Wound of the Stomach in which the Patient Recovered. By Dr. G. W. Penn.—The author reports a case occurring in the practice of his father, who believed that the full

stomach was a favorable factor in this case, in that fewer fibres of the stomach wall were cut by the ball, and hence a closer approximation of the wound edges followed the contraction after emesis. As one of the lessons of the President's case, the author suggests that it might be well to excise first the necessarily contused, and possibly infected, edges elliptically, much as an ulcer might be excised, before uniting with suture.

Partial Gastrectomy for Hæmorrhagic Ulcer. By Dr. L. J. Hammond.—Among the ætiological factors of gastric ulcer are syphilis, tuberculosis, chlorosis (?), embolism, and thrombosis; hyperacidity is said to be generally associated with the condition, especially in young women. In the case reported thrombosis would seem to be the most likely cause.

A Case of Tubercular Ulcer of the Stomach. By Dr. Erwin Fischer.—In the literature there is but one other case of tuberculous ulcer reported. The author believes that with careful attention such case will be more often diagnosticated in the future. The tuberculin test should be used to reveal, and oftentimes to heal, the concealed tuberculosis, which may be the source of disease of the stomach, either by direct or indirect infection.

Address in Mental Disorders at the Pennsylvania State Medical Society, 1901. By Dr. Robert H. Chase.—The author considers the subject of Paresis from the Standpoint of the General Practitioner.

The Progressive Muscular Atrophies. By Dr. Edward E. Mayer.—The author reports three cases illustrating the difficulty of assigning cases to any particular form of muscular atrophy. The significance of symptoms individually or collectively has not yet been shown. Many neurologists are trying to find a neuropathic basis for the dystrophies, as well as for the myelopathies, and look upon them as trophoneuroses, in which the form or type of cellular change is yet unknown. Lacking more exact knowledge, we can still cling to the idea of a primary muscular disease.

Postdiphtheritic Urticaria. By Dr. James J. Walsh.

American Medicine, October 12, 1901.

Uric Acid Fallacies. By Dr. Frank Billings.—Uric acid probably does not exist in the blood during health. It is probably formed in the kidney from two sources: (a) From the urea interacting with some antecedent of urea, probably glycocin in the kidney; (b) from the nucleins of the body, by oxidation, probably in the kidneys. Uric acid is not poisonous. The presence of uric acid in the blood as the quadriurate or biurate probably means that it has been absorbed from the kidneys. Defective kidneys are the cause of the accumulation of urates in the blood, because of insufficient excretion. Antecedent kidney disease is commonly present in so-called lithæmic states, which have often been attributed to the irritating effects of uric acid upon the kidney capillaries and the cells of the tubules. The lesions formerly attributed to uric acid are probably due to the toxic effect of the alloxuric bases.

The presence of these lesions in the kidneys and in the connective tissue elements of the body not only leads to the accumulation of urates in the blood, but also furnishes a proper condition of tissue for the deposition of the urates as concretions in joints and fibrous tissues. The degree of alkalinity in the blood has no influence upon the presence of urates in the blood. The deposited biurate concretions cannot be redissolved out of the tissues by an attempt to increase the alkalinity of the blood and fluids by the use of alkaline medication. The presence of concretions of urates in the body comprise the sum total of its pathologic effects. The so-called uric-acid diathesis consists in a condition or tendency to disintegrate a quantity of nuclein far in excess of the amount usually split up, with resulting increase of uric acid and alloxuric base formation. The condition of the urine as to the presence of uric acid is, in single specimens, not indicative of the blood state in relation to the presence of urates. The chemical reaction of the urine bears no relation to the presence of uric acid in the urine and blood, nor does it indicate the chemical reaction of the blood.

A Case of Anthrax of the Face; Operation; Recovery; with Exhibition of the Patient. By Dr. W. B. Platt and Dr. H. C. Ohle.—In human anthrax the most rational, and a very successful, treatment beyond all question, is that of excision, with or without cauterization.

The Diagnosis of Primary Laryngeal Tuberculosis. By Dr. P. S. Donnellan.—The bacteriological and histological examinations are of the highest importance in arriving at a diagnosis of primary laryngeal tuberculosis. The absence of tubercle bacilli from the sputum, or from scrapings taken from the larynx, is not to be taken as conclusive evidence of the absence of the disease.

Fibrin in the Blood. By Dr. Robert L. Watkins.

Kidney-stone Diagnosis and Treatment. By Dr. Donald Macrae, Jr.

A Fatal Case of Tetanus, Treated with Antitoxine. By Dr. Louis C. Ager.

The Lane Lectures on the Social Aspects of Dermatology. Lecture V. By Malcolm Morris, F. R. C. S.

Haller and His Native Town. By Harvey Cushing.

Boston Medical and Surgical Journal, October 10, 1901.

A Brief Résumé of the Life and Work of Ambroise Paré, with Biographical Notes on Men of His Time. By Dr. Charles Greene Cumston.—The intellectual development of Ambroise Paré began under the tutelage of an old professor who taught him the principles of reading, writing, grammar, and mathematics. At that time, as now, it was necessary to know Latin before using a bistoury, lancet, or syringe, and Paré's father was obliged to find a Latin teacher for his son, in the person of a good old priest—d'Orsay by name. In 1530, at the age of twenty-one, Paré

was apprenticed to a barber surgeon. The life of these poor apprentices possessed little charm. The apprentice arose at cock-crow, swept out the store, so that the earliest workman could have his beard and hair attended to, and, from this early morning rising until 2 o'clock in the afternoon, he was obliged to go to about fifty private houses to comb the wigs, put hair up in papers, etc. They were required to be more servile than servants, and their food consisted of bread and water. Physicians out of charity delivered lectures at 4 o'clock in the morning, so that these poor young men might attend. The subsequent incidents in Paré's life are told with charm by the author and may be read with profit. (*To be continued.*)

Cretinism. By Dr. Charles S. Millet.—The author in a text-book article considers this disease, in which the affected organs are the brain, skin, mucous membrane, bones, generative organs, and blood, and all of them to about the same degree, although, in many cases, the body is apparently more diseased than the brain. When treated, however, the nervous system shows the least improvement. The severity of the symptoms is dependent upon the length of time the disease has existed and upon the age at which it began, but mainly upon the degree of impairment of the function of the thyroid gland. The author presents two cases in which the medicinal use of the thyroid gland was of great benefit.

Association of Anæmia with Chronic Enlargement of the Spleen. By Dr. Arthur H. Wentworth.

Hernia Reduced "En Bloc"; Operation and Relief of Internal Strangulation. By Dr. C. A. Porter.—This case demonstrates that, whenever severe symptoms recur after taxis or even after the ordinary operation for strangulated hernia, it would seem conservative to perform laparotomy at once, and examine the intestine. Should its condition be doubtful it may be surrounded with gauze and watched for twenty-four hours. The leaving questionable intestine near the open inguinal canal in ordinary strangulated hernia, in view of the possible complications, seems inferior to making a rapid abdominal section.

A Case of Intussusception; Resection of Fifty-six Inches of Small Intestine; Recovery. By Dr. F. G. Balch.

Two Cases of Intestinal Obstruction Due to Constricting Bands. I. Constriction at the Ileum by Meckel's Diverticulum; II. Constriction at the Sigmoid Flexure by a Band. By Dr. John Wheelock Elliot.

Lancet, October 5, 1901.

Introductory Address on Medical Study. By Dr. P. W. Latham.

Introductory Address on Life and Character. By Dr. J. W. Taylor.

Abstracts of Introductory Addresses Delivered at the Opening of the English Medical Schools. A Case of Acromegaly. By Dr. J. Pirie.—The author reports a case of acromegaly, occurring in

a woman aged forty-three years. He gives a detailed history of the case and describes all the symptoms most carefully, but does not bring out anything new. Treatment was purely symptomatic. Thyreoid medication was tried, and did a certain amount of good, but it had to be stopped because of the pain and diarrhœa it caused. The patient died very suddenly, but no autopsy was obtainable.

Morvan's Disease (?) or Leprosy. By D. Douglas-Crawford, M. B.—The author reports the case of a man, aged twenty-seven years, suffering from whitlows on the fingers and recurring hydrarthrosis of the shoulder-joint. The reflexes were exaggerated, but there was no scoliosis. The case is interesting as bearing on the view put forth by Zambaco, that Morvan's disease is nothing but leprosy modified by climate, hygiene, and environment; in short, an attenuated form. The shoulder-joint required aspirating about once a year; otherwise the disease seemed to have come to a standstill.

An Interesting Case of Compression. By E. J. O'Meara, L. S. A.

A Case of Sudden Death Eight Days after Amputation of the Forearm. By Dr. P. N. Gerrard.

Physiological Phenomena Preceding or Accompanying Menstruation, Together with Notes on the Normal Temperature of Women. By Dr. H. MacMurchy.

British Medical Journal, October 5, 1901.

Sixty-ninth Annual Meeting of the British Medical Association.

Section of Obstetric Medicine and Gynæcology.

Introductory Remarks by the President on Puerperal Fever, Uterine Cancer, and the Falling Birth-rate. By Dr. J. W. Byers.—The author, after quoting the lamentably high death-rate from puerperal fever that prevailed in former years, illustrates the progress made in its prevention by giving the statistics of the Rotunda Hospital. In 7,000 maternity cases delivered there in the last two years, only 7 deaths occurred from puerperal fever. Little progress has been made in the treatment of cancer of the uterus. Early diagnosis is of the most enormous importance, and abnormal hæmorrhage in any woman, of whatever age, demands the most careful clinical examination. The author calls attention to the falling birth-rate in Great Britain, and states that it is the duty of the physician to take greater precautions when a woman is pregnant that she may give birth both to a living and a healthy child.

A Discussion on the Causation, Prevention, and Treatment of Miscarriage. By Dr. P. Horrocks and others.

Deciduoma Malignum. By Dr. P. Horrocks.

Cæsarean Section, with Notes of Three Successful Cases. By J. M. M. Kerr, M. B.—The author reports three successful cases of Cæsarean section performed for extreme pelvic deformity. All the operations were performed while labor was in progress, the incision being longitudinal

and the placenta situated on the posterior wall of the uterus.

Shock in Abdominal Operations. By G. A. Hawkins-Ambler, F. R. C. S.—The author calls attention to the fact that inspissation or drying up of the blood is a constant occurrence in shock. The specific gravity of the blood rises from 1,054 to 1,062, and this apoplasmia may last for days. It is the cause of the thirst which is the first complaint of the patient when the peritoneal cavity is opened. It should be met by giving warm fluids by the mouth, and rectal saline injections. The prime element in the causation of operative shock is time; rapid operating is oftenest successful. The preservation of asepsis during an operation, the conservation of the patient's strength, the maintenance of bodily heat, stimulation with suitable drugs, rectal injections, and sufficient clothing, all tend to minimize exhaustion of nerve centres and breakdown of the vasomotor mechanism. Raising the foot of the bed is often of great service.

When and How to Operate on Uterine Fibroids. By Dr. W. Duncan.—In cases of uterine fibroids the conditions calling for intervention are four: 1. Severe hæmorrhage. A preliminary exploration of the uterine cavity should always be made before resorting to more radical methods. Fibroid polyps or small submucous fibroids can easily be removed *per vaginam*. The author is opposed to removing polyps of any size by *morcellement*, and electricity has failed completely in his hands. He recommends intraperitoneal hysterectomy as the safest and best operation. 2. Pressure symptoms. Here the tumor fills the pelvic cavity; sometimes it can be pushed up above the brim and held there by a pessary, but in others this is impossible, and then nothing but hysterectomy is of use. 3. Rapid growth. This is due either to cystic or mucoid degeneration and always calls for hysterectomy without delay. 4. Complicating pregnancy. The risks run by a pregnant woman depend greatly upon the position of the fibroid. If in the upper uterine segment or if subperitoneal and not impacted in the pelvis, pregnancy and labor will in many cases proceed normally, and any operative intervention should be deprecated.

A Case of Cystic Fibromyomata in a Single Woman, Aged Twenty-two Years. By Dr. C. Lockyer.

On a New Gynæcological Position. By Dr. F. Jayle.—The gynæcological position recommended by the author is a combination of the ordinary position of the speculum or lithotomy, and of the sacro-dorsal "decline" position. In order to obtain it, is it necessary to have a balancing table with a system of shoulder-rests. This position throws back the intestines, dilates the vagina, and stretches the anterior vaginal wall, the exploration of the tubes and ovaries being thereby greatly facilitated.

A Successful Laparotomy for Abdominal Pregnancy, with Removal of the Fœtus (Full Term), Placenta, and Gestation Sac En Masse. By A. Smith, M. B.

A Case of Twin Pregnancy, Extrauterine and Intrauterine. By Dr. Boyd.—The author reports the case of a multipara, aged twenty-nine years, who was operated upon for right tubal pregnancy. At the operation the uterus was found to be pregnant, and there was an organized clot the size of an orange in the right tube. This last was removed, and the intrauterine pregnancy progressed uninterruptedly, the woman being delivered of a seven-and-a-half-pound baby at term.

Ovarian Pregnancy. By H. Gilford, F. R. C. S.

A Discussion on the Diagnosis and Treatment of Metritis and Its Relationship to Malignant Disease. By Dr. J. Campbell and others.

Further Report on a New Operation for Prolapsus Uteri, with Notes of Forty Cases. By Dr. J. I. Parsons.

Extirpation of the Uterus and Vagina in Cases of Intractable Prolapse. By C. Martin, F. R. C. S.—The author recommends the extirpation of the uterus and vagina in cases of intractable prolapse, where no pessary can be retained, where the patient objects to its use, or where ventrofixation of the uterus is a failure.

The Treatment of Chronic Uterine Inversion by Abdominal Hysterotomy, with a Successful Case. By Dr. F. W. N. Haultain. (*End of report of British Medical Association.*)

Notes on Enteric Fever at the Imperial Yeomanry Hospital, Pretoria. By Dr. H. D. Rolleston.—The present article is based upon observation of cases of typhoid fever in South Africa from May to September, 1901, and on analysis of 244 cases. A previous attack of typhoid in England, India or elsewhere, did not necessarily protect an individual in South Africa. As regards anti-typhoid inoculation the following conclusions were drawn: 1. Antityphoid inoculation does not absolutely protect against a future attack of typhoid fever. 2. When typhoid occurs in an inoculated person there is, as a rule, an interval of at least six months. 3. Inoculation protects against a fatal termination to the disease. Among 244 cases there were 52 relapses, a high percentage. Diarrhoea was decidedly exceptional. A noticeable feature was the rapid pulse-rate during convalescence. Hæmorrhage from the bowels occurred in 21 out of 244 cases, a percentage above the general average. Of these 21 cases, no fewer than 16, or 76 per cent., were fatal. Perforation of the intestine was curiously rare, occurring in only one case. Phlebitis was the commonest sequela met with after enteric, yet pulmonary embolism was very rare. Neuritis, insanity, and bronchitis, were seldom seen. Pneumonia occurred in four cases, proving fatal in two. The arthritic sequelæ took the form of true arthritis or simple arthralgia; of these, the former was much the rarer. One case of myositis was observed.

A Case of Beri-beri (?) Possibly Due to Arsenic Poisoning. By R. Ross, F. R. C. S., and Dr. E. Reynolds.—The authors report the case of a woman, aged twenty-seven years, which clinically exactly resembled the cases of arsenical neuro-

tis seen in the recent Manchester epidemic, and was also similar to the paralytic form of beri-beri. Examination of the patient's hair showed it to contain a considerable quantity of arsenic. The patient had not taken arsenic in any form, but the authors suggest that the arsenic was present in the canned foods used by her, either in glucose, in preservatives, or in the tin lining of the cans.

Gazette hebdomadaire de médecine et de chirurgie, September 5, 1901.

Pigmentation of the Median Abdominal Line.—M. Raoul Lehman says that the pigmentation of the umbilicopubic line in males is especially seen in severe intestinal inflammation, in general or local tuberculosis and at the age of puberty. It is rarely seen in men, and then only in cases of prolonged abdominal disease. The author writes interestingly on the development of the pigmentation during pregnancy and the manner of its appearance in local disease in women and with the development of abdominal tumors.

Gazette hebdomadaire de médecine et de chirurgie, September 12, 1901.

Typhoid Fever and Tuberculosis.—M. Vergnaud insists upon the contagiousness of typhoid fever, and urges that an additional reason for isolating patients with this disease lies in the avoidance thereby of their infection secondarily with other diseases. Tuberculous nurses must not be allowed to attend them, as typhoid patients are especially susceptible to this infection. The author also draws a clinical picture of the development of typhoid fever in tuberculous subjects and points out the data for diagnosis.

Suppurative Appendicular Inflammation with Intestinal Perforation.—M. H. Douriez reports such a case, in which the interesting complication arose of the exit into the peritoneal cavity of ascariides, with which the patient was affected. Recovery followed operation.

Progrès médical, September 7, 1901.

Cerebro-spinal Meningitis Following Otitis Media.—M. Stancullanu and M. Nattan-Larrier report the case of a man, thirty-one years of age, who died of a cerebro-spinal meningitis which was the direct extension of an acute otitis. The ætiological germ was the pneumococcus.

Ovarian Opothrapy.—M. Edmond Vidal reports good results in cases of neurasthenia in women, as well as from the effects of the natural and the artificial menopause, by the subcutaneous use of a glycerin extract of ovarin.

Lyon médical, September 8, 1901.

Case of Glabellar Encephalocele.—M. Bérard and M. Mailland record the case of a child thirteen months old who presented an encephalocele at the glabella. On autopsy, a cystic tumor of the chorioid plexus was found, and evidences of a latent hydrocephalus.

Calculous Anuria. By M. Rafin and M. Verrière.

Münchener medicinische Wochenschrift, September 10, 1901.

Diagnosis and Treatment of Oesophageal Stricture. By Karl Mayr and Dr. Adolph Dehler.—The description in detail of a case.

Blood Cysts.—Dr. A. Gebhardt reports the case of a man who had a large, fluctuating, elastic tumor, with a broad base in the axillary line on the left side. The growth was of the size of a foetal head. The skin over it was unchanged. Aspiration furnished dark fluid blood containing unchanged red blood cells, detritus, and a few leucocytes. A number of other similar cystic growths developed and involved the bones of the thorax. No malignant elements were found. The patient died after repeated operation. The author believes the cysts to have developed as hæmatomata.

Tuberculous Infection in Childhood. By Dr. Dieudonné.

Energy of the Ganglion Cells. By Dr. Adler.

Combined Intubation and Extubation Apparatus. By Dr. A. Rahn.

The Heart in Caisson Workers.—Dr. Hornung has examined a number of workers in a caisson after varying periods of exposure to the compressed air. A slowing of the pulse with dilatation of the left ventricle and an increased blood pressure were noted after a short exposure, but after prolonged labor in the caisson the reverse was uniformly found. In his own person, the author, who suffered from a perforation of the membrana tympani and a chronic otitis media, did not experience the slightest vertigo, which is usually described in caisson disease as due to increased pressure in the labyrinth.

Membranous Dysmenorrhœa.—Dr. Kollmann says that this ailment has no relation to pregnancy or abortion, and does not induce sterility. The membrane cast off bears no relation to an inflammation of the endometrium; the membrane is to be regarded strictly as a dysmenorrhœic membrane. The casting off of the membrane is not the cause of the pain. The histological picture of the membrane is not constant and may change from month to month in the same patient.

Disinfection of the Hands. By Dr. T. Paul and Dr. O. Sarwey. (*Continued article.*)

Berliner klinische Wochenschrift, September 9, 1901.

Amœbæ in Epidemic Dysentery. By Dr. H. Jäger.

Formation of Sugar from Fat in Severe Diabetes.—Dr. L. Mohr has carefully studied the urine of two patients suffering from diabetes mellitus in whom a restricted diet cause no diminution of sugar. His conclusions are that the almost unreasonable amount of sugar and the presence of acetone prove almost conclusively that, in diabetes of a grave type, sugar can be produced from fat.

Traumatic Pancreas Necrosis.—Dr. F. Selberg reports such a case and says that necrosis or gangrene following an injury to the pancreas may arise from an escape of the pancreatic fluids into the surrounding tissues, thereby causing a digestion of the pancreas and the abdominal fat; or it may follow from the fact that the injured organ may itself become gangrenous, thus furnishing a suitable nidus for bacterial growth.

Bismuth Poisoning.—Dr. Dreesman calls attention to the fact that poisoning may follow either the local or internal use of the subnitrate of bismuth. The milder intoxications are marked by a stomatitis, with a dark line at the junction of the teeth and gums, and discoloration of the tongue. In the severer cases, gastro-intestinal and renal disturbances are seen. The author reports a case in which poisoning of a severe character followed the use of the drug upon a burn of the leg. Recovery followed upon the withdrawal of the bismuth as a dressing.

Contribution to the Surgery of Peritonitis. By Dr. T. Gluck. (*Continued article.*)

A Self-balancing Extension Weight. By Dr. F. Cramer.

Riforma medica, August 7, 1901.

Appendicular Inflammation and Abnormal Types of Typhoid Fever. By Dr. Zagari.—A Clinical Lecture Reported by Dr. Ernesto Mea.—The author speaks of a form of appendicular inflammation which he terms *appendicitis typhosa* or *typhus appendicularis*. The patient was a man, aged sixty-seven years, who entered with the symptoms of the beginning of typhoid fever. The symptoms, however, almost completely disappeared two days later, to the astonishment of the attendants. Two days afterward he developed the symptoms of an acute attack of appendicular inflammation, together with slight cough, dyspnoea, and cyanosis. Pain at MacBurney's point and rigidity of the muscles on the right side of the abdomen were well marked. On the fifth day from the onset of the appendicular inflammation, there was added vomiting, and an increased degree of tympanites. The bowels became constipated and the vomit assumed a stercoral character. The patient was operated on the same day, but died; it is not stated how long after the operation. [In this country we do not usually wait for stercoraceous vomiting in appendicular inflammation before operating.] The autopsy revealed that there had been an acute septic peritonitis, that the appendix was surrounded by a pseudo-membrane, and that the small intestine was studied with flat ulcers like those of typhoid fever, one of which, situated near the appendix vermiformis, had perforated into the peritoneal cavity and was closed by adhesions. The author concludes that typhoid fever may be masked by the clinical picture of appendicular inflammation, and that typhoid fever must be considered as one of the causes of that disease. Before deciding upon an operation in appendicular inflammation, therefore, it is better to exclude, first, the presence of typhoid infection. The present case and a similar one reported by Rendu do not encourage operative treatment in such cases of appendicular typhoid.

August 8, 9, and 10, 1901.

Some Observations upon the Diagnostic and Prognostic Value of the Diazo-reaction. By Dr. Virgillio Bolli.—The author considers, first, the value of the diazo-reaction in pulmonary tuberculosis, and concludes that (1) the reaction is absent in the majority of cases of incipient tuberculosis. (2) Its presence in the initial stages is not an indication for a bad prognosis, while its absence in these cases is not a warrant for a good prognosis. (3) The diazo-reaction is almost always present in the more advanced stages, but its presence has no relation to the temperature or the state of the bowels. The prognostic importance attributed by Michaelis to the diazo-reaction in pulmonary tuberculosis is, therefore, not in correspondence with the facts.

As the result of his observations in patients with exudative pleurisy, the author concludes that the diazo-reaction is found in about one half of the cases, that its absence testifies for a favorable prognosis, and that its presence indicates a tuberculous origin of the infection. In cases of peritonitis and pleurisy with effusion combined or of peritonitis alone, the diazo-reaction is found in about fifty per cent. of the latter, and in all of the former. When it is absent, the infection is probably tuberculous and it has no prognostic value, but its diminution or disappearance in patients with pleurisy and peritonitis almost always indicates an increased diuresis and an absorption of the exudate.

Klinitchesky Journal, April, 1901.

The Diagnosis and Treatment of Appendicular Inflammation. By Dr. B. D. Schervinsky.—In speaking of the prevention of appendicular inflammation, the author says that the best way is to remove the appendix in every individual; in other words, a sort of internal circumcision. At present our prophylactic measures should consist in the early diagnosis of appendicular inflammation, and in the adoption of means that improve the regularity of digestion. The indications for treatment are: First, to remove anything that may increase the inflammatory process; secondly, to decrease the inflammation itself, and, thirdly, to promote the absorption of any exudate, as well as to protect from a second attack. The first indication is met by complete rest on the back and liquid diet, or even fasting, in order to afford the inflamed parts the proper amount of rest. The objections to the use of opium for the pain are theoretical and not based on clinical experience. No fixed rule can be given, and opium should not be given any more than laxatives as a routine plan in all cases. In each case the amount of pain, meteorism, etc., will determine the advisability of an opiate. As regards laxatives, the author recommends the administration of castor oil or of some bitter laxative water, if, during the first days, there is constipation with no symptoms of rupture or of general peritonitis. If the laxative does not lessen the pain, opium or morphine should be given, and the bowels kept open by enemata. For the reduction of the inflammation

the author recommends leeches—a remedy which is but rarely used nowadays, but one which he considers of great value. Then, at first, ice is applied to the region of the appendix, later a cold compress. The absorption of the exudate is promoted by the application of warmth after the acute inflammatory symptoms have subsided. This the author does by means of hot poultices, hot water bags, and sometimes hot poultices of mineral mud. Iodides should be given internally, and the patient should be kept in bed as long as possible, until most of the exudate has disappeared and there is no more pain. Careful dieting is essential, especially at the beginning, and the bowels should be kept open by enemata and light laxatives. In speaking of the indications for operation, the author disagrees with the "radicals," who insist on an operation so soon as the diagnosis of appendicular inflammation is made. Everybody agrees that an operation is necessary when there are signs of rupture, general peritonitis, the formation of an abscess, intestinal obstruction, or of a prolonged febrile movement. If the process goes on favorably, and if all the symptoms gradually disappear, an operation should not ordinarily be recommended. If a second attack occurs, an operation is indicated.

On the Treatment of Appendicular Inflammation. By Dr. A. A. Bobroff.—This author also antagonizes the opinion of the "radicals," and says that it is not necessary to operate on every case of appendicular inflammation so soon as the diagnosis is established. He thinks that, while such a rule would undoubtedly give better statistics if followed, its execution would be unfair to that portion of the patients who would have got well without an operation. If a patient comes to the author with a history of one or two attacks of appendicular inflammation, and if he cannot find any evidences of an exudate or only a very slight exudate on examination, he prescribes a careful regimen, avoiding all foods that irritate the stomach or the bowels or cause gas, etc., and regulates the movements of the bowels by laxatives. Often such patients get well, but if there comes another exacerbation after this, an operation is necessary. If the patient is seen during an attack, the measures vary with the case. If there are pain and local tenderness, but no evidences of general peritonitis and no positive signs of the presence of pus, and yet the temperature is high, he prescribes complete rest in bed, and immediately gives a laxative, and, after it has produced its effect, bismuth. Then a strict diet or fasting for two or three days and an ice bag on the appendicular region. If the general symptoms subside in a few days, and if the local tenderness grows less, so that one can distinctly feel the exudate, he orders the application of heat in the form of a hot-water bag. The diet and the bismuth are continued for from five to eight days, and an enema is given daily, while a rectal tube is also introduced daily to let out the gases if the abdomen swells excessively. If this is the first attack, the patient is put on the same regimen for a few months and carefully watched, but, if the attack is a recurrence, an operation is necessary. Immediate operation is indicated in the presence

of pus in the cæcal region, or of general peritonitis. The author strongly advocates operations *à froid*, wherever possible. He does not recommend opium in appendicular inflammation; it can do only harm, and never helps. As laxatives he prefers salts, such as Glauber's, or some bitter laxative water. The complete rest of the bowels as a means of preventing the development of peritonitis cannot be compared with the advantage of cleansing the bowels.

The Treatment of Appendicular Inflammation.

By Dr. N. D. Titoff.—The indications for operation in appendicular inflammation are as follows, according to this author: (1) In the early stages of an attack, an operation is indicated when there are symptoms of perforative peritonitis, of suppuration in or about the appendix, or of gangrene of the appendix. (2) If the general symptoms are severe and there is a resistance in the appendicular region, without a distinct infiltration and without the possibility of feeling the appendix; in such cases there is usually suppuration about the appendix. (3) In frequently recurring attacks. (4) After the first attack in subjects with a tuberculous or cancerous parentage, or in members of a sickly, short-lived family. (5) If a distinct infiltration remains after six or seven weeks of medical and dietetic treatment. Of the sixty-four cases which he has collected, thirty-four got well without an operation. Seven died, and of these, three after operations which were performed in the presence of acute general peritonitis. In four cases the operations were successfully performed by Bereskyne; the others were successfully operated on *à froid*.

Vratch, August 25 (September 6, New Style), 1901.

On Anæsthesia with Combined Ethyl Bromide and Chloroform.

By Dr. I. F. Zematsky.—The author strongly urges the employment of a combination of ethyl bromide and chloroform for general anæsthesia, as the result of an observation covering over 3,000 anæsthesias seen during the past fourteen years. In anæsthesia with pure chloroform it takes at least eight, sometimes twenty, and on the average twelve, minutes before the narcosis sets in. In the combined anæsthesia the patient is "under" after from forty-five to fifty-five seconds, occasionally even in twenty seconds, and the longest preliminary stage is not over two minutes. In anæsthesia with pure chloroform there is a prolonged and unpleasant period of gradual loss of consciousness, while in the combined method the patient falls asleep so quickly that he has not the time to analyze his sensations. In chloroform narcosis there is always a period of excitement, sometimes amounting almost to mania, while, if the anæsthetics are properly administered in the combined method, there is no stage of excitement unless the patient is an alcoholic, or unless he is getting too much ethyl bromide. In pure chloroform anæsthesia the narcosis proceeds as follows: (1) Dimming of the consciousness (delirium); (2) anæsthesia; (3) analgesia. In the combined method, on the other hand, there is (1) analgesia; (2) anæsthesia; (3) psychic anæsthesia or loss of conscious-

ness. The ethyl bromide is given first, from five to ten grammes of it being used, then chloroform is dropped on the mask. The contraindications to the use of ethyl bromide are atheroma and alcoholism.

Shall the Medical Use of Hypnotism be Restricted? By Dr. P. J. Rosenbach.—The author discusses the regulation of the Russian government which concerns the therapeutic use of hypnotism. No physician in Russia is allowed to hypnotize a patient except in the presence of other physicians, as in the case of surgical operation. In addition, he must file with the local official medical authorities a statement giving the name of the patient, the time and place of the séance, and the names of the medical witnesses. All this is required because the medical department of the empire believes that hypnotism can produce injurious effects upon the patient, causing hysterical and other disturbances of the nervous system, and because the abuse of suggestion and hypnosis on the part of the physician is possible, while the effects of suggestion may lead to criminal acts. The author quotes a number of authorities and presents arguments against such regulations, showing that their effect is to intimidate the public against a valuable therapeutic agent, and that the alleged injurious effects of hypnotism occur in people who had been already troubled with hysteria or some other nervous disease before the hypnotization took place.

Facilities for First Aid to the Injured in Berlin.

By Dr. J. E. Hagen-Thorn.—In 1897 there was organized in Berlin a society for first aid to the injured (Berliner Rettungsgesellschaft), which broadened and rendered more perfect the system of aid in cases of accident. Before this, the accident service was unsatisfactory and insufficient in Berlin. Since 1872 there have been in that city "sanitary posts," i. e., places where first aid may be had at the hands of a hospital orderly (Heilgehilfe) and at twenty police stations there were boxes with surgical dressings for use in cases of accident. In 1894 there were established "accident stations" by the medical aid societies, which correspond to our lodges or benevolent orders, but these have not been successful because the people believe that patients are taken from these stations to the public clinics to serve as demonstration material. The new society has fifteen "aid posts" in connection with hospitals and eight "minor posts" for quick aid. At these posts a number of physicians keep watch during certain hours, relieving one another. In addition, there are four stations with carriages and ambulances for the transportation of feeble or injured persons from their homes to the hospital or the accident post. A central accident post is connected by telephone with the whole system of posts, and with the police telephone system. The central station keeps a record of the vacant beds in the various emergency wards, so that a patient can be instantly directed to a hospital where he is sure to be received.

Medical Report of the Municipal Lying-in Asylums of St. Petersburg for 1900. By Dr. E. L. Pouschkina.

Book Notices.

The Pathology and Treatment of Sexual Impotence.

By FREDERICK VICTOR G. VECKI, M. D. Third Edition, Revised and Enlarged. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 5-329.

The appearance of a third edition of this work in the space of two years after the publication of the second edition (which we noticed at some length in our issue for June 3, 1899) is evidence that it has fulfilled a demand. The present edition has been revised and much new matter added to bring the volume up to date. For instance, in the therapeutical section so recent a candidate for medical favor as yohimbine receives extended mention. Of other new remedies that have been proposed, brucine, ergotine, carbonic-acid baths, intravesical irrigations, and *echinacea angustifolia* are critically considered. We observe that the author refers to the effect of thyreoid medication in inducing temporary impotence. There does not seem to be known, however, a fact that we can state from our own observation, that in some cases, at least, the use of suprarenal preparations has a similar effect, rendering the maintenance of erection almost impossible. These effects are, however, transitory, passing off some time after the cessation of the use of the drug, in either case. We are glad to see that attention is given in this edition to self-intoxication as one factor in the production of functional impotence; we are satisfied that it is a far more common cause than is generally suspected.

We can only repeat our former opinion of this work as one that "should prove of great interest and value to the practitioner."

Die Hypertrophie der Rachentonsille. Eine Monographie. Von Professor Dr. G. GRADENIGO, in Turin. Mit 3 Tafeln und 45 Abbildungen im Texte. Vierter Band. Viertes Heft. Jena: Gustav Fischer, 1901. Pp. 181 to 392.

This monograph forms Part IV, Vol. IV, of a series of publications edited by Haug, of Munich, and entitled *Klinische Vorträge aus dem Gebiete der Otologie und Pharyngo-Rhinologie*. It covers with great detail the question of the so-called adenoids of the nasopharynx. Of special interest are an excellent chapter on the development of this part of the body and another on the general question of tuberculosis as affecting the pharyngeal tonsil; otherwise, only familiar ground is covered. The whole is an excellent exposition of the present status of the adenoid question.

BOOKS, ETC., RECEIVED.

Electricity in Medicine and Surgery, including the X Ray. By William Harvey King, M. D., Professor of Electro-therapeutics in the New York Homœopathic Medical College and Hospital, etc. In Two Parts, with a Section on Electro-physiology, by W. Y. Cowl, M. D., of Berlin, and a Section on the Bottini Operation, by Alfred Freudenberg, M. D., of Berlin. New York: Boericke & Runyon Company, 1901. Pp. 296.

Diseases of the Stomach and their Surgical Treatment. By A. W. Mayo Robson, F. R. C. S., Member of Council and Hunterian Professor (1897 and 1900), Royal College

of Surgeons of England, etc., and B. G. A. Moynihan, M. S. Lond., F. R. C. S., Assistant Surgeon, Leeds General Infirmary, etc. New York: William Wood & Company, 1901. Pp. x-306.

The Principles and Practice of Medicine. Designed for the Use of Practitioners and Students of Medicine. By William Osler, M. D., Fellow of the Royal Society; Professor of Medicine in the Johns Hopkins University, etc. Fourth Edition. New York: D. Appleton & Company, 1901. Pp. xvii-1182.

Dictionary of Philosophy and Psychology, including many of the Principal Conceptions of Ethics, Logic, Æsthetics, Philosophy of Religion, Mental Pathology, Anthropology, Biology, Neurology, Physiology, Economics, Political and Social Philosophy, Philology, Physical Science, and Education, and giving a Terminology in English, French, German, and Italian. Written by many hands, and Edited by James Mark Baldwin, Ph.D., D. Sc., LL.D., Stuart Professor in Princeton University. With the Co-operation and Assistance of an International Board of Consulting Editors. In Three Volumes, with Illustrations and Extensive Bibliographies. Volume I. New York: The Macmillan Company, 1901.

A Text-book of Bacteriology. By George M. Sternberg, M. D., LL.D., Surgeon-General, United States Army; Honorary Member of the Epidemiological Society of London, etc. Illustrated by Heliotype and Chromo-lithographic Plates and Two Hundred Engravings. Second Revised Edition. New York: William Wood & Company, 1901. Pp. xi-708.

A Practical Treatise on Diseases of the Skin. By John V. Shoemaker, M. D., LL.D., Professor of Skin and Venereal Diseases in the Medico-Chirurgical College and Hospital of Philadelphia, etc. Fourth Edition, Revised and Enlarged, with Chromo-gravure Plates and other Illustrations. New York: D. Appleton & Company, 1901. Pp. xv-892.

Miscellany.

The Report of the United States Commissioner of Immigration for the Port of New York.—Through the courtesy of the acting commissioner, Edward F. McSweeney, we are enabled to give a résumé of such portions of the report of Commissioner Fitchie for the year ending June 30, 1901, as have special medical interest. The report is a very interesting one, and includes, among others, the following sections: Statistical tables, deportations, deportations under the one-year clause, primary inspection, board of special inquiry, criminals, anarchists, etc., medical division, obstacles to assimilation, buildings and grounds, etc.

The new buildings, says the report, on Ellis Island, though only partially completed, have enabled the arriving aliens to be more comfortably and expeditiously handled than ever before, and it is confidently asserted that, when the whole plant is completed, the conditions surrounding the arrival and inspection of immigrants will approximate the ideal.

The total number of aliens arriving at the port of New York for the year ending June 30, 1901, was 453,496. There were also 133,056 United States citizens who came within the scope of the work at the station, making a total of 586,552.

On the important subject of deportation the report states that, whereas immigration during the past year shows an increase of more than fifty per cent. over that for the year 1898-9, the number of deportations shows a decided decrease, which is attributed to the constantly increasing efficiency of the examination at this station, and

the consequent weeding out and preparation of immigrants before embarkation on the other side. In order to aid in the work of deporting aliens who have been in the United States for less than one year, and have become public charges, including, of course, those unfit from medical reasons, the commissioner suggests that it would be advisable to furnish the various State officials having charge of paupers, insane persons, etc., with copies of the laws and regulations concerning deportations under Section II of the act approved March 3, 1891.

There were 286 aliens deported during the year, and the commissioner says that of the total, seventy-three—or twenty-five per cent.—were insane from causes existing prior to their landing. He suggests that steps be taken whereby the immigration department shall be enabled to bring about deportations of aliens who become insane within one year after landing, from causes arising subsequent to their arrival. Under the existing laws the steamship companies can refuse to accept as a passenger an insane alien for whose return the government is ready to purchase a ticket. As one-quarter of the deportations under the one-year clause are immigrants who have become insane from causes existing prior to their landing, it is reasonable to assume that a considerable number become inmates of our public institutions for the insane from causes arising subsequent to their arrival. It would be beneficial to the country to take the steps suggested, but as the steamship companies assume serious liabilities in taking such cases as paid passengers, he would recommend that the law be so amended as to place such subjects, so far as their ocean transportation is concerned, on the same basis as those in which the causes existed prior to landing.

In regard to bringing cases for deportation from inland points, the commissioner suggests that a provision, whereby the steamship company concerned is held responsible for the inland transportation of the immigrant ordered deported, should again be embodied in the regulations covering such cases and enforced in each instance. The institution or bureau concerned would undoubtedly be only too willing to be relieved of the permanent care of such a person by the expenditure of the amount required for an attendant's expenses to and from the port of deportation, and a hindrance to the department's work by the detailing of inspectors would be avoided.

Particular attention is called to the system which is in vogue in Massachusetts, whereby the case of every alien who becomes a public charge within a year is immediately reported to the Bureau of Immigration, the expenses for their care while in hospital paid, and, where possible, the immigrant deported. An extension of this policy throughout the various States of the Union would do more than any one thing to assist the immigration authorities in their enforcement of the law; and it is earnestly recommended that the Secretary of the Treasury issue a circular letter to the various State executives calling their attention to the provisions of the immigration laws, in order that they may be able to place upon the Federal authorities the responsibility and expenses of

maintaining alien paupers and others becoming a public burden within less than one year after arrival in the United States. The general extension of this knowledge would bring the immigration question home to the people and make any needed restrictive legislation much more simple.

Too much attention cannot be paid to the fact that alien immigrants who become public charges within one year are able, through various means, to remain permanent charges upon the community. A case in point is given.

In regard to criminals, fugitives from justice, anarchists, etc., a subject of such great importance in regard to the medical aspect of sociology, the report says that it is obviously difficult to secure evidence that will lead to the exclusion of aliens belonging to this class, and reliance has to be placed on the theory of their being likely to become a public charge.

Of the proposal to establish some form of examination abroad, in connection with our consulates, to prevent the embarkation of persons who might be found objectionable to this country, and to obviate the individual hardships incident to the return of passengers after reaching this side, the commissioner points out that "at times during the past ten years, specially selected medical officers of the Marine-Hospital Service, have been placed at various European ports to enforce sanitary precautions, or to act in an advisory capacity in regard to the physical eligibility of an immigrant. Their conclusions regarding the advisability of taking a prospective passenger would generally rest on the clearest kind of evidence—that presented by a physical examination or, occasionally, perhaps, on a consideration of the locality of his residence in the immediate past. Although the financial interests of the steamship company concerned are dependent on the heed given to this medical officer's advice, some very disagreeable complications have arisen out of these assignments, and the commissioner says that these officers of this government have never been able to attain results warranting their continuance in any foreign port, except when they have received the unqualified co-operation and support of the steamship companies and of the government in whose territory they have attempted to exercise authority. The proposition to send officers of this bureau abroad to enquire into the antecedents of the subjects of the country to which they are assigned, and to decide upon their desirability individually as immigrants, would be inaugurated under less favorable auspices and would involve a far more difficult and delicate task.

It seems highly improbable, therefore, that any force which this bureau might send abroad could attain the desired result, or that such inspectors could maintain a higher standard of eligibility than we are able to uphold here on our own territory. If such foreign inspectors are to be given the right to exact evidence of an unobjectionable police record from him, the commissioner asks why not make it at once a requisite for admission to the country or make the absence of such record upon arrival *prima facie* evidence of criminality, and let the vessel that allowed him to embark assume the risk? Although such a measure may

seem radical it would really impose no hardship upon legitimate travellers from continental Europe.

The report of the Medical Division is in substance as follows: By departmental order of June 3, 1901, tuberculosis was added to the official list of diseases to be considered by us as dangerous contagions. It would appear from the medical reports of this and recent years that pulmonary tuberculosis in a demonstrable stage is a comparatively rare disease among aliens arriving here for the first time. This would seem to be borne out by experience with those who are examined with a view to returning them as public charges under the one-year clause. For, whereas a considerable portion of these are suffering from the above disease, in most instances it is impossible to attribute it to causes existing prior to landing.

Among arriving aliens it appears that this disease is most conspicuously found in the persons of alien residents of this country who are returning to their homes here after a trip abroad in the vain hope of improving their health.

While the number of immigrants afflicted with diseases known as "loathsome" or "dangerous contagions," shows no appreciable increase over last year, attention is particularly called to the number which, although detected, cannot be excluded from admission to the country. Out of a total of 286, 27 were allowed to land. The admission of these causes, together with the cases of idiocy and insanity—herein reported as admitted, although belonging to a class of aliens peremptorily excluded by the Immigration Act of 1891—was effected on a ruling of the bureau that they were "not aliens within the meaning of the law." The same claim is also made with increasing frequency to secure the admission of cripples and the feeble-minded, who would otherwise be excluded as likely to become public charges. Aside from one or two exceptions, where previous residence in this country and unquestionable citizenship was established, the cases above referred to were of persons who have never been dwelling in the United States, and who claim admission as the alleged wives or minor children of foreign-born residents of this country who became naturalized citizens prior to the arrival of such wives or children, or while the latter were detained here awaiting deportation, technically still on shipboard.

The present ruling of the department, that the wife and minor children of a naturalized citizen, even though they have never been dwelling in this country, are by virtue of the man's naturalization, to be deemed "not aliens within the meaning of the law," leaves open to inspectors and the Board of Special Inquiry no other course than to admit such immigrants to a man who presents naturalization papers, and whose claims to relationship, as above stated, they are unable to disprove. The observance of this ruling, moreover, prevents the possibility of allowing any such case to be tested by the courts on "habeas corpus" proceedings, even though the legal status of such immigrants has never been judicially defined. The increasing frequency with which this method is invoked to land immigrants whose admission to the country under the act of 1891 was (*sic*) particularly designed to prevent, makes it highly de-

sirable that the present practice should at least receive the sanction of a ruling by a court of competent jurisdiction. If such a serious limitation of the power of the immigration laws to protect the country against diseased persons, etc., does actually exist, it ought to be made a matter of judicial ruling rather than of departmental responsibility. Only five immigrants were certified to as "idiots," due to the fact that the medical examiners characterize as such only those cases of extreme deficiency of intellect which clearly come within the legal conception of this term. Those cases where mental deficiency is less marked, even though as serious as complete idiocy in regard to the immigrant's possibility for usefulness, are certified as "mentally deficient" or "feeble-minded," and therefore fall within the class excludable only as "likely to become public charges."

A tabular appendix to this report shows in detail the results of the medical inspection for the year, and the subjoined summary is interesting. This includes only cases made subject for special inquiry directly by the medical examiners because of physical condition alone. The 17,881 cases of minor defects are entirely additional thereto. This latter class comprises physical defects not serious enough to create a presumption of inability to earn a living, but regarded as contributory factors against the immigrant in determining his right to land.

Summary of Cases Held by the Medical Examiners on Account of Disease or Physical Disability, and Certified to "For Special Inquiry Regarding Right to Admission into the Country."

	Certified to dur- ing year	De- ported.	Landed
Idiots and insane (excludable as alien "idiots and insane persons:")			
Idiots	5	3	2
Insane	10	9	1
Other conditions of mental impairment, including feeble-minded persons, epileptics, etc. (excludable only as "emigrants likely to become public charges")	37	8	29
Cases afflicted with diseases officially recognized as "loathsome" or "dangerous contagions" (excludable as aliens "suffering from loathsome or dangerous contagious")	282	236	27
Tubercle of lungs (pulmonary tuberculosis), (placed in this category by order of treasury department, June 3, 1901)	34	11	23
Other conditions attributable to tuberculous processes, including Pott's disease of the spine, suppurating glands of the neck, etc. (excludable only as "aliens likely to become public charges.")	26	7	20

Cases afflicted with miscellaneous diseases and disabilities (excludable only as "aliens likely to become public charges"):			
Diseases of the nervous system, including hemiplegia, spinal sclerosis, etc.....	29	4	25
General diseases, including chronic rheumatism, malarial cachexia, etc.....	32	6	26
Affections of the eyes, including total blindness, cataracts, very defective vision, etc.....	547	37	516
Affections of speech and hearing, including deafness, deaf-mutism, impediments of speech, etc.....	74	4	70
Conditions of bodily infirmity or weakness, including spinal curvature and stunted growth, very poor physique, etc.....	221	31	188
Affections of internal organs (valvular disease of heart)....	202	73	128
Hernia	704	138	564
Other diseases of internal organs.	25	7	18
Deformities and diseases of the face and neck, including necrosis of bone, cancer, large goitre, etc.....	62	9	53
Disabilities of upper extremities, including mutilation, deformity, local paralysis, loss of limb, etc.....	133	23	110
Disabilities of lower extremities, including mutilation, deformity, local paralysis, loss of limb, etc.....	344	21	322
Non-contagious skin diseases...	18	..	18
Disabilities of a temporary character	3	..	3
	2,788	627	2,143

The continual efforts of officers of this division, to accomplish its purpose in a systematic and thorough manner, has come to make this division the most valuable adjunct we have for enforcing the law.

The medical division of the report concludes with a eulogy of the services of Surgeon L. L. Williams since transferred from the Barge Office to Washington, and of his successor, Surgeon George W. Stoner.

Under the heading Obstacles to Assimilation, the curious fact is noted that "Isolated Communities in this country, whether of native or foreign-born stock, show a marked tendency to moral degeneration. The remarkable increase in serious crimes, during the past ten years, in these localities which have borne the brunt of immigration is something more than mere coincidence."

In the section relating to the Building and Grounds, the report states that the immigrant station at Ellis Island, in addition to providing for the inspection and housing of immigrants, includes provision (among other things) for the

following matters relating to sanitation: Baths, toilets, hospital, disinfecting apparatus, crematory, laundry, ventilating apparatus, morgue, fire protection.

The hospital is all ready for occupation, the hospital out-building is almost ready, and the surgeon's house is about completed. The glazed porch in the front is expected to be completed before the rigors of the winter set in. Proper airing spaces have been constructed on the roofs to give detained immigrants a chance to be out in the open air. For the sanitary improvement of the island it is recommended that large and shady walks and roadways should be provided, of the most durable and non-absorbent character; the immediate surroundings of the buildings, where immigrants can throw debris from the windows, should be concrete or asphaltum, or some non-absorbent material; a large space should be provided, covered with gravel in the vicinity of that part of the island that is to be used by visiting friends; that space on the island that is between the main building and New York City should be properly planted out in low-growing shrubs and grass; shade trees should be provided in the gravel-covered space where the immigrants and their friends will be; surface water should be properly cared for in gutters; proper benches of a durable character, should be distributed under the trees before mentioned.

The hospital building will need an isolation-yard, which should be a separate building of economical but solid construction, in which infectious diseases can be confined; and, lastly, a new and perfect crematory should be erected, with the main stack.

A Conspiracy to Suppress the Truth About Living Greek.—Dr. Achilles Rose writes to us as follows: The language of a civilized people which has died out, like the old Baktrians, can be transmitted only by one way, namely, by writing; the language of an uncivilized people, like the Hottentots of Africa, can likewise be transmitted only by one way, namely, verbally. The transmission of the language of a living civilized people, however, is twofold, viz., both by writing and by speaking; that is to say, by a scholastic and a popular tradition, and these two forms of tradition influence each other mutually. One of the influences is that of the older monuments of literature upon the later phases of the language, and this influence is the more lasting, the more the old literature is manifold, and the more diligently it is studied by the descendants.

The study of a language like the Greek must not confine itself to investigation and learning of the one form of tradition to the exclusion of the other form of tradition, because such restriction excludes one-half of the tradition from investigation, notwithstanding that both together, complementing each other, have to be considered in order to render possible scientific knowledge of the older, as well as of the newer, phase of the language.

One would think that this was clear to everybody, and that especially the men of science would follow this rule in the course of the study

of a language. Indeed, they do so in scientific investigation of any other language than the Greek. In studying and teaching Greek, our college professors are unscientific, and they have a conspiracy among themselves against scientific truth in regard to Greek.

The philologists outside of Greece, who know only the written tradition of Greek, call all words and phenomena in Greek spoken in Greece to-day, which they have not found in the old texts, new Greek, and regard it as not belonging to ancient Greek, notwithstanding that in reality these words and phenomena are genuine, unadulterated, and often unchanged, oldest Greek. They do not know, do not wish to know, and as if it were by order of the German Emperor and the six great European Powers, they dare not know that the greater part of ancient Greek has been transmitted into Greek of to-day by verbal tradition only, that Greek thus transmitted is nothing less than "New Greek."

The methods of these philologists are unscientific, faulty, and misleading.

Demotic Greek of to-day, that is, the language of the people, which has been transmitted without interruption and often unchanged by verbal tradition from the oldest time, has been little investigated by philologists, notwithstanding that demotic Greek least of all can be called modern Greek. A great part of the old dialects, which does not exist any more in the Attic regular language, has been preserved in the demotic language, in dialects spoken to-day. As we shall see, the general, the regular language of to-day is neither Ionic, nor Doric, nor Æolic, but essentially Attic. At the same time a great part of this general language, although of the oldest Greek, cannot be found in the classics.

During my last sojourn in Athens I made the acquaintance of K. Kontopoulos, the author of a book, *Αθανασία της Ἑλληνικῆς Γλώσσης* (*Immortality of the Greek Language*) treating on Homeric words and forms of language preserved in the people's dialects of modern Greece. He gave me evidence that very few elements of ancient Greek have been lost in the now spoken dialects, least of all words and word formations.

There has never existed a language which permitted greater manifoldness and greater distinction of expression or style than the Attic. The Attic was richer in forms than the other Greek dialects. No language offers such a number of possibilities of expression as the Attic. To speak and to write Attic was, on account of its richness, as easy as it was difficult to do so with elegance.

The great mass of the Hellenes, who had come with Alexander the Great to Asia, were forced more and more, in order to understand each other, to give up their provincial idioms, and to adopt a more generally known dialect, and this dialect was the Attic, and out of this general adoption of the Attic developed the *κοινή*, the general language. This general language was spoken at the time of Christ in Asia and Egypt, its use extended, with the extension of the Christian religion, all over the Hellenic world; from the beginning the *κοινή* was the official language of the Greek Church, of the Greek Christians, the

language in which the Gospel, the New Testament, was written.

The Attic language was not disseminated over Asia Minor, Syria, Egypt, by schoolmasters, but by masses of soldiers, merchants, artists, all of whom were forced to employ Attic as well as they were able, as well as they could. Naturally enough, it was not the fine Attic of Plato that was spoken in those times, and the language, although of the same richness, assumed more and more a simplified form.

By this simplification the ancient Greek was transformed into New Greek, Greek became modernized. By this modernization, however, Greek remained the immortal language, developed out of itself, from its own elements only, without adopting foreign elements, for its completion, and it is yet the only language in Europe which needs no foreign words, and which excludes foreign words. This, for instance, is most strikingly apparent in the words for new conceptions, like *τυπογραφία*, *ταχυδρομικόν*, *κλιμακισμός*.

Desire of learning has always been a trait of the Greeks. After they had lost their political independence, they became absorbed in study. Their learning, their literature, was not of the same profoundness as the learning and the literature of their ancestors, but it was of lasting effect upon the language. The schools, the literature, the whole system of education, the religion, the legislature, the administration, all were carried out for many centuries—from 300 before, to 600 after Christ—in Attic *κοινή*, causes and centuries enough to explain the fact that Greek of to-day is still the pure unadulterated but simplified Attic.

Since men of science, like Hatzidakis, have given us the history of the development of New Greek, there exists no excuse for the gross errors which are not only current among the public, but are disseminated by philologists in regard to the character of New Greek. There is no excuse, either, for the gross errors in regard to Greek pronunciation since Th. Papadimitrascopoulos, the great scholar in the history of Greek pronunciation, has published the results of the studies of inscriptions in a voluminous, strictly scientific work. The philologists will not know New Greek, will not know the truth about it; they are bound to suppress the truth because its revelation causes some inconvenience for them. If it were not for a conspiracy among philologists to this end, Engel's book on pronunciation of Greek, showing how unscientific, how ridiculous the Erasmian system is, would have brought about a revolution in Greek instruction in our schools.

The language has not undergone any essential changes during these last two thousand years, neither has the pronunciation. From the inscriptions which, as a rule, are not written according to orthography, but phonetically, we can learn how Greek has been pronounced during all the centuries from the seventh before Christ down to our own. The result of the study of the inscriptions furnishes evidence that certain peculiarities of pronunciation of Greek vowels date back to the seventh century before Christ. Writ-

ings on accentuation of Greek exist from nearly all centuries from the third before Christ down to the present. In these writings the rules of accentuation, which the Greeks have observed from generation to generation, have been laid down. The Greeks of to-day accentuate the words exactly as did their ancestors of the classical period—poetry according to metre, prose according to accents.

But why this everlasting dispute about pronunciation? Who cares, in reading Old English, French, or German literature about the pronunciation of the times the old books were written? Who ever thought of suggesting that Shakespeare should be read with the English pronunciation of Shakespeare's time, although we know pretty nearly how much this pronunciation differed from the English pronunciation of to-day? Who ever thought of suggesting that Voltaire's dreams should be read with the pronunciation of Voltaire's time, although we could familiarize ourselves with this pronunciation through out contemporaries, the French Canadians?

We have heard a great deal of the arguments in favor of Erasmian pronunciation forwarded by the scholars. If they were correct, Germans, Frenchmen, and other peoples, would have to learn English also with some kind of Erasmian pronunciation, and indeed the pupils then would have less difficulty in learning English spelling, but they would no more learn to speak English than our college students learn to speak Greek.

To what absurdities the fact has led that we do not learn living Greek outside of Greece can be demonstrated by looking up the Greek terms of our medical onomatology. I have demonstrated this in a paper on Our Onomatology in Regard to Greek Terms, published in the *Post-Graduate* for September, 1901.

For any one who is familiar with living Greek it is painful to see how men, otherwise of scientific training, write about New Greek without knowing it; they write, contrary to all scientific methods, from hearsay only, from what they have read in the political journals inspired by the governments of Europe, who are bound to have everything excluded that speaks in favor of Greece, in order to have an excuse for all the wrong they have done and are doing to this unfortunate country.

These remarks are not strictly in accordance with the scope of a medical journal, but as they afford an explanation why we have an unscientific onomatology in regard to Greek terms, they may appear appropriate to complement my paper just mentioned. Finally, their appearance in a medical journal can be explained by the simple reason that it is the writer's experience that none but a medical journal will accept an article which reveals truths such as these here presented.

An Interesting Bacteriological Exhibit.—Dr. Charles Denison (*Journal of the American Medical Association*, August 31st) in his Impressions of the London Tuberculosis Congress, etc., says: "In the bacteriological department were remarkable illustrations, through the cultures on exhibition, of all kinds of tuberculosis. There was the 435th culture (in five tubes) of Koch's original

discovery of the bacillus tuberculosis, first isolated by him on August 15, 1881. These cultures had been carried down through these twenty years and kept continually growing from the original seed. There were three very interesting test-tube cultures, first showing the normal state of the germ for comparison, second a sub-culture made after exposure to liquid air for forty-two days without contact, third a sub-culture after similar exposure with contact—all showing that the bacillus grows as vigorously as ever after exposure for forty-two days to 186° F. below zero."

How the Arabs Avoid Prickly Heat.—A correspondent of the *Aden Weekly Gazette*, referring to Dr. Moore's article in the *Indian Medical Record*, says that journal for August 7th, regarding the use of cocoanut oil for avoiding prickly heat, states that from time immemorial the Arabs have used for this purpose sesame (gingelly) oil. The oil is diluted with water and applied to the parts where the prickly heat is, generally at the time of going to bed. It allays the irritation and dries and removes the pimples in two or three applications. This oil is held in high esteem amongst the Arabs who live in the interior, and who are in the habit of anointing their skins with it when they feel fatigued at night, and tired from their day's work, as it gives vigor and firmness to the limbs and body, and enables the workman to get up fresh and vigorous next morning. Besides, during the winter it has some effect in protecting the body from the piercing cold, as the Bedouins often go about naked without any coat. The oil is used pure for such a purpose, without water, and it is rubbed briskly into the skin. Not only in Yemen, but also in Hadramant, it is used, and the people universally believe that it conduces to good health. When there is high fever and the body is aching, the skin of the patient, whether he is an adult or a baby, is anointed with gingelly oil, and the patient gets relief, the skin becoming soft, and the temperature reduced. This remedy is resorted to even by patients under the treatment of European doctors here. The Arabs do not use soap, as it disfigures the body and inflames it in a tropical climate, but they use various other remedies made from the leaves of certain trees which are obtainable very cheaply in abundance, and which are as efficacious as soap for removing grease, oil, and dirt, and which refresh and cool the skin and render it clean and healthy. Some of these form a lather like soap, but exercise no such injurious effect as soap.

Where Brains are at a Discount.—The *New Zealand Medical Journal* for July 31st, citing the *Journal of Education*, says that a sergeant serving in South Africa was wounded in the head and invalided home. The doctor who removed the bullet removed accidentally a little bit of the brain with it. Prompted by a nice sense of humor, he wrote to the sergeant and asked him if he would like this bit of the brain returned to him. The sergeant replied that he did not think that he could want it, as he had just got a position in the war office.

Original Communications.

COSTUME DEFORMITIES.

By E. H. BRADFORD, M. D.,

BOSTON.

In determining the alterations of the human figure caused by clothing, the investigator is met at the outset by the difficulty of establishing the normal standard of human shape. The "points" of a dog are more or less arbitrary and dependent upon fashion, which often favors defects. Similarly, but less evidently, in the human figure physical distortions have been depicted as standards of form. It is said that the artist Botticelli's model was a consumptive; if so, the artist's genius has transmitted a defective type, which with its characteristic thoracic pathological faults can be traced through the renaissance to modern art.

What was pardonable in times of medical and anatomical ignorance is an offense in these days of greater knowledge. Physical flaws which could be overlooked in the Florentine Flora seem reprehensible in the modern Diana of Madison Square.

Photographs taken by travelers in savage countries enable the student to study the human form which has never been trammelled by clothing, and this he can compare with the figures of peoples long accustomed to dress. Costume deformities can in this way be determined, and these should be distinguished from those caused by occupations, which are not considered here.¹

The injury to the full shape of the neck which comes from clothing is seen in the long thin neck, with weak muscles and slight subcutaneous adipose tissue, which results from the binding of the neck by collars, stocks, and neck-bands. Among savage women heavy neck ornaments have a similar effect, weakening and checking the normal development of the trapezii and the sternomastoid muscles, and, by limiting the normal fatty tissue, often making the clavicles unduly prominent. This defect is so frequently reproduced in art that it might be looked upon as a type to be admired were it not that it is clearly the result of a lack of normal development.²

The injurious effect of clothing upon the shoulders is seen when the full development of the muscles is prevented and the shoulders are pulled forward, producing the common round-shoulder deformity.

The difficulty of preventing the sagging of long stockings has resulted in the use of hose-supporters which exert a strong pull upon the waist and upon the shoulders if the waists are furnished with shoulder-straps, as is usually the case with children.

It is difficult to determine exactly the amount of



FIG. 1.—Modern French statue, showing thin neck and shoulders, weakened thorax, bulging hip and upper thigh and thin lower thigh.

¹The distortion from shoes, though in reality a costume deformity, will be left in this article to a separate investigation.

²If the necks of the figures in Botticelli's *Prima Vera* are compared with that of the *Muse of Crotona*, the marked differences suggest the question of race peculiarity or defective drawing. A study of photographs of savage women proves without question that the classic type seen in the antique fresco and classic sculpture is the normal one.

pull exerted in this way, but it is evidently considerable, as is shown by the need of strong clasps upon the hose-supporters. The supporters are usually attached to the stocking when the knee is flexed or the body bent forward, and the mere straightening of the figure causes a strong pull upon the waist and



FIG. 2 Magazine illustration showing exaggerated long, thin neck and shoulders.

shoulders, and this pull increases and varies with the activity and movements of the child. In corsetted women with full hips this strain is borne upon the pelvis, but in children the pull comes entirely upon the thorax and is at times too great a strain upon the growing muscles, often causing distortion. Even where hose-supporters are not worn, the weight of skirts, if buttoned on to a waist, falls upon either the pelvis or the shoulders.

Where the hips are not large and the waist is loose, enough drag comes upon the child's shoulders from weight and friction of the clothes to favor a faulty attitude in weak-muscled children. Such faulty attitudes are also induced in young girls with long and heavy hair which is allowed to hang down the back, either loosely or in a braid; the head is held forward, resembling, though to a less degree, the position of a person carrying loads upon the back, suspended from a forehead band.

The injurious effect of the drag of the clothing upon the upper part of the figure is also seen in the flattening of the chest caused by the pressure of the upper part of a loose waist pulled down by hose-supporters attached to the front, and by the weight of the skirts. The loose waist slips down as far as the shoulder-straps will allow, and its upper edge presses upon the sternum, thereby flattening the chest.

The most important injury to the figure from clothing is seen in the trunk, where the effect of corsets is so apparent and well known that no description is necessary. So much has been written of the evil effect of corsets, and so many healthy wom-

en have worn them without serious harm, that the inference is natural that the injury supposed to be inflicted by this almost universal part of civilized women's dress is less than is represented. Exaggeration is not argument, and pelvic disorders in women, though too common, are not so universal as the use of corsets. But there is no doubt of the destructive effect of corsets or corset-waists upon the normal shape of the trunk and of the desirability of minimizing this in growing girls.

The use of some form of belt or band about the waist to support a skirt is so common in women of all races that it would seem a necessary part of a skirted dress. The mark of the waist-strap is seen even in many Greek statues, where the sculptor in studying his models was unable to distinguish the lines of Nature from those caused by the pressure of the cestus. In most savage and half-clothed na-



FIG. 3. Artists' model, showing weakened thorax and bulging abdomen and buttock.

tives also this can be seen, but the injury to their figures is so slight as to need for its recognition attentive examination. Where, however, corsets or stiffened waists have been worn constantly since early youth, the injury to the structure of the, subcutaneous tissue, to the strength of surface muscles, and to the contour of the trunk is so marked as to deserve the term destructive. It is so general that modern art, which prides itself on an imitation of Nature and a disregard of convention, having but little opportunity of seeing the female figure undistorted, has developed a distorted type of beauty which would seem grotesque to an Egyptian or classic sculptor, and which will (it is to be hoped) so seem to future students of art. Defective standards make the development of excellence more difficult.

How far the weakening of the trunk muscles from corset pressure is a cause of slow child-birth among civilized women is a question not pertinent here, but that feeble trunk muscles are a common cause of deformity in growing girls is easily seen. The muscles pressed upon (the rectus abdominis and longissimus dorsi) are all needed in holding the trunk erect, and if any of these are weakened, poise is maintained less by the balance of muscular tension than by the fasciæ and ligaments.

A child with weakened abdominal and back muscles stands with the back more hollowed than is normal, in order to balance the trunk readily. Where the muscles are in proper condition, they easily hold

any needed attitude; but where they are fatigued, the superimposed weight causes lordosis, or hollow back, and a compensating forward curve of the head and shoulders. Where muscular fatigue is added to the other causes of round shoulders, namely, the drag of the skirts and the pull of the hose-supporters, it is not strange that



FIG. 4. African female figures, showing trunk and thigh undistorted by clothing, neck somewhat compressed by neck ornament.

in growing children the attitude needs correction.

The school exhibition gymnastic drill is often distressing to the observer who notices the close-collared, waist-bound girls and their round-shouldered, flat-chested deformity only partly concealed by a hollow-back, erect attitude.

Deformities of the hips and thighs may be attributed in older girls and in women to the effect of corset pressure, which checks the normal adipose development of late adolescence, causing an undue deposit at the hips and giving an unnatural contour to the figure at the waist line. The upper portion of the thigh also bulges unduly owing to the tightly

Entirely apart from the resultant injurious effects, the ridiculous figure which often develops would be sufficient to condemn this unwholesome style of dress if such results were visible. That children should be allowed to develop as healthfully and normally as possible, whatever injuries conventionality, occupation, or custom may be allowed to



FIG. 5. Samoese woman with normal neck and shoulders.

worn hose. The rest of the limb becomes thinner than the hips from the relatively diminished amount of subcutaneous fat, and adds to the abnormality of the figure, which is pressed upon at the trunk above, on the limbs below, leaving the hips alone free to the contour-rounding adipose tissue.³

innict upon adult figures, is beyond denial.

The first step is to determine normal standards and to make such standards known.

The standard furnished by Greek art might be accepted as a model, but, lest it be discarded as antique, its reliability should be reinforced through examination of figures uninjured by clothing, hard labor, or suffering.

³This corset distortion of the buttock is different in shape from the *steatopygia* seen occasionally among Hottentot women. (Deniker, *Races of Man*.)

ILLUSTRATION FOR DR. BRADFORD'S ARTICLE ON COSTUME DEFORMITIES.



FIG. 6.—Torso of Greek statue with slight girdle mark, but without corset deformity of trunk, distorted hips or thigh.

From investigation it appears that exaggerated fulness of the hip, disproportional leanness of the legs and lower thighs, the flattened chest, the narrow waist, and the long neck are costume deformities to be avoided in a healthy civilization which seeks to preserve what Nature gives.

The question of the proper clothing of adults is one which may be left to the future gradual improvement of public common sense, but the proper clothing for children is of present importance. The problem is not an insoluble one, and has been successfully met in other civilizations.

ON RESISTANCE EXERCISES IN THE TREATMENT OF DEFORMITIES OF THE FEET AND ANKLES.*

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By resistance exercises I understand the use of repeated movements of a part of the body in which a definite resistance has to be overcome, the object being to strengthen those muscles which effect the movements. There is nothing new in principle in these exercises, for in some sense all gymnastics may be considered to be resistance exercises, whether



FIG. 1

the resistance is the weight of the body or that of clubs or dumb-bells, etc., or the elastic cords of various "exercisers." In the Nauheim treatment of heart disease the resistance employed is the pressure of the attendant's hands.

There are various deformities of the foot and ankle in the treatment of which exercises are of

value. In flat-foot and in-ankle (or over pronated foot) it is considered desirable to strengthen the adductors and external rotators of the foot, together with those muscles which in the normal foot support and help to maintain the plantar arch. With this object tiptoe exercises are often prescribed, and also exercises in which the above-named muscles are more definitely employed in overcoming the resistance offered by the hand of a nurse or attendant.

For this purpose the patient should be seated in a chair with the knee fully extended and the ankle also extended (plantar-flexed). The nurse sits or kneels near the inner side of the limb and steadies it with one hand, which grasps it below the knee, while the other hand grasps the forepart of the foot and gently presses it outward and at the same time rotates it inward to a slight extent. The patient then tries to overcome the pressure of the nurse's hand and to adduct the foot and rotate it outward.

Many patients are so unaccustomed consciously to direct the movements of their feet that they have to be taught to move the feet in the required direction without opposition at first. When the opposition is applied, it should be just as much as the patient can overcome completely. It needs some practice on the nurse's part to apply the right amount of force in the required directions. In Fig. 1 the foot is represented in the position of adduction and rotation outward, the movement having been just completed.

In case of club-foot the adductors and internal rotators (peronei and common extensors of the toes) may be strengthened by an exercise the exact converse of that just described.

The exercises, which are intended to strengthen the extensors (plantar flexors) in talipes calcaneus, or the flexors (dorsi-flexors) of the ankle in talipes equinus, are simple enough. The patient's knee being, as before, extended, the nurse is to seat herself facing the sole of the foot and, steadying the leg with one hand, to grasp the forepart of the foot with the other and oppose the desired movement. In every case the exercise should be begun with the foot in a position as far as possible the opposite of that into which it is to move against the resistance. Thus, in a case of flat-foot the movement should start from the deformed position of the foot.

In paralytic deformities resistance exercises are only of use when the weaker muscles are not entirely paralyzed, but after operations of tendon transfer they are of great value; at first to supplement and later on to supersede faradaic stimulation of the newly arranged muscle or muscles. The repeated performance of its physiological function stimulates the development of a muscle far more than can any electrical stimulus.

Simple as the exercises so far described are, it often happens that patients and nurses cannot or

*Reprinted from the American Orthopedic Association, June 12, 1901.

will not carry them out, and harm instead of good will result if the nurse simply pushes the foot into the deformed position, instead of just offering opposition to movements of rectification. It is, therefore, better in many cases, and especially in young children, to substitute the resistance of a small weight for that of the nurse's hand. This may be simply hung upon the forepart of the foot by a strap or loop of bandage, the patient being first turned on one side or the other or on his face or back, as may be necessary, so that the movement of rectification may lift the weight. It is, however, more convenient to attach the weight to a cord running over a pulley, such as is commonly used in hospitals for applying weight extension in cases of fracture or joint disease. Fig. 2 shows this method in use to strengthen the calf muscles, as in a case of Nicola-doni's operation.

A more convenient means of applying exercises with weights is the apparatus which was described by me briefly in the *Lancet* for April 6, 1901. It is suitable for cases of talipes varus, valgus, equinus, or calcaneus, and for either foot. The weight and pulley that are used for varus of one foot are to be used for valgus of the other. The apparatus consists of a strong board to which are screwed three uprights of iron gas-pipe. The shortest and stoutest of these is fixed at the middle of the hinder edge of the board and carries a padded trough consisting of a thigh-piece and a leg-piece fixed at about a right angle to one another. The patient, being seated in a chair of a convenient height, has the affected limb firmly strapped into the trough with the knee necessarily bent, but the foot and ankle hanging free. The bent position of the knee is necessary to prevent rotation at the hip joint, which movements patients are apt to substitute for true adduction and abduction of the foot. Two much slighter but higher side pillars are screwed to the two front corners of the board. Each of these carries a short arm with a pulley at its free end. This arm and this pulley can be shifted up and down and rotated round the axis of the pillar and fixed in the desired position by a set-thumb-screw. Over each pulley a cord passes, one end of which is attached to a weight-holder and the other to a strap which goes round the forepart of the patient's foot.

When it is intended to strengthen the adductor muscles of the foot (as in valgus), the cord on the outer side of the foot is alone used, but when it is necessary to strengthen the abductors, the cord on the inner side of the foot is employed.

A third pulley, fixed to the middle of the front of the board, is used when it is desired to strengthen the dorsiflexor muscles (*extensores digitorum*, *tibialis anticus*, etc.), as in cases of talipes equinus. A longer cord is then required, as its direction is twice

changed when it passes over the two pulleys.

In cases of talipes calcaneus or when for any reason it is desired to strengthen the plantar flexor muscles (*gastrocnemius*, *solæus*, etc.) both pulleys are raised to the top of the pillars, both cords are hooked on to the toe-strap, and both weights are used at once, but the middle pulley on the base-board is not used.

Intelligent children of ten years and upward will generally use this apparatus with a little supervision without any difficulty, but younger children often find the pushing away a nurse's hand or the frequent lifting of a weight by the toes uninteresting, and it is consequently difficult to get them to perform resistance exercises of any kind. This difficulty has led me to add the dry cell and common electric bell, which will ring whenever the weight is lifted the desired height, and will continue ringing as long as it is kept at that height by the muscular action of the child.

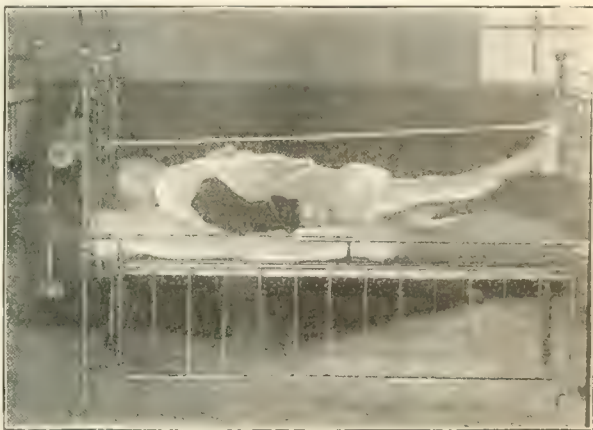


FIG. 2.

This is effected by the following arrangement: Two contact-makers, consisting of two plates or leaves of brass, are fixed close together, one above the other, but insulated from one another. The upper leaf is rigid, but the lower one is a weak brass spring. There are corresponding holes in these two leaves through which the cord of the exerciser passes freely.

Each of these contact-makers forms part of an insulated wire circuit which includes the bell and battery. A block, too large to pass through the holes in the contact-breaker, can be fixed by a screw at any part of the cord. When the weight is lifted far enough, this block presses the lower leaf of the contact-maker against the upper, and so closes the circuit, whereupon the bell rings and goes on ringing as long as the block is pulled up against the spring leaf. Only one contact-maker is to be used at a time.

As a rule, only one cord is used at a time (except for calcaneus), but if desired a compound move-

ment may be made. For instance, both weights and cords may be used for talipes equinovarus, but it will generally be found that it is better to work each group of muscles separately.

The apparatus is most useful in flat-foot and congenital talipes, less often so for infantile paralysis, except in the after-treatment of cases of tendon transfer. When made of a proper size, it is useful for adults as well as children. As for the weights to be used, from four to eight ounces are generally enough for small children.

The frequent repetition of a moderate effort will do more to develop muscle than the occasional performance of the greatest effort of which the muscles are capable, which is apt to cause strain and fatigue.

The temptation of making the bell ring and of keeping it ringing at will is one that few children can resist; but in order that they may not tire of the exercise, it is essential that they should not be allowed to play with the machine as a toy. Its use should be reserved for stated periods and be made rather a treat than a task.

THE LANE LECTURES ON THE SOCIAL ASPECTS OF DERMATOLOGY.

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LECTURE VII.

Delivered at the Cooper Medical College, San Francisco, September 5, 1901.

Syphilis; an Exanthematous Fever Diluted by Time; Cutaneous Manifestations; Polymorphous Character of Lesions; Hereditary Syphilis; Modes of Inoculation; Diagnosis; Treatment; Aggravating Circumstances; the Prevention of Syphilis; a League against Syphilis; Leprosy; Prodromal Period; Evolution of the Disease; Skin Leprosy; Anæsthetic Leprosy; Geographical Distribution of the Disease; Leprosy and Colonization; Leprosy a Contagious Disease; Mr. Hutchinson's Heresy; the Mediæval Leper; Segregation a Necessity.

Syphilis has, in common with tuberculosis, the feature that it is transmitted by inoculation. It is much more infective than any other of the inoculable diseases which cause the development of a constitutional taint; but, although we know the mode of transmission, we do not know what is transmitted. It is assumed that it is a micro-organism, but, although several have been arrested on suspicion, the charge has not yet been proved against any of them. The same thing may, of course, be said of small-

pox, scarlet fever, and other infectious diseases, as to which nevertheless it can be predicated with certainty that they are caused by specific micro-organisms.

AN EXANTHEMATOUS FEVER DILUTED BY TIME.

I think it will help us to a clearer conception of the nature and clinical manifestations of syphilis if we regard it as a specific exanthematous fever "diluted by time," to use a phrase of a distinguished London physician, the late Dr. Moxon, of Guy's Hospital. In fact, if we suppose the different phases of its evolution to be prolonged into months and years instead of days and weeks, the following stages corresponding to those, say, of small-pox may be perceived in a typical case of acquired syphilis: (1) A period of *latency*, between the date of inoculation and the appearance of the local lesion; (2) an *incubation* period, during which the primary sore is formed; (3) an *invasion* period, marked by the presence of fever; (4) an *eruptive* period, in which characteristic lesions appear on the skin and mucous membranes; (5) a period of *quiescence*; (6) a period of *sequelæ*, in which the so-called "tertiary" lesions become developed. It is important that it should be clearly understood that in the primary stage, when the only objective mark of the disease is the initial lesion, syphilis is a local disease; during this period the infection can be conveyed only by direct inoculation of virus from the local sore. In the second, or eruptive, stage, syphilis is a toxæmia; lesions are produced on the skin by the action of toxins brought to it in the lymph and the blood; and discharges from these lesions which contain the virus and are therefore infective. In the third stage syphilis is once more a local affection, and the tertiary lesions have only local contagious properties. In syphilis, as in other inoculable diseases, "mixed infection" is frequent, owing to the inoculation at the same time or later of micro-organisms of various kinds which give rise to suppurative processes and alter the typical appearances of syphilitic lesions.

CUTANEOUS MANIFESTATIONS.

Here we are concerned only with the cutaneous manifestations of syphilis. The eruptive stage is not generally accompanied by constitutional disturbance, but sometimes there is fever, which occasionally runs high. The eruption itself is scattered over the chest and abdomen and is erythematous in character, resembling that of measles, but having a duskier tint. It is evanescent and soon gives place to a papular eruption, which appears on the limbs and neck as well as the trunk. Vesiculation and more rarely pustulation may occur; and in the later stages there may be formation of crusts, which by the superimposition of successive layers sometimes

form a structure having something of the appearance of a limpet shell. This is the condition known as "rupia," which is generally the result of neglect of treatment or failure of health.

At the height of the eruptive stage the clinical picture is bewildering in the complexity of its multitudinous details. Patches of roseola are mingled with macular, papular, and maculopapular, pustular, scabby, and crusty lesions. These various elements, which are present in all stages of development, are often combined into mixed forms presenting the greatest variety of appearance and arrangement. Syphilis writes its mark on the skin in characters of such diversity that it might almost seem as if it attempted to imitate those of other diseases. It simulates nearly every known cutaneous affection, not only in the nature, but to a certain extent in the distribution of the lesions. One might almost say of it that it is not one, but all diseases' epitome.

POLYMORPHOUS CHARACTER OF LESIONS.

Syphilitic skin lesions have, however, certain peculiarities which, taken together, are usually sufficient to make them known for what they are. Their very polymorphism betrays them to the experienced eye. Then, as being the result of a general and not a merely local infection, they are generally symmetrical in distribution. They tend to assume a crescentic outline; their color is a dusky red, like the lean of raw ham, which deepens into a coppery hue, and they leave a permanent record of their presence in brown stains.

The eruptive stage seldom lasts more than a year, and the tertiary period does not as a rule begin till the third year. I have, however, frequently seen these stages overlap in poorly nourished patients, tertiary lesions making their entrance before the secondary manifestations had made their exit.

Tertiary lesions, being the expression of a local disease, show no tendency to symmetry of distribution. On the skin they show a predilection for the forehead, where they form the so-called *corona veneris*; they also affect the upper part of the legs, the genitals, the nuchal region, the back, and the palm or sole of one side. In appearance they often present a marked resemblance to lupus, but they are less chronic in course. A characteristic tertiary lesion is the gumma, which forms in the subcutaneous connective tissue and often involves the skin, breaking down and causing ulcers which tend to become serpiginous.

HEREDITARY SYPHILIS.

The marks of hereditary syphilis are also writ large on the skin. A bullous eruption may appear almost immediately after birth and speedily cause

death. In most cases the characteristic "snuffles" is followed by a polymorphous eruption presenting much the same characters as those seen in acquired syphilis. Condylomata are seen about the anus and sores at the corners of the mouth. The child looks withered and has often a peculiar senile aspect. It is fretful, wastes, and droops, and often dies. The skin is not usually the seat of any special lesions in subjects of inherited syphilis who live to maturity.

MODES OF INOCULATION.

Such are the effects of the poison of syphilis as seen on the skin. The disease marks the victim for its own. It disfigures him till he may become an object of repulsion and horror; it may prevent his earning his living, and in the secondary stage it makes him a source of danger to all who are thrown in contact with him in family life or daily work. He is charged with a poison more baleful than that of the most venomous snakes, which is conveyed on whatever he touches with his polluted lips—from a pipe to the communion cup. Allusion has already been made to the transmission of syphilis by the lips of the operator after ritual circumcision. I believe the disgusting and dangerous practice of sucking the wound after that rite has been stopped in Great Britain, but it has not yet been abandoned in some countries of the continent of Europe. Vaccination is an occasional and tattooing a not infrequent mode in the inoculating syphilis. The dangers from infected wet-nurses, nursery maids, and "friends of the family" who are allowed the privilege of kissing the children are too well known to need more than mention. How the danger of propagating this loathsome disease may lurk in acts not only innocent but heroic is shown by a curious case which lately came to my knowledge. A man had been badly burnt about the body and the surgeons wished to graft a considerable piece of skin on the wound. The patient's son offered his arm for the purpose, and the grafting was successful. But, as one of the surgeons put it, the filial piety of the son was not diminished by the fact that the skin which he nobly gave conveyed the infection of syphilis to the father.

DIAGNOSIS.

It need hardly be said that it is of the utmost importance that no mistake should be made in regard to the true nature of syphilitic affections of the skin. On the one hand, if an eruption having this origin is not recognized, the patient may be left unknowingly to disseminate the poison; on the other, if an innocent lesion is declared to be syphilitic, it may lead to the breaking up of a family or the ruin of the patient's life. Some years ago a lad was refused admission to the Civil Service on the ground of an eruption which was pronounced by a very eminent

physician to be syphilitic; and I had some difficulty in getting this decision reversed. I mention this only to emphasize the necessity of the greatest care in the diagnosis of syphilitic skin lesions. In typical cases this is easy enough from the characters of the eruption which have been described, and from the presence of the marks of the disease elsewhere. But occasionally there may be some difficulty, and in such cases the judgment must be based on a careful review of all the details of the case—the possibility of infection, the history of the lesions, their character, development, and termination, and the effect of treatment. In some cases we have to rely entirely on the aphorism *Naturam morbi ostendit curatio*.

TREATMENT.

Fortunately there is no disease over which we have more therapeutic control. - If the time between the incubation period and the eruptive stage is taken full advantage of, the disease may be shorn of most of its terrors or even expelled from the system. My experience is that if the administration of mercury is begun before the constitution has become infected, and continued for a period corresponding to the average duration of the eruptive stage, the appearance of secondary manifestations can generally be prevented. But, as a further safeguard, mercury should be given with occasional intermissions for two or even three years. I do not think there is the least fear of injuring the health, even if the administration of mercury is continued for months. In addition to its parasiticide properties, the drug increases the number of red blood corpuscles and improves the general health; further, it promotes metabolism and thus favors the elimination of the poison. In dealing with tertiary lesions recourse must be had to iodide of potassium.

AGGRAVATING CIRCUMSTANCES.

A word should be said as to the influence of the environment and personal habits of the patient, and of other diseased states, in aggravating syphilis. The infection tends to run riot in persons who are poorly fed and live amid unclean and unwholesome surroundings. But the worst of all aggravating circumstances is alcoholism. There is a story of the old days of our Penal Laws against Popery which may perhaps find an application here. A worthy magistrate of an ancient city in Scotland had before him an individual charged with Popery. The interrogatory proceeded as follows:

Are ye a Papist?

Aye.

Are ye a Priest?

Aye.

Are ye a Jesuit?

Aye.

Whereupon the magistrate, overcome by the horror of the situation, exclaimed:

Eh, man! That's the de'il and a'.

In the same way I would say that syphilis alone is bad; syphilis *plus* alcohol very bad; but syphilis and alcohol *plus* tobacco make up a combination which may be fitly described in the picturesque language with which the magistrate expressed his theological prejudice. The "scrofulous" constitution, gout, rheumatism, and renal disease are all apt to aggravate syphilis; and when it is in a state of quiescence it may be roused again into activity by any disorder of the general health.

THE PREVENTION OF SYPHILIS.

It hardly falls within my province to discuss the general question of the prevention of syphilis and the transmission of infection from secondary lesions. This is largely a matter of the proper education of the public as to the existence of such a danger. It is ignorance, for instance, that leads people with mucous patches of the mouth to indulge in promiscuous kissing, and in these days, when a hero is liable to be kissed by all the young women of his country, the scientific imagination can easily conjure up a vision of a wholesale diffusion of infection that would in the classic phrase of Mr. Kruger "stagger humanity." It cannot be too emphatically stated that a person suffering from secondary manifestations of syphilis is a danger to all around him. The greatest care must therefore be taken to avoid contact with him so far as is possible in the intercourse of life. I cannot help thinking that if the presence of obvious secondary lesions on an adult were to entail some measure of social ostracism—if, for instance, people were to act on Shylock's principle and buy with him, sell with him, walk with him, talk with him, and so following, but not eat with him or drink with him—this fact would have a greater effect in restricting the diffusion of the disease than appeals to moral sentiment. If the contamination of a healthy person through the carelessness of a syphilitic person who knows himself to be such could be made a criminal offense, it would be better.

A LEAGUE AGAINST SYPHILIS.

Prevention of syphilis has in Europe recently become a matter of urgency, as there appears to be no doubt that the prevalence of the disease is increasing. According to researches by M. Lenoir in France, where repressive measures have long been in force, of 100 patients admitted into hospital for diseases of all kinds, fifteen are the subjects of syphilis. Moreover, according to Professor Fournier, the prognosis of syphilis is graver than it was some fifty years ago. The sphere of influence of

the disease is shown by pathological research to be larger than was previously suspected; and we have to include among its possible sequelæ not only the changes in the liver and other internal organs that have long been known to medical men, but some of the most formidable diseases of the nervous system, such as tabes, general paralysis, and several more. It is gratifying to note many signs of a general awakening to the importance of a systematic effort to stamp out syphilis or at least to restrict very greatly its sphere of activity. The conference which was held at Brussels last year, mainly on the initiative of Dr. Dubois-Havenith, was intended to be the first step of a movement in this direction, and there is reason to hope that the new crusade will not be allowed to evaporate with the breath of enthusiastic oratory. Conferences are to be held at regular intervals to keep the question alive and to encourage practical effort of an international character. Quite recently a League against Syphilis has been started in Paris, under the auspices of Professor Fournier, for the education of the public on the aspects of this important question which concerns them.

LEPROSY.

Leprosy, at which we now proceed to give a rapid glance, presents some analogies with syphilis. It also is a fever still more diluted by time and with eruptions usually of a more formidable kind. It presents the striking contrast with syphilis, however, that, although its cause is definitely known, its mode of transmission is still an unsolved problem. It is outside the plan of the present lectures to give a detailed description of the appearances, symptoms, and results of leprosy. I propose, therefore, only to indicate its salient features and chiefly as these are seen on the skin. Though leprosy has a much slower course than syphilis, it presents an equally definite succession of stages, the complete evolution of which may extend over twenty, thirty, or even forty years.

PRODROMAL PERIOD.

There is a long *incubation* period, which in a case seen by myself extended over eight years; this is followed by a period of constitutional disturbance analogous to the febrile stage of syphilis; third, a period of invasion, when the eruption appears, generally ushered in by high fever. The eruption consists of erythematous spots or patches and areas with smooth shining surface and well-defined outline in which the natural pigmentation of the skin is either increased or deficient. These leper spots, which may appear on any part of the cutaneous surface, but have a special predilection for the face, continue to come out in successive crops for some

time and do not disappear. At the site of these patches there is generally some infiltration of the affected skin, which in proportion to its amount causes more or less local anæsthesia.

EVOLUTION OF THE DISEASE.

After this prodromal period there comes a parting of the ways and the disease in its further evolution follows one of the great lines, according as it attacks the skin or the nervous system. There are thus two distinct types of leprosy: 1. Tubercular, or nodular, which affects the skin. 2. Anæsthetic, which affects the nerves. Sometimes the two types may be combined, giving rise to a mixed form, called by some complete leprosy. In European countries the nodular, in tropical countries the anæsthetic type is the more frequent. The mixed form is the least common.

SKIN LEPROSY.

When the force of the disease is spent chiefly on the skin, the leper spots after a variable time become transformed into nodules, crops of which also develop in other parts. These nodules, which may attain the size of a filbert or larger, have a peculiar india-rubber-like feeling to the touch; sooner or later they generally become anæsthetic. Coincidentally with the development of nodules, considerable areas of skin become the seat of inflammatory infiltration, with the result that firm flat plates are formed. In the nodular stage the affected skin is greasy from seborrhæa; this gives the nodules, especially on the face, a peculiar glistening appearance by which a leper can often be recognized when too far off for his features to be distinguishable. The face and ears are generally the parts first attacked, and the massing of the nodules about the eyebrows produces a characteristic deformity to which the ancients gave the name of leontiasis, from the lion-like look which it gives to the countenance. Fresh crops of nodules come out from time to time on other parts, and in some cases almost the whole surface of the body is covered with them. Sooner or later they break down and give rise to ulcers, which generally heal leaving scars that often cause frightful deformity. The disease often attacks the eye, which it slowly destroys, and in most cases there is thickening of the mucous membrane of the larynx, causing hoarseness, and as the infiltration proceeds the voice is reduced to a whisper. The effects of tubercular leprosy are well described by a poet of the fifteenth century, Robert Henryson, in his Testament of Cresseid. Saturn, threatening to transform Cresseid into a leper, delivers himself as follows:

"Thy cristall ene (eyes) minglit with blude I mak
 Thy voice so cleir unpleasand, hoir, and hace,
 Thy lustic lyre (fair skin) ouirspread with spottis blak,
 And lumpis haw (livid) appeirand in thy face;
 Quhair thou cummis, ilk (each) man sall fle the place;
 Thus sall thou go begging fra hous to hous,
 With cop and clapper like ane Lazarous."¹

ANAESTHETIC LEPROSY.

In anæsthetic leprosy pigmentary changes in the skin following the initial leper spots are much more frequent than in the tubercular form. In time the macules become depigmented, and later frequently anæsthetic. In a later stage of the disease the neuritis which is the special pathological feature of this form of leprosy causes severe neuralgic pain in the affected parts of the skin. This stage is also frequently marked by the appearance of a bullous eruption, chiefly on the hands or feet, elbows, and knees, which may continue for years; the bullæ generally break and form crusts and ulcers. The eruption may, after remaining stationary for years, spread over the whole cutaneous surface, making it white and atrophied and shrivelled. As the disease progresses, the parts of the skin that were the seat of neuralgic pain become anæsthetic and muscular atrophy occurs, especially in the hands, the fingers becoming bent so as to present the appearance of claws. Ulceration of the atrophied skin easily takes place and hideous mutilations result.

GEOGRAPHICAL DISTRIBUTION.

Leprosy has been known as a definite disease as far back as human history extends. In Egypt, which was supposed by the Romans to be the land of its birth, and in Syria it has existed from time immemorial. It was probably brought to Europe by Roman armies returning from the East or by Jewish and other Oriental immigrants. Fresh importations by the Crusaders in the Middle Ages gave it fresh life, and its diffusion as a virulent epidemic throughout Europe was, according to Voltaire, the most notable result of the Crusades. About the beginning of the sixteenth century it suddenly began to decline, and less than a hundred years later it had all but disappeared. At the present day smouldering embers of what once was a general conflagration are found in various parts of Europe, particularly on the shores of the Mediterranean, the Baltic, and the North Sea. In Norway there are three principal foci—about Bergen, Trondhjem, and Molde. Fifty years ago there were, according to official statistics, some 2,000 cases, and since then the disease has been slowly but steadily decreasing. The foci in Italy and France are very small and show no tendency to expansion. In Spain Dr. Roman Viscarro some years ago declared that lepers "swarmed"; the

disease is especially prevalent in the district of La Marina, which includes the seaboard of the provinces of Valencia and Alicante. In Portugal leprosy is more rife than in any other European country except Norway. In a population of less than five millions there are fifteen hundred known lepers, scattered through every district, but in greatest numbers near the coast. In the Baltic provinces of Russia the disease has for some years been increasing to such an extent as to cause some alarm and lead to the establishment of several leper houses. From Russia leprosy was not long ago imported into East Prussia, and a leper house was established by the German government at Memet.

Outside Europe leprosy is widely diffused throughout Asia, Africa, South America, the West Indies, the Sandwich Islands, and the Philippines. It is found in Australia and New Zealand. As Manson says, "with the exception of a few insignificant islands, leprosy is an element in the pathology of nearly all warm countries." In India and in China the lepers are counted by hundreds of thousands; in the Sandwich Islands the proportion of them to the general population was estimated by Dr. Davidson in 1890 as 1 in 16; in the Philippine Islands a recent estimate—of the value of which I have no means of forming an opinion—places the number of lepers at 130,000.

LEPROSY AND COLONIZATION.

The prevalence of leprosy is therefore one of the difficulties of colonial expansion. Not only are members of the colonizing race attacked, but when they return home they bring the seeds of the disease with them. Although every dermatologist in London has always one or two lepers under his care, I do not know of any instance in which an Englishman who has contracted leprosy in India or any other of our colonies has spread the contagion at home. In a recent discussion at the Académie de médecine, M. Besnier has borne similar testimony as to France. But this is due to the fact that such lepers are generally well looked after, and the conditions in which they live are unfavorable to the spread of contagion.

In the United States leprosy was, according to Professor James C. White, of Harvard, so prevalent in Louisiana in the eighteenth century that a leper house was founded in that State in 1785. A fresh focus came into being in 1886 in the person of a woman whose father was a native of the south of France. From her the disease spread to such an extent that Dr. Blanc a few years ago counted forty-two cases in New Orleans alone. Several new foci have, I believe, appeared in other parts of the United States within the memory of living men. The disease was imported into California by the "heathen Chinese"; into some of the Northwestern

¹Quoted by Sir James Y. Simpson in *Antiquarian Notices of Lepers and Leper Hospitals in England*. *English Medical and Surgical Journal*, Vols. lvi and lvii, 1841 and 1842.

States by Norwegian immigrants; and, according to Dr. Prince A. Morrow, of New York, into Salt Lake City by Mormon converts. I read quite recently in one of your medical journals that some uneasiness was felt by the United States government as to the prevalence of leprosy, and an official inquiry had consequently been made. From the results of this inquiry it appeared that there are about 275 reported cases of leprosy in the United States. The number, it is said, would undoubtedly be much larger were all cases promptly recognized and reported to the proper authorities. Of those reported, nearly all are in foreigners, a large proportion of them being among Italians in New Orleans. It is added that in general the disease appears to be spreading most rapidly in Louisiana. In a striking essay entitled *The Question of Contagion in Leprosy*² Professor White shows that North America has from time to time received importations of leprosy from Africa, Spain, Portugal, France, Norway, and China. Perhaps Hawaii should be added to this list, and now that you, too, have embarked on a career of colonial expansion you have two new possible sources of contagion in the Philippine Islands and in Cuba.

LEPROSY A CONTAGIOUS DISEASE.

Leprosy is now known to be caused by a specific bacillus discovered by Armauer Hansen some thirty years ago. As this discovery was solemnly endorsed by the International Congress on Leprosy, held at Berlin in 1877, I suppose it may now be taken as one of the fundamental verities of medicine. From its bacillary origin it follows that it is transmitted by inoculation, though the experimental test is still wanting. As in the case of tuberculosis, it must be admitted that the medical profession has darkened counsel in regard to the contagiousness of leprosy. Its contagiousness was never doubted when men had daily proof of the fact before their eyes; and men who have a like experience now have the same conviction. White quotes the resident governor of Molokai, a talented lawyer who voluntarily exiled himself thither on discovering himself to be a leper, as declaring that all who doubt that the disease is contagious are dreamers. Yet the London College of Physicians, when consulted on the subject by the British government in 1867, reported that "the all but unanimous conviction of the most experienced observers in different parts of the world" was "quite opposed to the belief that leprosy is contagious or communicable by proximity or contact with the disease." The result of that ill-inspired utterance was that measures of segregation which had been taken in some of our colonies were abandoned, while similar schemes which were in

contemplation in other colonies were not carried into effect. There can be no doubt that a considerable amount of leprosy in the West Indies and elsewhere is directly traceable to the Report of the College of Physicians.

MR. HUTCHINSON'S HERESY.

Now the doctrine of contagion is victorious along the whole line, and what may be regarded as an official declaration of the fact is contained in the report of the proceedings of the Berlin congress, which resolved that "the theory of the heredity of leprosy has lost ground in comparison with the now generally accepted opinion of its contagiousness." The opposite view is, as far as I am aware, now held only by one man, but he is a host in himself. I honor Mr. Jonathan Hutchinson as much as any one, but I cannot bring myself to say that I prefer to be wrong with Plato to being right with the rest of the world. Mr. Hutchinson holds that the infective material of leprosy is conveyed in the food, generally in fish. So entirely is his mind enthralled by this fish theory that he gives the credit of the subsidence of leprosy to the Reformation, which abolished the abstinence from meat formerly enjoined by the Church. Even if we admit that this supplied an explanation of the decline of leprosy in Protestant countries, how can it account for the contemporaneous disappearance of the disease in Catholic countries? As a matter of fact, leprosy was fast disappearing before the Reformation, while in England at least the old fish days were rigorously enforced by special laws till well into the seventeenth century. The impressive object lesson of the Sandwich Islands in modern times Mr. Hutchinson explains away to his own satisfaction by saying that it was "synchronous with the advent of the Chinese and the establishment of a fish-curing establishment"! In the same way a man who had an *idée fixe* that tea was a deadly poison might explain a fatal accident by saying that it followed the drinking of a cup of the toxic beverage—with half an ounce of arsenic in it.

Mr. Hutchinson's belief would have only a psychological interest, if he did not insist that our policy in regard to leprosy should be shaped in accordance therewith. He condemns segregation as "a most cruel tyranny," and has for some time striven to enforce his views by highly colored descriptions of its horrors. The steady increase of leprosy in South Africa has long been a source of anxiety to the government of Cape Colony. In accordance with the existing law, lepers are segregated on Robben Island, and Mr. Hutchinson has lately painted the horrors of that place in the most lurid colors. A leper settlement can never, I imagine, be an earthly paradise, though there is abundant evidence from Molokai and elsewhere to

²*American Journal of the Medical Sciences*, October, 1882.

show that it is not necessarily a hell upon earth. Robben Island may be all that Mr. Hutchinson says it is, but surely that is a question of administration. It is the principle, however, that Mr. Hutchinson objects to, and although of course he has a perfect right to express his opinion, I cannot help saying that by his passionate denunciations of a measure which the whole body of competent authorities, with the single exception of himself, regard as necessary, he is taking upon himself a most serious responsibility.

THE MEDIAEVAL LEPER.

The history of leprosy shows clearly that it is contagious, and it is on that view alone that it has been efficiently dealt with. It was stamped out in the Middle Ages by a system of segregation which the most thorough-going sanitarian of the present day would hesitate to recommend. The unhappy leper was condemned to civil death. He was cut off from the society of men and had to take refuge in a leper house or hide away somewhere out of sight during the day, coming forth only at night to pick up food left for him by the charitable in some lonely place. If he heard footsteps approaching, he was compelled to make his presence known by sounding a clapper; and he was forbidden under the severest penalties to come between the wind and the nobility of any casual passerby. The mediæval hygienists were not too particular in their diagnosis, but acted on the principle that any one with an ugly eruption on the skin or a hoarse voice was to be treated for practical purposes as a leper.

Hence doubtless many sufferers from syphilitic and tubercular skin disease and many roysterers who, like Falstaff, had lost their voice from halloing and singing anthems were condemned to the death in life that was the leper's doom. But if the mediæval means of segregation were somewhat too drastic, they were at any rate effectual and, aided no doubt by the general betterment in the conditions of life which took place as knowledge grew and civilization advanced, they freed Europe from a devastating scourge.

SEGREGATION A NECESSITY.

If leprosy is to be stamped out again, it must be by segregation. The methods, of course, must be humane and founded on the state of scientific knowledge. In dealing with the vast mass of disease to be found, for instance, in India, it would scarcely be possible to apply the principle of segregation with anything like thoroughness. But the sick should as far as possible be separated from the sound, and while everything should be done to mitigate the leper's lot, he should not be allowed to scatter the seeds of his dreadful malady among his fellow-men.

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the subsequent questions are as follows:

VI.—How do you use quinine for the prevention and cure of malarial disease, and what other treatment do you employ? (Answers due not later than November 11, 1901.)

VII.—What is your method of preventing laceration of the perinaeum in labor? (Answers due not later than December 9, 1901.)

VIII.—In fractures of the upper third of the femur, how do you manage the tendency of the upper fragment to tilt forward? (Answers due not later than January 10, 1902.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested that the answers be short, no one answer to contain more than six hundred words. We shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers as original communications.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted this month has been awarded to Dr. S. A. Knopf, of New York, whose paper appears below.

PRIZE ESSAY NO. V.

HOW DO YOU TREAT HABITUAL CONSTIPATION?

By S. A. KNOPF, M. D.,

NEW YORK.

The title of this little essay excludes all pathological considerations. All that I may be permitted to say is that in suggesting the following therapeutic measures I shall view habitual constipation as a distinct disease with characteristic symptoms, such as heaviness and discomfort in the abdomen, colic, cramps, anorexia, anaemia, distention of the abdomen, faecal tumors, hæmorrhoids, neuralgic pains in the lumbar or ovarian region, headache, insomnia, irritability (neurasthenia), feeling of oppressiveness amounting sometimes to hypochondria, flashes of heat without rise of temperature, etc. Many of these symptoms are doubtless the result of an autotoxæmia.

Excluding a symptomatic habitual constipation caused by displacement of the uterus, cancer of the rectum, neoplasms or adhesions of other abdominal or pelvic organs, tumor of the prostate, lead poisoning, ulcer of the stomach, etc., which requires either gynæcological, surgical, or special medicinal means to overcome, I would suggest the following thera-

peutic measures to combat habitual constipation: First, educational means; second, mechanical; third, hydrotherapeutic; fourth, electrical; fifth, dietetic; sixth, medicinal.

When one is first called to see a patient suffering from habitual constipation who has not had a free movement of the bowels for some time, there is, of course, but one thing to do—to produce a thorough evacuation of the bowels. In my experience nothing has rendered more valuable service in such cases than the administration of calomel in fractional doses, to be prescribed in tablet triturates as follows:

For children from one to four years, one twentieth to one tenth of a grain, 10 to 20 in number; for children from five to ten years, one tenth to one fifth of a grain, 10 to 20 in number; for children from eleven to fifteen years, one fifth to one third of a grain, 10 to 20 in number; for adults, from one third to one half a grain, 10 to 20 in number.

S. One every half-hour or hour, dissolved in or taken with one ounce of water until two free movements of the bowels have taken place.

The best time to begin to administer the tablets is one hour after a meal. The diet on the day of taking the calomel should as far as possible be light, mainly diluted milk, soups, and eggs. The administration of fractional doses of calomel has the advantage over the one-dose administration of being safer and leaving the patient in a less weakened condition; only the amount of calomel absolutely necessary is thus ingested.

Salivation is hardly possible when calomel is administered in such small doses and with a sufficient amount of water. There are, however, cases where the administration of a larger amount of calomel in one or two doses may be indicated. It is then wise, after about twelve hours, to give the patient a saline draught to avoid all possible danger of salivation.

The next day the most practical combination of educational, mechanical, hydrotherapeutic, electrical, dietetic and medicinal measures, according to the age of the patient, his intelligence, circumstances, and environments, should be inaugurated. Each case is a law unto itself. If the maxim to treat the patient and not the disease is ever applicable, it is so to the chronically constipated patient.

The educational means to overcome habitual constipation should be inaugurated as early as possible in life. Children should be taught as soon as they can comprehend that they must go to stool every day once or twice. When they are no longer watched by nurses or mothers they must learn to report when they have no stools or difficult ones. School children, and particularly young girls, who so often become habitually constipated for lack of

knowledge or for reasons of false modesty, should be particularly instructed as to the importance of regularity in regard to these natural functions. Every chronically constipated patient should be impressed with the importance of going regularly to the water-closet, if at all possible always at the same time (preferably in the morning before or shortly after breakfast). To go once every twenty-four hours should be a law to him, and he should know that to go twice is by no means a sign of ill health. He should be taught not to hurry with the act, but to take his time for it; not to read during the act of defecation, but to concentrate his mental and physical energy on the accomplishment of this function. He should also be taught that the semi-solid consistence of the stools, a free evacuation, and defecation without pain whatsoever are the only signs of healthy stools. The pregnant woman particularly should be impressed with the importance of not allowing constipation to become a chronic affliction with her. Never should she take a laxative or purgative without its being prescribed by her physician, for a too violent purgative may cause a premature expulsion of the foetus and, besides, endanger her own life. The physician should also teach the young mother the necessity of watching that the child has its regular movements.

Under hygienic treatment of chronic constipation I understand:

a, To clean the teeth after each meal with the aid of toothpick, brush, and clean water; *b*, to have diseased teeth promptly treated; *c*, to take meals at regular times; *d*, to take time for meals, eat slowly, and chew the food well; *e*, not to read or do difficult thinking while eating (light, pleasant conversation, on the other hand, is to be recommended); *f*, not to eat in workshop or office; *g*, not to eat when tired or exhausted from either physical or mental work, but whenever practicable rest in a sitting or recumbent position from half an hour to an hour before the principal meal, either in the open air or in a well-ventilated room; *h*, not to begin to work mentally or physically immediately after eating, but rest, if possible, at least from fifteen to thirty minutes; *i*, to use a water-closet which is well aired, well lighted, cool in summer, comfortably warm in winter; *j*, to use soft toilet paper and, whenever possible, some water to clean the external anal region.

Of mechanical means to overcome chronic constipation, the best are walking and deep breathing in the open air, but never when tired or to the extent of becoming tired; also alternate contraction and relaxation of the diaphragm. All outdoor sports, calisthenics, gymnastics, etc., when not done to excess, are most commendable. When going to stool it is wise for chronically constipated people to take the natural knee-chest position (as do peasants out

of doors) so as to cause the abdominal walls to exert the greatest amount of pressure over the intestines. If this position is not practicable, elevate the knees as much as possible while sitting on the ordinary closet, by the aid of a high foot-bench.

Next in importance comes massage as a passive exercise—circular friction and moderate kneading around the umbilicus from right to left, followed by the same movements with somewhat increased vigor along the ascending, transverse, and descending colon. It must, however, be remembered that massage cannot be done thoroughly in a soft bed. The patient should rather be placed on a hard mattress, on a specially constructed table, which must conform in height to the stature of the operator, or a board with another mattress must be placed on the bed to realize as far as possible the same condition the regular massage table offers. During massage of the abdomen the head should be slightly elevated and the knees drawn up as near to the abdomen as possible, so as to produce a thorough relaxation of all abdominal muscles. Some patients will be able to stand a thorough abdominal massage from the beginning, others will complain of sensitiveness, and others, again, will involuntarily contract their abdominal muscles to such an extent as to make their manipulation utterly impossible. One must have patience under such conditions. With the sensitive patient one must go slowly and gently and train him gradually to the manipulations; and when there is much contraction one should only knead during the act of expiration, when the diaphragm descends. While it would be best to always massage the patient in the morning before breakfast, when this is not practicable it can also be done at other times, the only rule being never to massage the patient immediately after he has taken his principal meal. An abdominal massage should not last over ten minutes, except perhaps when the person has a great deal of adipose tissue, when the séance may be somewhat prolonged; but even then too great a result must not be hoped for from massage, for to knead the abdomen of a fat person is a most difficult procedure. After the patient has rested he can follow up the massage by moderate active exercise—a short vigorous walk in the open air, some gymnastics, calisthenics, or breathing exercises.

As practical mechanical means to overcome chronic constipation the occasional use of a rectal glycerin suppository should be mentioned. The insertion of such a suppository is also to be recommended when the patient, after having had an evacuation, has the feeling of not having had a sufficiently free movement, and still experiences the sensation of fulness in the lower bowels. This simple means often produces an additional quite voluminous stool, to the great physical and mental relief

of the patient. The psychical condition of the habitually constipated patient should never be ignored, and the suggestive treatment, cheerful and encouraging words, must often enter into our therapy of these cases.

Of hydrotherapeutic means to overcome chronic constipation, we have a choice of internal and external measures, and may use them combined. Enemata of hot water should not be used as a routine treatment to overcome chronic constipation; when used often they tend to lessen still more the lost tonicity of the lower bowels. The injection of one or two ounces of glycerin or about ten ounces of linseed oil should alternate with the hot-water injection when enemata are indicated. Water taken internally, hot or cold, half a tumblerful every half hour, beginning half an hour or an hour after a light breakfast, tends to increase the peristaltic action of the intestines and is a most valuable remedy in chronic cases. Externally, cold water compresses over the abdomen at bedtime and gentle abdominal douches of either cold or alternately cold and hot water, morning and evening, cool "sitz" baths, or simple friction with cold water, often tend to revive the lost muscular action of the small or large intestines, and thus restore the patient to normal conditions.

Electricity may be applied in some cases with advantage and good results be looked for. Both electrodes may be applied to the abdominal walls or one pole passed into the intestine. For the first method the broad plate electrode can be used, the common button electrode, or the electric roller. For the use of the electrode in the rectum, Ewald's flexible tube, constructed by him for that purpose, is perhaps most convenient. While in a number of cases electricity has done a great deal of good, it has failed in many others. Thus it may be well not to continue it too long if relief is not soon obtained.

Under dietetic treatment should be understood the use of more liquids, more vegetables, more fruits; in short, a proper selection of such articles of food as are rather laxative than constipating in their action. Thus, we recommend all waters taken hot or cold, carbonated or pure; white wine diluted with water, light beers, grape and other fruit juices, provided they do not contain any astringents, buttermilk, kefir, weak coffee, broth, bouillon, and oyster soup, and plenty of good butter. Of vegetables, spinach, cauliflower, boiled onions, Brussels sprouts, asparagus, green corn, green peas, string beans, potatoes, carrots, kohlrabi, turnips, a moderate quantity of cabbage, salads with plenty of good olive oil and little lemon juice, cucumbers, and tomatoes; all fruits, both raw and cooked, particularly stewed prunes (morning and night), figs, apples, peaches, pears, grape-fruit, oranges, melons, cherries, grapes,

and all kinds of berries without large seeds are to be recommended, also all kinds of fresh and tender meat and poultry. If there is great anorexia, scraped raw beef with a little salt and pepper should be tried, as well as whole-wheat bread, Graham bread, brown bread, rye bread, all bread preferably at least one day old, toast, oatmeal, hominy, cracked wheat, etc.

The habitually constipated patient should avoid all alcoholic drinks, particularly whiskey, clarets, stout, ale, and heavy dark beers, also chocolate, tea, strong coffee, and milk. With some patients, however, milk acts as a laxative, and then it can be allowed. He should avoid thick soups, peas, beans, lentils, rice, sago, pastry, sweets, unripe peaches, berries with big seeds, and nuts. Of meats, he should avoid pork, veal, all kinds of liver (except that of pultry), game, and smoked, potted, preserved, and fried fish. All kinds of cheese, except the fresh cream cheese, are injurious to habitually constipated persons; so are hot cakes or biscuits and fresh warm bread.

Chronic constipation in infants and little children requires particular care in regard to their diet. Instead of too nitrogenous, starchy, and saccharine food, diluted milk, cooked fruits, Graham bread, a great deal of good butter, and vegetables should be given. Stewed prunes with plenty of juice are particularly to be recommended. It is, however, prudent only to give the pulp of the prunes, as the cooked skin of this fruit is often digested only with great difficulty by little children. Pure water or Vichy water (the latter after most of the gas has been allowed to escape) may be added with advantage to the diet of the chronically constipated child. Life and exercise in the open air or well-ventilated rooms, massage, etc., are, of course, as useful for children as for adults.

While many habitually constipated patients may be cured of their infirmity by a combination of educational, dietetic, hygienic, and mechanical means, in some cases the additional administration of some laxatives is indispensable. Before enumerating the few remedies which in my experience are at times necessary as adjuvants to combat a chronic constipation, I wish to state that it seems always prudent never to continue with the same remedy for any length of time, never to use a drug of which the increase of the dose is essential to keep the patient's bowels in good condition. Always prefer drugs the dose of which can gradually be diminished until non-medicinal measures suffice to put the patient in proper condition, and, last but not least, in choosing a medicinal agent take into consideration the idiosyncrasy and susceptibility of the patient to this or that drug.

If the stools are clay-colored and particularly foetid, calomel is perhaps the best remedy, and, of course, always administered in fractional doses, in the same or similar manner to that given in the foregoing table. A few teaspoonfuls of olive oil, if the patient has no dislike for it, should be tried as a mild laxative. Castor oil may be given a few times; to make it palatable it is well to administer it by putting a tablespoonful (dose for adult) into a wineglass between two layers of orange juice. The various saline purgatives, such as potassium and sodium tartrate, sodium sulphate, and magnesium sulphate, may also be given occasionally. The mineral waters containing these salts, or salts that are similar in their action, may likewise be prescribed and good results obtained. Of the vegetable laxatives, I must first mention cascara sagrada as perhaps one of the best as an occasional remedy in chronic constipation. The fluid extract is the most convenient preparation. The various preparations of rhubarb, senna, and tamarind enter also into the armamentarium to combat habitual constipation. For children syrup of manna is an unusually good preparation as an adjuvant to the dietetic treatment of constipation.

There are doubtless a number of other good and useful medicinal remedies not mentioned here which in the hands of other practitioners and with some individuals have rendered excellent service. The literature on the subject is large, and it would be impossible to enumerate all the medicinal or other agents which may accomplish the desired effect in individual cases. But all this confirms what has been said before—"treat the habitually constipated patient, but never the habitual constipation."

16 WEST NINETY-FIFTH STREET.

THE IMPORTANCE OF DRINKING FREELY OF WATER.

Dr. B. C. Loveland, of Syracuse, N. Y., says:

Among the causes of habitual constipation, first place should be given to inattention to the indication for emptying the rectum and to thirst, from mental preoccupation, and the result is that thirst is abolished and rectal sensitiveness is dulled. Hence we have dryness (relatively) of the intestinal contents and also toleration for the presence of faecal matter in the rectum.

Too concentrated food, making the contents of the bowel small in volume, thereby reducing their force as an excitant of peristaltic activity, and general muscular weakness of the abdominal and pelvic muscles are also prominent causes; spasmodic contraction of the sphincter ani may also be mentioned as a cause, and may itself be caused by the cathartic habit. Two quarts of water, at least, should be drunk during the twenty-four hours. It is rare to find an habitual con-

stipation patient who is an habitual drinker of that amount of water. Institute a habit of going to stool, or attempting to induce an evacuation, every morning after breakfast. Swinging the body forward while sitting at stool, so as to compress the abdomen against the thighs (putting the arm across the abdomen if necessary), and swaying back again until the trunk is erect or a little tipped back are of service. This exercise should be done slowly and thoroughly, and may be supplemented by pressure with the hand at the right of the coccyx, where it is possible to practically massage the rectum. Such a habit of regularity, aided by the movements mentioned, will often be sufficient to effect a cure alone.

Regulate the diet so as to include an abundance of coarse vegetables and grains, the best being the succulent fruits, green vegetables, and the entire wheat cereals. Outline the diet specifically, and insist on regularity. Order outdoor exercise of a character to develop the abdominal muscles, if possible for the patient to take it, otherwise calisthenics directed to the same end. The best exercises are rowing, walking, tennis, and horseback or cycle riding. Calisthenics.—Flexing the thighs on the abdomen, sitting (squatting) down and rising up, bending forward and backward, etc.

Faradaic electricity is a great help when its use is possible, and the effect of cool bathing over the abdomen is beneficial.

If spasmodic contraction of the sphincter exists, stretching will be in order. Massage of the abdomen, either by a masseur or self-administered, is also helpful.

Stop all cathartics, and if some aid beside the measures stated is required, use as small doses of a laxative as will help to secure a movement when the other measures are also used. The dose has been too large if it causes an imperative evacuation, even though it does not purge. It is often well to use in addition a small amount of oil *per rectum* with other things, so the patient will not depend on any one thing, besides forming a habit.

Among the medicines most helpful may be mentioned nux vomica, rhubarb, aloes, cascara, phosphate of sodium, and occasionally a mild mercurial, none of these to be given as a cure, but prescribed in their respective places to tide over while, by other methods, the causes are being corrected.

Finally, I have no routine treatment for constipation, for constipation in different people is different, but after properly studying my patient for the underlying causes, and applying the principles here laid down, my results are quite satisfactory.

CONSTIPATION IN CHILDREN AND IN ADULTS.

Dr. William S. Ackert, of Poughkeepsie, N. Y., says:

I will first speak of age as a factor in the treatment. A breast-fed infant may be affected by the presence of a similar condition in the mother, in which case establishment of normal intestinal action in the mother will ordinarily overcome the trouble in the child. In bottle-fed infants it is usually due to improper food or improper quantities and proportions, and consequently is to be a special study in each case. When it is due to a deficiency in fat, the amount of cream in the food should be increased. In young children, where a diluent is required, oatmeal water is sometimes useful instead of clear water. Glycerin suppositories are useful as an adjuvant as well as enemata of soap-suds or sweet oil or an occasional flushing of the rectum with a warm normal salt solution; but this must not be continued too regularly, as the rectum will become accustomed to it and finally fail to respond to this form of stimulation. A teaspoonful of orange juice is sometimes another adjuvant that acts favorably. Four or five doses or more of calomel, a tenth of a grain each, will act in clearing out the intestinal canal of curds and establish a healthy hepatic action. I have found from half a drachm to a drachm of sweet oil, given internally every morning and reduced in quantity as may be necessary, to be very beneficial. The elixir of cascara sagrada, given in ten- to thirty-drop doses at night or even three times a day, according to the age of the child and the effect produced, will usually restore healthy muscular action when other means have failed.

Habitual constipation in the adult should be treated, first, hygienically; secondly, medicinally. In persons of sedentary habits, advise outdoor exercise, such as walking, wheeling, horseback riding, etc. An important factor in the treatment of constipation is the force of habit, and if any one will accustom himself or herself to answer the call of Nature at a certain time each day, even if an evacuation is not accomplished at the first effort, good results will follow, although no efforts at straining should be encouraged. As an adjuvant to this, a glass of cold water (some prefer hot water) before breakfast, and taken daily, eventually will show good results. Kneading and massaging the abdominal muscles laterally from above downward, and then following along the ascending, transverse, and descending colon, in succession, is also an aid to peristalsis.

The diet should consist of oatmeal and rye and Graham bread; vegetables, such as lettuce, asparagus, tomatoes, celery, etc., selecting those that leave a coarse residue; fruits, such as stewed prunes, apples, figs, raisins, and berries that contain small

seeds; and fresh cooked ripe fruit, if not abused so as to interfere with the digestion. An apple eaten at bedtime is a favorite custom with some.

In regard to drug treatment, strychnine is one of the most valuable remedies, and may be combined with belladonna, aloin, podophyllin, and cascara sagrada. A favorite formula is a tablet containing a fifth of a grain of aloin, one one-hundred-and-twentieth of a grain of strychnine, an eighth of a grain of extract of belladonna, and half a grain of cascara sagrada. Take one at night and repeat in the morning if necessary. In stubborn cases, where we find a sluggish liver, a tablet containing a quarter of a grain of aloin, the same amount of podophyllin, and a grain of blue mass will be beneficial, if taken at night for several nights or until the bowels are cleared out. Another good method is to unload the portal circulation with a sixth of a grain of calomel every half hour till twelve doses are taken, followed in the morning with a Seidlitz powder. A compound cathartic pill may be needed occasionally as well, so that milder remedies may have a better chance to act. The drug that can be relied upon to the greatest degree is cascara sagrada, and in the form of an elixir it may be taken in drachm doses once, twice, or three times a day, gradually reducing the quantity and frequency as the needs require. It may be combined with malt extract, and in any case tonics, where indicated, are beneficial. In anæmia, iron, in combination with gentian or other tonics is to be used with laxatives. A chronic gastric catarrh requires treatment directed to that condition as well as the constipation. Just so, the relief of chronic heart, liver, lung, or kidney disease will often relieve the habitual constipation that is present in those conditions. Lastly, mineral waters, bottled or preferably at the springs, where they can be procured in their fresh condition, together with the change of climate and scene and the exercise required in walking to the spring, will do wonders sometimes for those who are able to avail themselves of this form of treatment. In women a retroflexed, retroverted, or hypertrophied uterus demands attention.

THE VALUE OF CALOMEL AND SODIUM PHOSPHATE; OBJECTIONS TO ENEMATA.

Dr. William F. Barclay, of Pittsburgh, Pa., writes:

In infant life the power of habit does not prevail, as volition is not a factor in the physical life of the infant. Childhood is a period of life when the power of habit has considerable part in the formation of the habit of constipation. Parents, nurses, guardians, and teachers seldom consider the power and influence of habit upon the health of children until the system is impaired and disease is estab-

lished. Schools perhaps have more to do in aiding in the formation of the constipation habit than any other agency in our economy of life. Ignorance is the mother of error, and prevails in those in authority in schools; they practically pay no attention to the care of pupils as to natural evacuations of the bowels. The pupils are actually in many instances denied the privilege of attending to a natural desire. The time and impulse being unheeded, the power of accommodation supervenes, and the habit is easily and readily formed. Natural resources assume toleration of the retention of excrement and the systemic forces accommodate the offense against natural law in the accommodation of natural physical conditions.

Adult life is more disposed to the habit of disobeying the natural impulse to evacuate the bowels. It reposes more in the power of medication than infant and child life; hence it is that Americans more than any other nation are constipated, pure and simple habitual constipation, with all the evils that attend the condition of habitual constipation. Improper food primarily is the great cause of the evils which befall the digestive powers of mankind. Plain, wholesome, nutritious, palatable, well-selected food insures good digestion. No less reasonable and important are the quality, quantity, and regularity of drinking water. It may be assumed that water alone, if properly used internally and externally, will correct ninety-nine out of a hundred cases of habitual constipation. It is a remarkable observation that no one has or suffers from habitual constipation at resorts for health where reasonable or even large quantities of water are used. Is it possible to drink too much water, pure, wholesome water, as it emanates uncontaminated from Nature's laboratory? No. The constipation habit is one that continually presents itself for consideration in scientific medicine. The lessening of the use of medicine and the better understanding of Nature's resources in all things which pertain to the preservation of the powers of life conserve health and prolong life. The inculcation of regular habits of evacuation of the bowels once or twice daily overcomes the habit of neglect and cures without the intervention of medication.

Should the use of medicine seem imperative, then a careful study of the functions of the body and of the secretions in their normal or pathological state will indicate the selection of medicines of value in the relief of habitual constipation. More time spent in each individual case of habitual constipation, as to habits of life, will elucidate the causes which have brought about the habit, and their removal, the restoration of natural function.

Physical exercise is a most valuable means of producing results of lasting advantage to the habitual

constipate. Massage in the hands of a scientific physical trainer seldom if ever fails to correct the habit of habitual constipation. Twenty lessons in physical training have never failed, if the instruction received has been well carried out in the daily life of the patient. Physical exercise of a few minutes each day, especially in the sedentary, is invaluable in the treatment of the habitual constipate. The cold or cool bath or plunge is useful when it is pleasantly borne. Small doses of calomel given at short intervals with large portions of hot water until an evacuation of the bowels is procured, and continued once or twice daily for some time, are among our surest and best remedies. Calomel is the best of all intestinal antiseptics. It acts on the entire intestinal tract, without injury if properly administered, with milk sugar in twenty- to thirty-grain doses, or a similar quantity of bicarbonate of sodium. Phosphate of sodium is second in the list, and I believe is applicable in the larger number of cases. One drachm of phosphate of sodium, given in a pint or a quart of warm water at bedtime, seldom fails to act upon the bowels the following morning. This treatment can be continued indefinitely without injury to the patient, and the rule is that it permanently breaks up the habit of habitual constipation. The ungovernable desire to evacuate the bowels the following morning after having taken phosphate of sodium breaks up the habit to the lasting advantage of the patient.

Women more frequently than men suffer from habitual constipation, and for obvious reasons are harder to treat, and in many instances it is most difficult to avoid the administration of medicines to women habitual constipates. The difficulty attending the treatment of women is in their carrying out any line indicated. It is not unusual to observe women who for days and even weeks, never have a natural evacuation of the bowels.

It is evident that enemata, suppositories, and other means of treatment have been largely employed to the impairment of the general health and in many instances the loss of life. No treatment of habitual constipation has been more studiously considered or positively condemned than the use of the syringe for the correction of the habit of constipation. I am certain that, if this procedure is used, it will undermine and ruin the health. In the city of Chicago, in 1898, in a paper read before the Mississippi Valley Medical Association, I condemned the use of the syringe as a means of moving the bowels as unwarranted and injurious to health. The discussion that followed showed a most positive disagreement with my statements in regard to the use of the syringe. Its use was urged as a means of lavage, with large or small quantities of water, cold or hot, according to the conditions present, as being

a conservative and sure means of relief. I am now able, without a single exception, to record the approval of my views. The syringe should only be used in emergency cases, and its general use is positively injurious. I am well aware that this opinion is at variance with that of thousands of members of the medical profession, but I am not afraid to aver that no treatment instituted has been so injurious and detrimental to health. The conclusions arrived at are determined from careful observation and experience in a general practice of over thirty-five years.

(To be concluded.)

THE ANNUAL REPORT OF THE SURGEON-GENERAL OF THE ARMY.

We have been favored by Surgeon-General Sternberg with a copy of his Annual Report, dated October 8, 18901, from which the following extracts have been selected:

The Army General Hospital for the Treatment of Pulmonary Tuberculosis at Fort Bayard, New Mexico.—The selection of Fort Bayard as a site for a sanatorium has been amply justified by the results. Its location in the dry mountainous region of southern New Mexico, at an altitude of 6,040 feet, affords a climate permitting comfortable outdoor life during the entire year. During the past fiscal year, 344 patients were under treatment in this hospital. Of these, 184 were discharged, 40 died, and 120 remained under treatment on June 30, 1901. Ten of the 40 deaths occurred in patients who had been in hospital less than a month. Of those discharged, 17 had been in hospital but a short time. The others were treated an average of 5.4 months, and, when they left the hospital, 10 were clinically cured, 26 convalescent, 73 improved, and 58 not improved. * * *

Medical Officers, United States Army.—The total number of regular medical officers allowed by law under the Army Reorganization Act (approved February 2, 1901) is 321; number in service June 30, 1901, 245; number of vacancies on that date, 76. Fifty-seven *appointments* as first lieutenants and assistant surgeons were made during the year. * * * The appointments were made on the recommendation of examining boards in session in San Juan, P. R.; Manila, P. I.; Washington, D. C., and San Francisco, Cal. It is gratifying to note that, although the percentage of candidates approved by the boards recently in session is 24.84, as compared with 19.23 approved by the boards in session during the ten years 1889-1898 inclusive, there has been no lowering of the standard of admission. So many of the recent candidates were young men who had proved their capabilities, physical and professional, by one or more years of active service as volunteer or contract surgeons, that the ratio of successful candidates was necessarily higher among them than among the young medical graduates who came before the earlier boards. * * *

Medical Officers of Volunteers.—All the medical officers of the volunteers, staff and regimental, ap-

pointed under previous acts of Congress were mustered out of service June 30, 1901. Under the act approved February 2, 1901, there were appointed for service in the Division of the Philippines fifty surgeons with the rank of major and 150 assistant surgeons with the rank of captain. One major and surgeon and two first lieutenants and assistant surgeons died during the year.

Contract Surgeons, U. S. Army.—There were in service June 30, 1900, 462 contract surgeons. During the year ended June 30, 1901, contracts were made with 265 physicians; 333 contracts were annulled and 7 terminated by death, leaving in service June 30, 1901, 387 under contract. Of this number, 106 were on duty in the United States, 17 on transports, 14 in Cuba, and 250 in the Philippines.

Dental Surgeons.—The corps of 30 contract dental surgeons, authorized by the act approved February 2, 1901, is in process of formation. On June 30, 1901, 14 dental surgeons who had passed the examining board were assigned, 1 to the Department of Cuba, 11 to the Division of the Philippines, and 2 to posts in the United States.

Hospital Corps.—On June 30, 1900, the hospital corps consisted of 167 hospital stewards, 381 acting hospital stewards and 3,543 privates, a total of 4,091 enlisted men. During the year ending June 30, 1901, the corps gained by enlistment, re-enlistment, transfer from the line, etc., a total of 1,082 men, and lost 837, among the latter being 97 by discharge on surgeon's certificates of disability, 36 by death from disease, 2 killed in action, 3 by drowning, and 3 by suicide, leaving in service June 30, 1901, 246 hospital stewards, 388 acting hospital stewards and 3,702 privates, a total of 4,336.

To replace the loss of hospital stewards that would be occasioned by the muster out of the volunteer regiments, Congress, in its act approved February 2, 1901, allowed an additional 100 hospital stewards, making a total of 300. Fifty of the new appointments were allotted to the Division of the Philippines. On the recommendation of the chief surgeon of that division, 27 candidates who had passed the required examination were appointed up to June 30, 1901. To fill the remaining vacancies, examinations were held in the United States, Cuba, and Puerto Rico and 30 successful candidates were appointed.

Owing to an increased demand for men of the hospital corps for duty in the Division of the Philippines and with the China relief expedition, general recruiting officers and attending surgeons at important points were granted authority, in July, 1900, to enlist desirable men for the corps without reference to this office. The number required having been obtained, this general authority was withdrawn in September, 1900, and, thereafter, enlistments were authorized only in cases where the candidates had previous service in the army or were exceptionally desirable by reason of education, character, and physique. In January, 1901, to meet the current requirements of the corps recruiting was resumed. By the end of March, sufficient men had been enlisted for this purpose, when general recruiting was again suspended and remains so up to this time.

During the year special attention has been given to the instruction of the men of the hospital corps, it being realized that a considerable part of the suc-

cess of the department depends upon this important organization. Of the nearly 5,000 men now constituting the corps, a very large part have entered the service since 1897, and but few of them, from the necessities of the situation, could receive the careful training given the sanitary soldier in our army before the Spanish-American war. Schools of instruction have been maintained at the Army General Hospital, Washington Barracks, D. C., at Fort McDowell, Cal. (Angel Island), and at Hospital No. 3, Manila, P. I. Most valuable work has been done in these organizations, which are now all running on a high plane of efficiency. Detachments of instruction have been established at such posts as Fort Columbus, N. Y.; Fort Sheridan, Ill.; Fort Snelling, Minn.; Fort Leavenworth, Kans.; Fort Sam Houston, Tex.; Fort Logan, Col., and Vancouver Barracks, Wash.

I take pride in stating that the men of the hospital corps have borne themselves creditably under all conditions of service. Many have been specially commended during the past year.

Army Nurse Corps.—With the passage of the Army Reorganization bill, the nurse corps became part of the medical department. During the past year the number of nurses was reduced from 210 to 175; 96 of these are in the Philippines and 43 are on duty in the general hospital, Presidio of San Francisco, Cal.; the others are scattered. * * *

Recruiting.—The total number of men examined for enlistment in the regular army during the year 1900 was 39,916. The ratio of accepted men was considerably smaller than during the years immediately preceding. In 1897, a year of peace, the ratio was 702.19 out of every thousand examined. In 1898, during the active recruiting to increase the numerical strength of the army, the accepted men numbered 770.47 per thousand examined, but in 1899 the ratio decreased to 681.24, and during the past year to 563.16, showing evidently that greater care is exercised in the selection of men for the service.

Identification of Deserters and other Undesirable Men.—By the use of the outline figure card 351 men were identified in 1900 and 265 during the first half of 1901.

Health of the Army.—The health of the army must be regarded as having been unusually good during the calendar year 1900; but to give a proper valuation to this statement the statistics of our army from the time of the Civil War must be taken into consideration. For many years after that war the admissions to sick report, discharges for disability, and deaths, were somewhat similar to those reported during the past year, but then they were the result of service in the garrisons of the United States, while now they result from what practically has been war service in the Philippine Islands. Sanitary improvements in the condition of the soldier gradually lessened the rates year after year subsequent to the Civil War among the troops in the United States, until in 1894 the admission rate from all causes fell to 1089.73 per thousand of strength. The lowest admission rate for disease was 830.65, in the year 1896. The lowest death rate from all causes was 5.11 per thousand of strength, 3.14 having been the rate for disease, both of which were recorded in the year 1897, the year preceding the great change in

the sanitary environment of the soldier which resulted from the outbreak of the Spanish-American war. Following that outbreak we had heavy rates of sickness and mortality due to the exposures of active service in Cuba, Puerto Rico, and the Philippine Islands. For a short time these rates were in excess of those of the Civil War when at their worst, but the sanitary knowledge of the present time put to energetic practical use speedily caused a cessation of these excessive war rates, leaving the ratios still as high as those which prevailed in the garrisons of the United States for a number of years after the close of the Civil War.

The increase in the ratios of admissions to sick report, discharges and deaths during the past year over those of the years 1894-1897, is due to the relatively large proportion of our military force which served under war conditions in the Philippine Islands and China; but for this, the rates given by the army would have made a very satisfactory record as those given by troops serving in Cuba, Puerto Rico, and the United States were by no means heavy.

The admission rate for all causes in the army, volunteers and regulars, with a mean strength of 100,389 in 1900 was 2311.81 per thousand of strength as compared with 2178.06 in the previous year; but during the year 1899 only 39,280 men out of a total of 105,546 were serving in the Philippines, while during the past year 66,882 of a total of 100,389 were thus serving. This is an important point to remember in considering the sick rates of the two years.

The troops serving in the United States during the year 1900 (mean strength 20,690) had an admission rate of 1510.97 per thousand of strength as compared with 1677.51 during the previous year. The death rate was 7.78 from all causes per thousand of strength as compared with 7.89 in the previous year; 4.83 from disease as compared with 6.56, and 2.95 from injury as compared with 1.33.

In the Philippine Islands, with a mean strength of 66,882, the admission rate was 2621.96 as compared with 2395.52 in the previous year, this increase being mainly due to disease among the volunteers, the ratio for which rose from 1859.21 to 2761.79. The regulars, on the other hand, showed a marked decrease in the ratio of admission for disease, which fell from 2454.10 to 2197.73. Two thirds of the admissions for disease were caused by malarial fevers and diarrhoeal diseases. The deaths from all causes amounted to 28.75 per thousand of strength as compared with 30.58 in the previous year. Disease occasioned 20.26 deaths, the principal cause of the fatalities being dysentery, which, with other intestinal diseases, gave a rate of 9.08. The rate from injury amounted to 8.49.

The death rate in China was large—47.76 per thousand of strength—23.62 from disease and 24.14 from injury.

From the close of the calendar year 1900 to the latest reports, the health of the troops in the Philippines has been steadily improving. The chief surgeon has reported a progressive diminution in the non-efficiency of the command from disease and injury. In July and August, 1900, the non-efficiency constituted 9.47 and 9.58 per cent. of the strength. From January to June, 1901, the non-efficiency was less than 7 per cent., the lowest rate—6.12 per cent.

—having been recorded in March. Intestinal and gastric diseases, including dysentery and typhoid fever, gave 34.22 per cent. of the total sickness, malarial fevers 15.23 per cent., and venereal diseases 13.10 per cent. Typhoid fever, which scourged our camps in 1898, appeared only sporadically, constituting merely 1.78 per cent. of the total sickness. Most of the malarial cases were mild and made little or no figure in the mortality returns. Small-pox, so prevalent and deadly in the early occupation of the islands, has almost entirely been suppressed. Dysentery, constituting 13.44 per cent. of all cases of sickness, is the dangerous disease. Bubonic plague, although a subject of importance to the medical officers, members of the Board of Health of Manila, and to those temporarily assigned for duty with the board as inspectors, on account of its prevalence among Chinese and Filipinos, appears to have given but little anxiety to medical officers serving with troops, as during the year only one case was reported as having occurred in the army, in the person of an enlisted Chinese cook of the Twenty-seventh Infantry at Camp Stotsenberg, near Manila.

The health of the troops serving in Cuba was excellent during the year. With a mean strength of 8,690, the admission rate was 1873.07 as compared with 2749.74 in 1899, the rate for disease having been 1586.19 as compared with 2537.98. The death rate from all causes was 9.78, as against 18.30 in 1899. But for the occurrence of yellow fever, the death rate from disease in this command would have been only 4.72 per thousand of strength. One hundred and forty-four cases were reported, of which 32 were fatal, giving a death rate of 3.68 per thousand of strength. Since the close of the calendar year the health of the troops has continued good. Under date of July 26, 1901, the chief surgeon reported that since November, 1900, the only cases of yellow fever that had occurred in our military garrisons were the nine cases in the persons of men who were experimentally inoculated by infected mosquitoes at Quemados. As a result of the American occupation of the island, every city has its health officer, and every inland town where troops are stationed has had its sanitary condition more or less improved by the energy of the post commander and medical officer, the latter acting as a sanitary inspector for the municipality.

The medical record of the troops in Puerto Rico for the year 1900 is an excellent one, comparing favorably with that of the troops serving at the home stations. With a mean strength of 2,180 for the year, the admission rate for all causes of disability was 1577.98 as compared with 2522.40 during the previous year. The death rate was only 5.05 per thousand of strength as against 11.27 in 1899. All the deaths were the result of disease. It will be observed that this death rate is lower than the lowest recorded death rate in our army—5.11 per thousand in 1897—in the carefully supervised garrisons of the United States prior to the sanitary change made by the outbreak of the Spanish-American war.

Prevalence of Special Diseases.—Cases of scarlet fever, diphtheria, and cerebro-spinal fever were, as usual, rare among the troops. Measles and mumps were, on the other hand, of quite frequent occurrence. In the United States measles had an admission rate of 11.36, the mean annual rate for the pre-

vious decade having been 8.46 per thousand of strength. The infection of this disease was imported into the Philippine Islands on almost every transport. The admission rate for volunteers in these islands was 8.18 per thousand of strength and for regulars 1.61. Similar rates prevailed as regards mumps.

Typhoid Fever.—No epidemic of typhoid fever occurred among the troops during the year. In the army, as a whole, the admission rate was 9.74 per thousand of strength, and the death rate 1.63, as compared with the mean annual rates—5.19 and .56—for the ten years preceding the outbreak of the Spanish-American war. Among troops in the United States the admission rate was 5.56, the death rate .43 per thousand of strength. In addition to these, there was quite a large admission rate for fevers of undetermined causation, most of them probably typhoid fever of mild character, as these cases had practically no death rate.

Yellow Fever.—During the calendar year 1900, there were 144 cases of this disease, 32 of which were fatal, reported from the army, showing for the whole army, regulars and volunteers, with a strength of 100,389 men, an admission rate of 1.43 and a death rate of .32 per thousand of strength. During the decade 1889-1898 the mean annual admission rate was 2.08 and the death rate .25 per thousand men.

Malarial Fevers.—The rates for malarial disease were heavy during the year, owing to the great prevalence of these diseases in the Philippines and Cuba. The admission rate for the whole army was 706.52 and the death rate 1.36 as compared with the mean annual rates of the decade 1889-1898—174.29 and .58. The rates for the volunteers in the Philippines were: Admission, 1108.75, and death, 1.98; for the regular, 742.82 and 1.64, respectively, per thousand of strength. Cuba followed with an admission rate of 581.35 and a death rate of 1.04. In Puerto Rico and China the prevalence and mortality were relatively light. In the United States the admission rate was 166.20 and the death rate .05 per thousand of strength.

During the current year so much has been done in the practical application of methods for the prevention of malarial diseases, based on the diffusion of our knowledge of the means by which these diseases are propagated by infected mosquitoes, that a safe prognostication may be given of a lessened non-efficiency from these diseases in the next report of the surgeon-general of the army.

Consumption.—For tuberculosis of the lungs the admission rate for the year—4.92 per thousand of strength—was much higher than the mean annual rate of the previous decade, 2.66. The rate of discharge for disability was 1.36 as compared with 1.40 for the previous ten years, and the death rate .96, as compared with .48, as the mean annual rate for the decade. The admission rate was higher—5.27—in the United States than in any of the other commands, except that serving in China, where a rate of 7.70 was recorded. The lowest rate—3.80—was recorded in Cuba, but this does not mean that the prevalence of consumption in the West India Islands is notably less than in the United States, for the command in Puerto Rico gave an admission rate of 4.59 per thousand of strength. It is believed

that the sanatorium for consumptives recently established at Fort Bayard, New Mexico, will be of great value in the recovery of incipient cases of this disease.

Veneral Diseases.—The admission rate for these diseases for the whole army during the year 1900 was 133.97, and the discharge rate 2.36 per thousand of strength, as compared with 133.00 and 2.61 during 1899 and with 71.45 and 1.22, the mean annual rates of the decade 1889-1898. These large rates prevailed in all the commands, except among the volunteer troops serving in the Philippines, the admission rate for these having been 79.94 and the rate of discharge .41 per thousand of strength. Among the regular troops in the Philippines the rates were respectively 138.88 and .96; among troops serving in the United States 155.39 and 7.29. In China the admissions rose to 173.60, but there was no discharge for disability. In Cuba the admission rate reached 190.68, with 4.03 discharges per thousand of strength, and in Puerto Rico the excessive admission rate of 367.88 was recorded.

Since the close of the calendar year reports from the chief surgeon of the Division of the Philippines show these diseases to have increased materially in their prevalence. In April, 1901, they constituted 20.42 per cent. of the total sickness as compared with 8.97 per cent. in September, 1900. The Board of Health of Manila has instituted measures for the control of these infections among the women of the town, including the segregation of prostitutes in a certain part of the city and a careful system of superintendence over them. Orders have been issued directing an inspection of the troops at regular intervals, with the intention of detecting all diseased soldiers and sending them to hospital for treatment. The carrying out of these orders for the examination of all enlisted men has added to the sick list many cases that would have otherwise been treated privately and not appeared on the sick reports. Los Banos, on Laguna de Bay, which has hot springs closely resembling in composition those of the Hot Springs of Arkansas, has been selected as a suitable place for the treatment of syphilitics, and some of these cases are now there undergoing treatment. Similar efforts have been made in Cuba and Puerto Rico to control these diseases.

Alcoholism.—The admission rate for alcoholism in the army, as a whole, during the year 1900 was 15.34 per thousand of strength as compared with 14.49 in 1899 and with 28.67, the mean annual rate of the decade 1889-1898. Troops serving in the United States during the past year had 22.43 admissions per thousand of strength. The steady decrease of late years in the admissions for alcoholism among the men of the regular army is a matter for congratulation. Military officers may be said to be unanimous in their opinion that this was mainly the result of the establishment of the post exchange or canteen at military posts. The following shows this gradual improvement: Mean annual admission rate of the decade ending with 1889, 56.68 per thousand of strength. Admission rate for 1889, 41.41; for 1890, 40.73; for 1891, 40.01; for 1892, 37.23; for 1893, 33.97; for 1894, 30.94; for 1895, 30.11; for 1896, 29.06; and for 1897, 27.86. In 1898 the altered conditions consequent on the Spanish-American war prevented further comparisons. There is

less drunkenness among troops in active service than in a command doing garrison duty in the times of peace. In the Philippines during the past year the admission rate for alcoholism among the volunteers was 8.68 and for regulars 12.41; for troops in China, 7.70. These statistics do not sustain the newspaper reports of drunkenness among the troops in the Philippines. In fact, medical officers report the habits of the enlisted men in the Philippines as very much the same as in the United States. Much of the evil effects of intemperance in the Philippines are attributed to the use of the native intoxicant, vino, which is a crudely distilled alcohol causing rapid intoxication, which is readily recovered from when a moderate quantity is taken, but which, taken in excess, causes wild delirium and unconsciousness, and in habitual users induces a deterioration of the mental faculties.

Insanity.—Of insanity 273 cases were reported, equivalent to an annual rate of 2.72 per thousand of strength. Of these cases, 149, or somewhat more than one half, were discharged from the service and sent to the Government Hospital for the Insane at Washington, D. C., for treatment. The remaining 124 cases were returned to duty at various periods after having been taken on the sick report. The admission rate in 1899 was 1.78 and the proportion of those sent to the government hospital formed .87 per thousand of the strength. The increase during the past year is explained by the nervous depression and home sickness among the relatively larger proportion of the strength of the army serving in the Philippines.

Diarrhæal Diseases.—During the year 1897, when all the troops of the United States served at the home stations, the admission rate for diarrhæal diseases was 73.77 per thousand of strength, with no death. Dysentery was a comparatively rare disease and seldom fatal. In 1898, as a result of war service in Cuba, Puerto Rico, and the Philippines, the admission rate rose to 388.62, and the increased gravity of the cases was manifested by a death rate of 1.45 per thousand of the strength. During the following year, 1899, the admission rate was 380.69, with a death rate of 2.14. During the past year the admission rate increased to 465.01 and the death rate to 6.47, on account of the relatively large proportion of the army which was exposed to the causes of diarrhæal and dysenteric diseases in the Division of the Philippines. Among troops serving in the United States, the admission rate was only 96.57; in Puerto Rico 148.17, and in Cuba 166.75, and the death rates in these commands was relatively small. But in the Philippines, among the regulars the admission rate was 488.25, and among the volunteers 736.05, while among the troops engaged in the dangerous campaign in China it rose to 1266.54 per thousand of the strength. The heavy mortality rates occurred in these commands. Among the Pacific islands the death rate was 7.47 per thousand of strength; among the volunteers 10.88, and among the troops of the China relief expedition 15.92.

Diseases of the Respiratory Organs.—Diseases of the respiratory organs among troops serving in the United States gave an admission rate of 76.48 and a death rate of .56 per thousand of strength.

Bronchitis gave a rate of 84.39 in the United States. The exposures of the troops during the ac-

tive campaign in China caused a rate of 92.45, but in the islands this affection was infrequent, the rate in China having been only 29.34, in Puerto Rico 29.82, and in the Pacific Islands among the regulars 34.59, and among the volunteers 44.60.

Pneumonia also had its highest prevalence in the United States—4.25 per thousand of strength—followed in China by a rate of 3.08, while in Cuba the rate was only 1.61, in Puerto Rico 2.29, and in the Pacific Islands 2.12 among the regulars and 2.61 among the volunteers. The death rate, however, from this disease was highest among the volunteer troops in the Philippines, .76 per thousand men, as compared with .25 among the regular troops serving with them, and with .34 among the troops serving in the United States.

Injuries.—The admission rate for injuries in the army, regulars and volunteers, in 1900 was 196.27 and the death rate 6.95 per thousand of strength, contusions and sprains contributing largely to the former, and gunshot wounds to the latter.

Gunshot Wounds.—During the calendar year 1900, 377 men were killed by gunshot, 305 in action, and 21 by accident; 30 of the deaths were suicidal and 21 homicidal. Besides the 377 killed by gunshot, 1,173 cases were received in the hospitals for treatment; 782 were incurred in action, 315 not in action but in line of duty, 57 not in line of duty, while 12 were suicidal and 7 homicidal.

Ninety-two of the 1,173 cases proved fatal, 70 of which were battle wounds; 12 received in line of duty, 3 not in line of duty, 4 were suicidal and 3 homicidal.

Of the total number struck by gunshot missiles, 469, or 30.3 per cent., died from the injuries inflicted. The killed constituted 24.3 per cent. of those struck and the wounded 75.7. One man was killed for every 3.1 men wounded. This is a much heavier record than was given by the gunshot wounds of 1898 and 1899. During those years the killed constituted 11.9 per cent. of those struck, the wounded 88.1 per cent., or one man killed for every 7.4 wounded.

Of the 92 cases which terminated fatally, 28 deaths occurred among 35 penetrating wounds of the abdomen, a mortality of 80 per cent., as compared with 70 per cent. in the years 1898 and 1899. Laparotomy was performed in 4 of the 28 cases and an abrasion of the ileum was sutured in 1 of the 7 cases which recovered.

Sixteen of the 92 deaths occurred among 63 penetrating wounds of the thorax, a mortality of 25.4 per cent. as compared with 27.8 during 1898 and 1899.

Fractures of the femur had a mortality of 19 per cent. caused by 7 deaths among 37 patients, as against 11 per cent. in 1898 and 1899. During the past year, however, the total number of cases was smaller and the relative number of upper third fractures larger than in the years cited. Fractures of the knee joint had a mortality of 15 per cent.

The mortality in fractures of the spine constituted 69.2 per cent. of the cases—13, of which 9 were fatal; and fractures of the skull were 45.5 per cent. fatal, 10 deaths in 22 cases.

Bolt Wounds.—Besides the gunshot wounds received in action the battle casualties of the year included 41 men killed and 83 men wounded, mostly

by bolo, kris, or spear. Five of the 83 wounded died of their wounds.

Board for the Study of the Ætiology and Prevention of Yellow Fever.—* * * This board, consisting of Major Walter Reed, surgeon, U. S. army, and Contract Surgeons James Carroll, Aristides Agramonte, and Jesse W. Lazear, U. S. army, arrived at their station, Columbia Barracks, Quemados, Cuba, on June 25, 1900. Fortunately for the purposes of the board, an epidemic of yellow fever, which had begun in the adjacent town of Quemados, Cuba, during the latter part of the month of May, was still prevailing, so that an opportunity was afforded for bacteriological and pathological observations in this disease. The results obtained are especially valuable, showing that the *Bacillus icteroides* (Sanarelli) bears no causative relation to yellow fever, and that the mosquito serves as an intermediate host for the parasite of this disease. Further experiments of a most interesting character have demonstrated that yellow fever is transmitted to non-immunes by the bite of a mosquito that has previously fed on the blood of those sick with this disease; that yellow fever can also be produced by the subcutaneous injection of blood taken from the general circulation during the first and second days of the disease; that an attack of yellow fever produced by the bite of the mosquito confers immunity against the subsequent injection of infected blood; that yellow fever is not conveyed by clothing, bedding, or merchandise soiled by contact with those sick with the disease; that a house may be said to be infected with yellow fever, only when there are present in it mosquitoes capable of conveying the parasite of the disease; and that the spread of yellow fever can be most effectually controlled by measures directed to the destruction of mosquitoes and the protection of the sick against the bites of these insects.

The importance and far-reaching consequences of the observations made by Major Reed and his associates at Quemados, Cuba, can hardly be overestimated. For the first time in the history of this widely prevalent tropical disease we are in possession of knowledge with regard to the manner of its propagation which will enable us, I believe, not only to check its ravages, but effectually to stamp it out whenever it may appear in any of our garrisons or cities.

With the view of promptly arresting the spread of the disease, full instructions were issued in a circular from Headquarters, Department of Cuba, for the information and guidance of medical and commanding officers. Already the sanitary measures which have been put in force by the health authorities in the city of Havana, based on the work of Major Reed and his associates, have resulted in practically ridding that city of yellow fever for the first time in more than one hundred and forty years.

Board for the Investigation of Tropical Diseases in the Philippines.—Much excellent work has been done by this board in the study of animal parasites, dysentery, fevers, bubonic plague, and other tropical diseases, while some valuable reports have been received from medical officers not members of the board. Under authority from this office, excerpts from the reports on these subjects were published in the forms of circulars by the chief surgeon, Division of the Philippines, with the view of presenting to

the medical officers of the division the results of the investigations that had been made. Circular No. 1, by Lieutenant R. P. Strong, assistant surgeon, U. S. Army, published in February, 1901, discusses the subject of animal parasites. Circular No. 2, also by Lieutenant Strong, published in April, 1901, gives full information concerning dysentery and its causes. Circular No. 3, by Lieutenant W. J. Calvert, assistant surgeon, U. S. Army, published in May, 1901, consists of an epitome of our knowledge on the subject of bubonic plague. The value of these circulars has been so highly appreciated by medical men that calls for copies of them are constantly being received.

Exhibit of the Medical Department at the Pan-American Exposition, Buffalo, N. Y.—The exhibit, which was in charge of Captain E. L. Munson, assistant surgeon, U. S. army, consisted of a brigade field hospital of 100 beds, and was excellently located on a plot of ground immediately south of the government building, very accessible to visitors, and of sufficient size, not only to contain the hospital tentage without crowding, but also to furnish an adjoining space suitable for drill purposes. The hospital was fully equipped in all its details according to the provisions of the latest supply table, the purpose being to leave nothing to the imagination of visitors, the majority of whom would be unfamiliar with military matters, but to demonstrate the equipment of the medical department in respect to the brigade hospital unit, in quantity, size, and capacity, as well as in form, variety, and quality. The number of visitors who have inspected the field hospital and witnessed the exhibition drills of the hospital corps is very great. * * * As a means of educating the popular mind with respect to the efficiency of the medical department, this exhibit has thus been of very great value.

Therapeutical Notes.

Methyl Blue in Small-pox.—Professor Matoni (*Arte medica*, September 29th) reports good results in the various stages of small-pox, but especially in the pustular stage, from methyl blue administered in pills in a daily dose (divided) of from four to eight grains.

The Use of Salicylic Acid in Diabetes.—According to van Noorden (*Wiener klinische Wochenschrift*, 1901, No. 13; *Arte medica*, September 29th), salicylic acid increases the tolerance for carbohydrates in diabetics, especially in those who tolerate from seventy to one hundred and fifty grammes of bread.

The Pneumonia of Children.—Dr. Caillé (*Post-Graduate*, October) uses as a stimulant and heart tonic, camphor, strychnine, or nitroglycerin. Half a grain of camphor may be given in five grains of sugar, or the following prescription may be employed:

R Camphor. 15 grains;
Oil of sweet almonds. 11 drachms.
M. Five minims hypodermically.

Camphor half a grain, digitalis one grain, and benzoic acid three grains, combined, may be administered.

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NEW YORK, SATURDAY, OCTOBER 26, 1901.

THE TWO NEW YORK STATE MEETINGS.

Close upon the semi-annual meeting of the Medical Society of the State of New York, held in the Academy of Medicine last week, has come the annual meeting of the New York State Medical Association, held in the same place this week. No little perplexity is ordinarily occasioned among our brethren in other States by the similarity of name of the two organizations and by the fact that each purports to represent the regular medical profession of the State of New York, and the mystification must, we suppose, be heightened for the time being by this quick succession of the two meetings. However, it ought to be pretty well known throughout the country by this time that the profession in this State is divided into two camps, so to speak, the one being adherents of the old State society, for a number of years now deprived of all part in the American Medical Association, because of its having abrogated the national association's code of ethics; and the other consisting of those who have cast in their lot with the new State association, which was organized immediately after the older body had dropped the code. In everything except relations with the American Medical Association the line is not now very sharply drawn, for there are few who still care particularly about the code question; as a matter of fact, indeed, there are some men who are members of both State organizations, and we know not why there should not be more, for each body does good work.

The two meetings seem to have been about equal in the matter of attendance and in that of the number and diversity of papers brought out.

The old society's semi-annual meeting was, as we pointed out in our issue for October 12th, to some extent experimental. It seems to us, however, that the society ought to look upon it as having passed that stage. We hope that it will be a regular thing in future, so that we shall have the pleasure annually in New York of the presence of the two organizations almost side by side. This year both meetings have been profitable from the scientific point of view, and they have both been the occasion of many an edifying renewal of old acquaintance and of many an establishment of new bonds of fellowship. The spectacle of a divided profession is in itself humiliating, it is true, but there is much consolation in the thought that each section is capable of so much good. So long as the discord continues—and it cannot be for many years more, we believe—the profession in general will look at only what is for the common interest in the proceedings of the two bodies and wait patiently for a reconciliation which shall involve nothing but honor to all concerned.

THE NON-SURGICAL TREATMENT OF APPENDICULAR DISEASE.

There are many physicians—and they are by no means ill-informed or wanting in judgment—who hold that the treatment of disease of the vermiform appendix should not be invariably and exclusively surgical. We may concede that there is good ground for this broad contention, but we must, nevertheless, hold firmly to the idea that surgery should be invoked on the occurrence of the first threatening sign. However, that sign may never occur if proper attention is given to the prodromes, the importance of which, we think, is not in general sufficiently insisted upon. So far as regards the preventive treatment, we quite approve of an article by Dr. L. Bourget, which appeared in the July number of the *Therapeutische Monatshefte* and is summarized in the *Centralblatt für innere Medizin* for October 5th.

Dr. Bourget says that every individual suffering with perityphlitis has gastric and intestinal disturbances which may last for months or years. Almost always the symptoms are at first referable to the stomach, although subsequently they become intes-

tinal, with alternating constipation and diarrhoea. But frequently the slightest occasion suffices to give rise to the most significant symptoms. The prophylaxis of perityphlitis is therefore incumbent on us. How shall it be accomplished? A person threatened with perityphlitis should live on a mixed diet—little meat, an abundance of vegetables, well-cooked fruits, and a good deal of cereal food—and there is no occasion to fear the swallowing of grape-stones, etc. Special attention must be given to hyperacidity of the stomach; if it is present, it must be carefully overcome by hygienic and dietetic measures. Of foremost importance is a daily evacuation of the bowels. The dread of accustoming the intestinal canal to purgatives has no foundation. Most important for persons inclined to constipation are the ingestion of ice-cold drinks, gymnastic exercises, such as call the abdominal muscles into action, and massage, which the patient himself may perform.

When perityphlitis has actually set in, the author would treat it on the plan of disinfecting the stomach and the small intestine and irrigating the large intestine. The first thing to be insisted on is a liquid diet, and the patient is to take daily from half an ounce to six drachms of castor oil with from fifteen to thirty grains of salacetol. If gastric symptoms are prominent, the stomach is to be irrigated with a one-per-cent. solution of sodium bicarbonate, and intestinal irrigation is of equal importance; the danger of thus breaking up adhesions and causing perforation has been exaggerated. When the large intestine is cleansed, the elements of infection are quickly and surely got rid of. A quart of water should be injected, and the injection so carefully conducted that the fluid shall enter the cæcum. The temperature of the water should be about 100° F., and it should contain a non-toxic antiseptic; the author employs four parts of ichthyol to a thousand of water. At the same time a certain amount of olive oil should be thrown in. The pain is said to be soon allayed. The procedure is to be resorted to night and morning, and linseed meal poultices are to be applied, or five or six leeches if the exudate is bulky and hard. After the second or third day salines may replace the castor oil. The phenomena of general intoxication, such as nausea, vomiting, a feeling of anxiety, and cold sweats, gradually subside, mostly within twenty-four hours,

and the temperature falls to normal after the third or fourth irrigation.

Apparently the cases of established appendicular disease met with by the author have been those in which a palpable exudate has resulted. Such cases, we know, are not prone to end in anything more serious than an abscess, and they cannot be taken, as criteria for the treatment of appendicular inflammation in general. In a fulminant case the patient would be dead before the dietetic, antiseptic, and irrigating plan of treatment could have time to produce any impression, so that we cannot advise our readers to place any dependence upon it. We believe an immediate operation is the safest recourse when once the case has been interpreted as threatening; nevertheless, the author's remarks concerning premonitory symptoms are worthy of close attention, for we know them to be well founded.

HABITUAL CONSTIPATION.

The every-day importance of this theme need not be alleged; it is conceded and realized by every practising physician. Had it needed any confirmation, it would have been amply set forth in the great number of replies that we have received to our fifth question in the series of *Our Subscribers' Discussions*, some of which we publish in this issue of the *Journal*. We regret exceedingly that we have not space for all of them, for they are all replete with practical suggestions and with the results of experience and thought. Quite correctly, our contributors all take it for granted that our question had no reference to obstructive conditions admitting of correction only by surgical procedures; we had in mind functional constipation pure and simple.

Naturally, the hygienic treatment of habitual constipation figures largely in our contributors' essays, and necessarily, therefore, there is some repetition; but this is not to be regretted, for each writer presents the matter in some new phase or from some novel point of view. Among the hygienic measures, regulation of the diet figures largely, as could not fail to be the case. As to the matter of diet, there is substantial agreement among the contestants that there should largely be used such articles of food as leave a bulky residue after their nutrient constituents have been abstracted by the process of digestion. Perhaps it may serve a good purpose if we

point out that bulk is not the only requisite in the intestinal residue; it must be soft as well as bulky. The remnants of a milk diet are bulky enough, but they are apt to take the form of hard masses upon which the unaided peristaltic movement of the intestine makes little impression. This, it seems to us, is the real objection to milk as an article of diet for persons disposed to constipation, and it may be well to remember that, as Dr. Thomas Addis Emmet has pointed out, the tendency of a milk residue to become agglomerated into scybalous masses may in great measure be reduced by adding salt to the milk. Moreover, the addition of a little salt makes milk more palatable to many persons. By reason also of the hard and bulky intestinal residue which it is apt to produce, cheese, too, is an article of food that should generally enter but slightly into the diet of those who are given to constipation. So widely is its constipating effect known that diamond-smugglers, so it is stated, commonly have recourse to the free ingestion of cheese after they have swallowed the gems. Swiss cheese seems to be free from this constipating effect in a very great measure, and, indeed, it is only comparatively new cheese that appears to be decidedly constipating, the well-ripened product, which is usually eaten but moderately, having no decided action in opposing peristalsis.

The squatting posture is mentioned by some of our contributors as aiding substantially in promoting the process of defecation. There can be little doubt that it is of advantage, but the present conditions of civilized life, especially in urban communities, almost preclude its adoption. It may, therefore, be well to know that, as we have reason to believe, its influence may almost wholly be obtained by the simple expedient of crossing one leg over the other while seated in the closet. First one leg and then the other should be brought uppermost. Apparently the effect is that of contraction of the *psoæ* muscles. These suggestions may perhaps be found useful supplements to the measures mentioned by our contributors.

SCARLATINOID.

Under the name of scarlatinois, Trammer (*Wien-er medicinische Wochenschrift*, 1901, No. 13; *Berliner klinische Wochenschrift*, August 5th) describes an epidemic, observed by him in Herzegovina, of an itching papular rash affecting chiefly the face, but extending to other parts of the surface,

varying from one to three days in duration, and of an entirely benign course. The tonsils were involved in all instances, and often the nasal mucous membrane also. The tongue had the appearance of the so-called "raspberry tongue." The attack came on suddenly, without prodromes, and no sequelæ were observed. Contagiousness was extraordinarily pronounced. Such an ailment, if it is really an essential, specific exanthem, can hardly be confined to Herzegovina, but should be encountered elsewhere.

THE EARLY DIAGNOSIS OF ADDISON'S DISEASE.

Among the most curious of diagnostic procedures, we venture to say, is one described at a recent meeting of the Hospital Medical Society, of Paris, by Jacquet and Trémolières (*Gazette hebdomadaire de médecine et de chirurgie*, July 25th). In a tuberculous subject these gentlemen have been able to produce bronzing of the skin at will by somewhat prolonged applications of linseed-meal poultices, either plain or slightly sinapized. They suggest that by this means one may make a diagnosis of Addison's disease before melanoderma has taken place. On the two heels of their subject they produced bronzing of the same degree, although one leg had been exsanguinated with an Esmarch bandage, and this fact, they deduce, makes in favor of the autochthonous production of the cutaneous pigment in the Malpighian layer.

ICHTHYOL BATHS.

It appears that we must add to the other therapeutical actions of ichthyol certain prompt and decided effects upon the blood. Schütze (*Deutsche Medizinal-Zeitung*, 1901, No. 32; *Fortschritte der Medizin*, July 22d) has been using ichthyol baths in various forms of anæmia, in gouty conditions, and in diabetes, and he has constantly observed that after the baths the amount of hæmoglobin in the blood was increased from twenty to forty per cent., and that the number of the red corpuscles rose by from a million to a million and a half. This effect was often recognizable after three baths, and always after fifteen or twenty, but the author has never witnessed it after ordinary warm baths. In a diabetic, hand in hand with the increase of hæmoglobin there was a reduction of the amount of sugar in the urine from 1.3 to 0.24 per cent. The blood examinations were always made twenty-four hours after a bath, so that the erythrocytosis due to a warm bath had not to be taken into account. To a bath of about sixty-two gallons he adds rather less than two ounces of ichthyol. The temperature of the bath is 95° F., and its duration is from ten to fifteen minutes.

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general, during the week ending October 19, 1901:

Smallpox—United States.

Iowa.....	Ottumwa.....	Sept. 7-28.....	24 cases.	
Massachusetts	Boston.....	Oct. 5-12.....	5 cases.	
Michigan.....	Detroit.....	Oct. 5-12.....	1 case.	
New Jersey.....	Camden.....	Oct. 5-12.....	1 case.	
"	Newark.....	Oct. 5-12.....	4 cases.	3 deaths.
New York.....	New York.....	Oct. 5-12.....	7 cases.	2 deaths.
Ohio.....	Youngstown.....	Oct. 5-12.....	1 case.	
Pennsylvania.....	Erie.....	Oct. 5-12.....	2 cases.	
"	Norristown.....	Oct. 5-12.....	1 case.	
"	Philadelphia.....	Oct. 5-12.....	60 cases.	2 deaths.
Rhode Island.....	Newport.....	Oct. 5-12.....	1 case.	
Vermont.....	Burlington.....	Sept. 28-Oct. 12.....	13 cases.	
Wisconsin.....	Green Bay.....	Oct. 6-13.....	1 case.	

Smallpox—Foreign.

Austria.....	Prague.....	Sept. 21-28.....	4 cases.	
Belgium.....	Antwerp.....	Sept. 21-28.....	2 cases.	1 death.
"	Ghent.....	Sept. 21-28.....		1 death.
Brazil.....	Rio de Janeiro.....	Aug. 18-Sept. 1.....		115 deaths.
Colombia.....	Colon.....	Sept. 30-Oct. 6.....	1 case.	
"	Panama.....	Sept. 30-Oct. 7.....	125 cases.	
Ecuador.....	Guayaquil.....	Aug. 3-Sept. 21.....		25 deaths.
France.....	Paris.....	Sept. 10-28.....		9 deaths.
Gt. Britain.....	London.....	Sept. 21-28.....	163 cases.	6 deaths.
Italy.....	Naples.....	Sept. 21-28.....	71 cases.	4 deaths.
"	Palermo.....	Sept. 14-21.....		1 death.
Mexico.....	Hunucma.....	Sept. 21.....	Epidemic.	
"	Vera Cruz.....	Sept. 28-Oct. 5.....	7 cases.	4 deaths.
Russia.....	Moscow.....	Sept. 14-21.....	1 case.	
"	St. Petersburg.....	Sept. 14-28.....	3 cases.	1 death.
Uruguay.....	Montevideo.....	July 27-Aug. 24.....	71 cases.	10 deaths.

Yellow Fever.

Brazil.....	Rio de Janeiro.....	Aug. 18-Sept. 1.....	3 deaths.	
Costa Rica.....	Port Limon.....	Sept. 28-Oct. 5.....	8 cases.	3 deaths.
Cuba.....	Habana.....	Sept. 28-Oct. 5.....	3 cases.	
Mexico.....	Merida.....	Sept. 14-21.....	a few deaths.	
"	Valladolid.....	Sept. 14-21.....	Epidemic.	
"	Vera Cruz.....	Sept. 21-28.....	6 cases.	2 deaths.

Plague.

Philippines.....	Manila.....	Aug. 25-31.....	5 cases.	4 deaths.
Japan.....	Formosa.....	Sept. 7-14.....	5 cases.	4 deaths.

Cholera.

Japan.....	Onsen Dist.....	Sept. 7-14.....	1 case.	
Straits Settlements.	Singapore.....	Aug. 25-31.....		1 death.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending October 19, 1901:

DISEASES.	Week end'g Oct. 12.		Week end'g Oct. 19.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	115	27	100	23
Scarlet fever.....	104	9	101	6
Cerebro-spinal meningitis.....	0	0	0	2
Measles.....	71	1	56	6
Diphtheria and croup.....	243	40	210	25
Small-pox.....	7	2	4	1
Tuberculosis.....	291	164	231	130

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the week ending October 17, 1901:

DUDLEY, D. E., Acting Assistant Surgeon. Granted leave of absence, on account of sickness, for thirty days from November.

GOLDSBOROUGH, B. W., Acting Assistant Surgeon. Granted leave of absence for ten days.

HOLT, J. M., Assistant Surgeon. Upon the arrival of W. C. Billings, Assistant Surgeon, he will proceed to Cairo, Illinois, relieving J. A. NYDEGGER, Passed Assistant Surgeon, and assume temporary command during the absence of J. H. OAKLEY, Passed Assistant Surgeon, on leave.

MAGUIRE, E. S., Hospital Steward. Granted leave of absence for seven days.

NYDEGGER, J. A., Passed Assistant Surgeon. Upon being relieved by J. M. HOLT, Assistant Surgeon, he will proceed to Baltimore and report to the medical officer in command for duty and assignment to quarters.

SCHLAAR, W. F., Hospital Steward. Granted leave of absence for thirty days.

SIEDENBURG, F., Hospital Steward. Directed to report to the medical officer in command, Chicago, for duty and assignment to quarters.

Appointment.

SIEDENBURG, FRANK, of Illinois, appointed junior hospital steward in the United States Marine-Hospital Service.

Board Convened.

Board convened for the purpose of selecting a site for a quarantine station in Brunswick, Georgia. Detail for the board: Chairman, Surgeon J. H. White, M. H. S.; recorder, Acting Assistant Surgeon Hugh Burford, M. H. S.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending October 19, 1901:

FURLONG, F. M., Assistant Surgeon. Ordered to the Naval Hospital, New York, for treatment.

GRIFFITH, S. H., Surgeon. The order to report for duty as a member of medical examining boards is modified, and he is ordered to report as a member of the medical examining board only, and not as a member of boards for the examination of medical officers.

WEBB, U. R., M. D. Commissioned assistant surgeon from October 11, 1901.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending October 19, 1901:

FORD, CLYDE S., First Lieutenant and Assistant Surgeon, is granted leave of absence for one month.

HOWELL, EVAN P., First Lieutenant and Assistant Surgeon, will proceed to Fort Clark, Texas, for duty.

IVES, FRANCIS J., Major and Surgeon, is granted leave of absence for fifteen days.

KIERSTED, HENRY S., First Lieutenant and Assistant Surgeon, is relieved from further duty in the Division of the Philippines and from temporary duty in the Department of California, and will proceed to Fort Lawton, Washington, for duty.

LA GARDE, LEWIS A., Major and Surgeon, is detailed as lecturer on the result of gunshot injuries at the Army Medical School in Washington.

POWELL, JUNIUS L., Major and Surgeon, is granted leave of absence for fifteen days.

REYNOLDS, FREDERICK P., Captain and Assistant Surgeon, is detailed as a member of the board of medical officers appointed for the examination of candidates for admission to the Medical Corps of the Army, to take effect October 31, 1901, vice FRANK R. KEEFER, Captain and Assistant Surgeon, who is relieved and will return to his proper station at Fort Monroe, Virginia.

RUFFNER, ERNEST L., First Lieutenant and Assistant Surgeon, will proceed from Columbia Barracks, Ohio, for temporary duty.

WATERHOUSE, M. MANLEY, Contract Surgeon, is relieved from further duty on the transport *Logan* and from temporary duty at the General Hospital, Presidio of California, and will proceed to Fort Wadsworth, New York.

WATERHOUSE, SAMUEL M., First Lieutenant and Assistant Surgeon, is relieved from further duty at Fort Meade, South Dakota, and will proceed to San Francisco for transportation to Manila.

Society Meetings for the Coming Week:

MONDAY, October 28th.—Medical Society of the County of New York (annual); Lawrence, Massachusetts, Medi-

cal Club (private); Cambridge, Massachusetts, Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, October 29th.—Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, October 30th.—Auburn, N. Y., City Medical Association; Berkshire, Massachusetts, District Medical Society (Pittsfield).

FRIDAY, November 1st.—Practitioners' Society of New York (private) Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, November 2d.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Massachusetts, Medical Society.

A Dinner to be Given to Professor Waldeyer.—A dinner, at which Dr. W. H. G. Waldeyer, professor of anatomy at the University of Berlin, will be the guest of honor will be given in this city on October 26th by the German Medical Society.

A New Medical Building at Ann Arbor.—The cornerstone of the new medical building for the University of Michigan, at Ann Arbor, was laid on October 14th. The building will have a frontage of 175 feet 8 inches by 144 feet 8 inches in depth.

The Clinical Society of Washington.—At a meeting, on Monday, October 14th, the following officers were elected for the ensuing year: President, Dr. Walter A. Wells; vice-president, Dr. Monte Griffith; secretary and treasurer, Dr. J. Carlisle De Vries.

Dr. Achilles Rose becomes Adjunct Professor of Medicine at the Post-Graduate.—Dr. Achilles Rose, of No. 126 East Twenty-ninth Street, New York, has been elected by the faculty of the New York Post-Graduate Medical School and Hospital to the post of Adjunct Professor of Medicine.

A Dinner to Professor Hartman, of Paris.—Dr. Ernest LaPlace, professor of surgery in the Medico-Chirurgical College, Philadelphia, gave a dinner of twenty-six covers at the Art Club, on October 17th, to Dr. Henri Hartman, professor of surgery in Paris, to give him an opportunity to meet the surgeons of Philadelphia.

Changes of Address.—Dr. George W. Conterno, to No. 137 McDougal Street, New York; Dr. Samuel Kohn, to No. 13 East Seventy-fifth Street, New York; Dr. L. Harrison Mettler, to No. 100 State Street, Chicago; Dr. O. B. Douglas, to No. 20 Pleasant Street, Concord, New Hampshire; Dr. Edwin Sternberger, to No. 43 East Sixtieth Street, New York.

The Civil Service Examination for the Position of Assistant Surgeon.—The United States Civil Service Commission invites attention to the fact that the examination announced for October 29 and 30, 1901, to be held in any city in the United States where postal free delivery has been established, for the position of assistant surgeon at the Freedmen's Hospital, is postponed to November 12 and 13, 1901.

No Typhoid Epidemic.—A careful perusal of the official report of the Chicago health department shows that we were in error in attributing to that report the statement that typhoid fever was epidemic throughout the United States.

A Gift of \$25,000 to the New York University Medical School.—Chancellor MacCracken, of New York University, announced at a recent meeting of the university council the receipt of a gift of \$25,000 for the medical school. The name of the donor was withheld by request. Improvements in the Havemeyer Laboratory were made possible during the summer through the generosity of William F. Havemeyer.

Indictments Found against Faith Curists.—The Butler county (Ohio) Grand Jury has reported indictments for manslaughter against Sylva Bishop and his wife, Leota, faith curists. Last July their eight-year-old child, Esther, was terribly burned by a gasoline explosion and the Bishops refused to call a doctor. They surrounded the child's bedside, offering prayers for her recovery. Coroner Sharkey, in his verdict, said that medical attention would have saved the girl's life. A second indictment for criminal neglect was returned against the father.

The Medical Society of the State of New York held its semi-annual meeting at the Academy of Medicine, New York, on October 15th and 16th. A reception was given for the members and their guests of the State organization by the Medical Society of the County of New York. Papers were read by Dr. Enoch V. Stoddard, commissioner of the State Board of Charities; Dr. William P. Spratling, the medical superintendent of the Craig Colony for Epileptics; Dr. J. Leonard Corning, Dr. Abraham Jacobi, Dr. Carlos F. MacDonald, Dr. D. B. St. John Roosa, and Dr. Richard Stein.

The Milk Commission of the Medical Society of the County of New York requests us to state that in the report, recently published, a wrong impression was inadvertently conveyed which, in justice to the workers of the Rockefeller Institute and to themselves, they would like to correct. The Milk Commission during the past year has interested the dealers and the medical profession in certified pure milk, and in the furtherance of its aims has been permitted to use certain data gathered by special workers of the Rockefeller Institute in pursuit of an independent investigation of wider scope which the institute has undertaken. The data gathered for the institute which the Milk Commission especially made use of in the above-mentioned report was in part bacteriological; while the results of farm investigations and the observations indicating the correlation of improved sanitary conditions of the dairies with improvement in the character of the milk, were derived almost wholly from an investigation as yet unfinished, which is being carried on by Dr. Belcher, under the auspices of the Rockefeller Institute.

Alvarenga Prize of the College of Physicians of Philadelphia.—The College of Physicians of Philadelphia announces that the next award of the Alvarenga prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about \$180, will be made on July 14, 1902, provided that an essay deemed by the committee of award to be worthy of the prize shall have been offered. Essays intended for competition may be upon any subject in medicine, but cannot have been published, and must be received by the secretary of the college on or before May 1, 1902. Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author. It is a condition of competition that the successful essay or a copy of it shall remain in possession of the college; other essays will be returned upon application within three months after the award.

The Alvarenga prize for 1901 has been awarded to Dr. George W. Crile, of Cleveland, Ohio, for his essay entitled *An Experimental and Clinical Research into Certain Problems relating to Surgical Operations*.

The New York Academy of Medicine.—At a stated meeting, on Thursday evening, the 17th inst., Dr. Herman Knapp read a paper entitled *A Clinical Discourse on the Gift of Helmholtz to the Medical Profession by the Invention of the Ophthalmoscope Fifty Years Ago*.

At the next meeting of the Section in Ophthalmology, on Monday evening, the 21st inst., Dr. A. Schapinger will present a case of amblyopia from the inhalation of wood alcohol, and Dr. H. H. Seabrook will present a case of peculiar neoplasm of the bulbar conjunctiva. Dr. John E. Weeks will exhibit a specimen of neuroma of the retina.

At the next meeting of the Section in Laryngology and Rhinology, on Wednesday evening, the 23d inst., Dr. H. Holbrook Curtis will read a paper on the *Early Appearances of Laryngeal Tuberculosis*. Cases will be presented and new instruments and specimens will be exhibited.

At the next meeting of the Section in Obstetrics and Gynecology, on Thursday evening, the 24th inst., Dr. S. W. Bandler will read a paper entitled *The Ætiology, Histology, and Usual Course of Ectopic Gestation*. Patients will be presented, and specimens will be exhibited by Dr. Simon Marx, Dr. L. T. Lazinski, and Dr. Asa Brothers.

The New York State Medical Association held its eighteenth annual meeting in New York on Monday, Tuesday, Wednesday, and Thursday of this week, under the presidency of Dr. John A. Wyeth, of New York. Officers for the ensuing year were elected as follows: President, Dr. A. A. Hubbell, of Buffalo; vice-president, Dr. William H. Biggan, of Brooklyn; secretary, Dr. Guy Lombard; treasurer, Dr. E. H. Squibb, of Brooklyn. According to the reports presented by its officers, the association is prosperous, and is gaining strength rapidly. The present member-

ship is 15,000, compared with 700 a year ago. The treasurer's report showed that during the year \$13,000 had been received, and of this amount \$10,000 had been expended.

At the annual banquet, held at the Murray Hill Hotel on Wednesday evening, the president acting as toast-master, the toasts were as follows: Liberal Culture and Medical Education, the response by President Jacob Gould Schurman, LL. D., of Cornell University; The American Medical Association, the response by Dr. George H. Simmons, of Chicago (the editor of the *Journal of the American Medical Association*); The Necessity of Legislation for the Relief of those Afflicted with the Drug Habit, the response by the Hon. George W. Brush, M. D.; Our Sister Societies, the response to have been made by Dr. Henry L. Elsner, of Syracuse (the president of the Medical Society of the State of New York), who, however, telegraphed that he was unable to be present, owing to sickness in his family; Cooperation in the Medical Profession, the response by Dr. William M. Polk, of New York, the dean of the Cornell University Medical College; and the Relation of Physicians to Medical Legislation and the Public Health, the response by the Hon. Samuel S. Slater, State senator.

The Southern Surgical and Gynecological Association.—The fourteenth annual meeting will be held in Richmond, Va., on November 12, 13, and 14, 1901, under the presidency of Dr. Manning Simons, of Charleston, S. C. The preliminary programme contains the following titles:

The President's Address, by Dr. Manning Simons, of Charleston; Laceration of the Cervix and its Consequences, by Dr. E. S. Lewis, of New Orleans; Repair of a Complete Laceration of the Perinæum in a Girl of Nine Years, Produced by the Finger of the Obstetrician at the Patient's Birth, by Dr. H. A. Royster, of Raleigh, N. C.; Vaginal Puncture or Incision, an Unsururgical Procedure, by Dr. Joseph Price, of Philadelphia; Pelvic Hæmatocele and Hæmatoma, by Dr. W. P. Manton, of Detroit; Retrodisplacement of the Pregnant Uterus, its Surgical Treatment, by Dr. William A. Quinn, of Henderson, Ky.; The Treatment of Pelvic and Abdominal Tumors complicating Pregnancy, with a Report of Cases, by Dr. Rufus B. Hall, of Cincinnati; Puerperal Septicæmia, by Dr. William R. Pryor; A Unique Case of Extra-uterine Pregnancy, by Dr. H. Tuholske, of St. Louis; The Surgical Treatment of Dysmenorrhœa in Unmarried Women and Girls, by Dr. J. T. Wilson, of Sherman, Tex.; The Surgical Treatment of Dysmenorrhœa, by Dr. Henry D. Fry, of Washington; Tuberculosis of the Female Generative Organs, by Dr. J. B. Murphy, of Chicago; Cancer of the Female Urethra, with a Report of Cases, by Dr. C. J. Miller, of New Orleans; The Angeiotribe, its Use and Abuse, by Dr. John N. Ellis, of Atlanta; Some Points in the Treatment of Appendicitis, by Dr. A. M. Cartledge, of Louisville, Ky.; Some of the Avoidable Causes for Disaster in Appendicitis Work, by Dr. Robert T. Morris; Gunshot Wounds of the Abdomen, by Dr. John C. Wysor, of Clifton Forge, Va.; Gunshot Wounds of the Abdomen,

by Dr. Wallace Neff, of Washington; Penetrating Wounds of the Abdomen, with Histories of Six Successful Laparotomies and Statistical Tables of 152 Abdominal Sections done at Charity Hospital, in New Orleans, by Dr. E. D. Fenner, of New Orleans; Closure of the Abdominal Incision, by Dr. I. S. Stone, of Washington; The Results Obtained in Sixty Operations for Prostatic Hypertrophy—Catheterization of the Ureters in the Male, with a Report of Cases, by Dr. Hugh H. Young, of Baltimore; Perineal Prostatectomy, by Dr. Alexander Hugh Ferguson, of Chicago; Report of a Case of Gangrene of the Gall-bladder, by Dr. George Ben Johnson, of Richmond; Report of Cases of Gall-stones, by Dr. J. A. Goggans, of Alexander City, Ala.; Gastrostomy in the Treatment of Impermeable Stricture of the Œsophagus, by Dr. Hugh M. Taylor, of Richmond; Œsophagotomy, with a Report of a Successful Operation on an Infant Forty-six Days Old, by Dr. John W. Long, of Salisbury, N. C.; Two Cases of Nephro-ureterectomy, by Dr. J. Wesley Bovee, of Washington; The Treatment of Procidentia Uteri, by Dr. Charles P. Noble, of Philadelphia; A Clinical Report of Two Cases of Osteo-sarcoma of the Maxilla Treated by Excision, with a Statement of the Condition of the Patient after a Year, by Dr. Hermann B. Gessner, of New Orleans; Spiral Section of Fibroid Tumors in the Lower Portion of the Uterus to Facilitate their Removal—Puncture Scissors and Counter-pressure Instrument for Vaginal Puncture in Vaginal Drainage—The Use of Adhesive Plaster for the Prevention of Laceration of the Perinæum in Forcep Delivery, by Dr. George H. Noble, of Atlanta; Operations on the Liver, by Dr. W. E. B. Davis, of Birmingham, Ala.; Hepatic Drainage, by Dr. John B. Deaver, of Philadelphia; A Report of Two Interesting Cases, by Dr. Joseph Taber Johnson, of Washington; Tuberculous Peritonitis, by Dr. Samuel Lloyd; Hodgen's Splint for the Treatment of Fracture of the Thigh, by Dr. George S. Brown, of Birmingham, Ala.; A Peculiar Succession of Septic Wounds occurring in and Around Alexander City, Alabama, with a Report of Cases, by Dr. A. J. Coley, of Alexander City, Ala.; Pott's Disease and some of its Complications, by Dr. A. R. Shands, of Washington; and The Surgery of the Pancreas, by Dr. W. D. Haggard, Jr., of Nashville.

Births, Marriages, and Deaths.

Born.

SPRATLING.—In Philadelphia, on Sunday, October 13th, to Dr. L. W. Spratling, United States Navy, and Mrs. Spratling, a daughter.

Married.

ADAMS—MOORE.—In Sandy Springs, Maryland, on Saturday, October 12th, Dr. Herbert S. Adams, of Catonsville, Maryland, and Miss Sarah Thomas Moore.

ARMOUR—MITCHELL.—In Coburg, Canada, on Wednesday, October 2d, Dr. Donald Armour, of London, and Miss Louise Mitchell.

BUTTON—WRIGHT.—In Buffalo, on Thursday, October 17th, Dr. Lucius L. Button, of Rochester, and Miss Rosalie Howard Wright.

CLARK—TAGGART.—In Massillon, Ohio, on Thursday, October 17th, Dr. Charles Herman Clark, of Washington, and Miss Cora E. Taggart.

CROSS—CROSBY.—In Ashtabula, Ohio, on Tuesday, October 1st, Dr. William Curtis Cross and Miss Agnes Josephine Crosby.

FRANK—HALLETT.—In St. Louis, on Tuesday, October 15th, Dr. Charles A. Frank and Miss Edith Hallett.

GODDARD—BARTLETT.—In New York, on Thursday, October 17th, Dr. A. Franklin Goddard and Miss Edna Lee Bartlett.

GRABAU—ANTIN.—In Boston, on Saturday, October 5th, Dr. Amadeus Grabau, of Columbia University, New York, and Miss Mary Antin.

HOLT—VANCE.—In Morgantown, West Virginia, on Tuesday, October 15th, Dr. David T. Holt, of Martinsburg, West Virginia, and Miss Alice Vance.

HUMPHREY—SMITH.—In Bath-on-the-Hudson, N. Y., on Saturday, October 5th, Dr. Elbert H. Humphrey, of Rensselaer, N. Y., and Miss Mary Alice Smith.

JOHNSON—OLIVER.—In Shields, Pennsylvania, on Saturday, October 5th, Dr. Loren Bascom Taber Johnson, of Washington, and Miss Mary Frances Oliver.

KEPPEL—HEARNE.—In Georgetown, Kentucky, on Wednesday, October 16th, Dr. F. D. Keppel, of Montour Falls, N. Y., and Miss Mary R. Hearne.

MCCORMICK—BAKER.—In Belleville, Missouri, on Wednesday, October 2d, Dr. Ferdinand G. McCormick, of Normal, Illinois, and Miss Estelle K. Baker.

MORRISON—GOLDMAN.—In Kansas City, Missouri, on Tuesday, October 8th, Dr. Abraham Morrison and Miss Allie R. Goldman.

NIEDRINGHAUS—HIGGINS.—In St. Louis, on Thursday, October 10th, Dr. Ralph Niedringhaus, of Granite City, Illinois, and Miss Frances E. Higgins.

OSBORNE—PLASTER.—In Round Hill, Virginia, on Tuesday, October 1st, Dr. Archibald P. Osborne and Miss Fannie Meade Plaster.

PALMER—YARROW.—In Philadelphia, on Monday, October 14th, Dr. Edward Carlton Palmer and Miss Matilda Edith Yarrow, daughter of Dr. Thomas J. Yarrow.

PRETLOW—HOLLADAY.—In Suffolk, Virginia, on Wednesday, October 9th, Dr. Richard Henry Pretlow, of New York, and Miss Katherine Beverly Holladay.

SMITH—CHINNOCK.—In Brooklyn, on Wednesday, October 9th, Dr. George H. Smith and Miss May Raymond Chinnock.

WOOD—STERLING.—In East Orange, N. J., on Monday, October 14th, Dr. Francis Carter Wood, of New York, and Miss Edith Warren Sterling.

Died.

BIGELOW.—In New York, on Tuesday, October 15th, Dr. Horace Bigelow, in the twenty-ninth year of his age.

BROWN.—In New York, on Tuesday, October 15th, Dr. Charles Henry Brown, in the forty-fifth year of his age.

GRISWOLD.—In Balangiga, Samar, Philippine Islands, on Saturday, September 28th, Dr. Richard S. Griswold, United States Volunteers.

HINCKLEY.—In Northampton, Massachusetts, on Monday, October 14th, Dr. Donald R. Hinckley, of New Haven, in the thirty-second year of his age.

HOFFMANN.—In Omaha, Nebraska, on Tuesday, October 15th, Dr. Ernest H. Hoffmann, in the sixty-fifth year of his age.

JOHNSON.—In Chicago, on Wednesday, October 9th, Dr. R. B. Johnson, in the sixty-second year of his age.

JONES.—In Chicago, on Friday, October 4th, Dr. Samuel J. Jones, in the sixty-fifth year of his age.

LEMBERGER.—In Louisville, Kentucky, on Thursday, October 10th, Dr. Alfred C. Lemberger, in the thirty-fourth year of his age.

MCRAE.—In Osceola, Wisconsin, on Tuesday, October 8th, Dr. Alexander McRae, in the thirty-sixth year of his age.

STILES.—In Brooklyn, on Wednesday, October 9th, Dr. Samuel Edward Stiles, in the fifty-seventh year of his age.

Pith of Current Literature.

Journal of the American Medical Association,
October 19, 1901.

The Treatment of Malignant Disease. By Dr. Frederic S. Dennis.—The author points out that, in this matter of malignant disease, the questions of ætiology, symptomatology, and classification, are insignificant, as compared with the question of treatment. He emphasizes this fact by pointing to the increase of malignant disease and to its universal mortality. Believing that drugs are ineffectual and that all other methods are practically of no avail, the author asserts that surgical intervention is the one resource; successful, however, only when the disease is taken early in its history, and when the operation is radical in its character. The author points out the importance of carefully watching the subsequent history of patients upon whom an operation has been performed for the removal of sarcoma; of a microscopic examination of every sarcoma, and of a radical operation in cases of malignant sarcomata affecting the long bones of the extremities; and condemns partial enucleations and the use of caustics and plasters. Patients, suffering from malignant disease of the long bones, may be encouraged on the ground that early and radical operations, even in the most malignant cases, may result in perfect cure.

Carcinoma of the Cæcum, with Report of a Case in which the Cæcum was Removed for Malignant Disease. By Dr. William J. Mayo.—This disease most frequently originates at the ileocæcal juncture and has the usual tendency of all carcinomata of the large bowel to form a ring-like constriction, although a considerable tumor may exist without obstruction. The duration may be very prolonged, and its course before active obstruction supervenes is usually slow. Death usually results from obstruction or perforation, the latter either just above the stricture and close to it, or at some point in the cæcum, from distention; perforation is somewhat more frequent. The ultimate results of early excision are good. The author urges that every operating surgeon be prepared to excise the cæcum. The early symptoms may be such as to lead to the belief that an inflammation of the appendix exists, and in this way a timely operation for a malignant process may result in a complete cure.

On the Growth of the Epithelium. By Dr. Leo Loeb.—During its growth the epithelium forms a mass of cells, all layers of which are equally able to grow in different directions. A distinct differentiation between different rows of these cell masses does not exist. Later on the epithelium which comes into contact with connective tissue well supplied with blood vessels forms again regular epithelium, the lowest rows producing new cells, which now undergo the changes leading to the formation of normal keratohyalin and keratin. These growing cell masses do not need connections with either resting or growing connective tissue, although, under the usual conditions found during the growth of epi-

thelium, the epithelial cells are found accompanied by connective tissue. The possibility of separating the growing epithelium from other tissues might be used to subject an isolated tissue, like epithelium, to certain experimental conditions, as, for instance, to the influence of different chemical substances, and thus to facilitate study of the reaction of isolated tissues, other than connective tissue and leucocytes, to different stimuli.

Some Considerations Regarding the Hygiene of Early School Life. By Dr. Julius Noer.—The physician's capability and wisdom in educational matters have always been acknowledged in the most difficult department of education, that of the mentally and physically defective. When, indeed, reason becomes deranged, he is called upon to restore it to its normal balance, which he often succeeds in doing, not by the administration of medicine, but by the adaptation of wise training and the judicious application of the laws of physical and mental hygiene. It appears, therefore, eminently proper for the physician to interfere in matters relating to school hygiene, even though this may involve the criticism of the curriculum and also some of the more absurd conclusions of psychologic pedagogy. The author emphasizes the practical value of regular, periodical, physiological examination of school children.

The Official Report of the Case of President McKinley.—Presented in the *New York Medical Journal* for October 19th.

Tracheotomy in Breech Presentation. An Old Operation, but a New Application. By Dr. Herbert Marion Stowe.

American Medicine, October 19, 1901.

The Case of President McKinley: Surgical History, etc.—Presented in the *New York Medical Journal* for October 19th.

The Simultaneous Employment of Analgesia Obtained by Spinal Cocainization and Ether or Chloroform Narcosis. By Dr. George Ryerson Fowler.—The author brings forward some cases for the purpose of illustrating what may be done in the way of surgical procedures in cases in which general anæsthesia as usually employed is positively contraindicated, and to meet the objections of those who lay so much stress upon the "mental effects" of operating upon patients while the latter are fully conscious of the environment. The author is not aware that the suggestion has heretofore been offered or carried into effect, of producing a slight narcosis for the purposes of the spinal lumbar puncture, or of combining narcosis for the purpose of obliterating the touch sensation and the mental disturbances with the analgetic effects of spinal cocainization.

The Practical Value of Blood Examination in Medicine and Surgery. By Dr. Thomas R. Brown.—The author indicates in a general way something of the practical value of blood-counting in medicine and surgery. He points out that it has rendered possible the diagnosis of a number of diseases, pernicious anæmia, the leucæ-

mias, malaria, typhoid fever, trichinosis, filariasis, diabetes, etc., and assists in the establishment of the diagnosis of many more. It has given valuable information regarding the prognosis in all forms of infection and inflammation; it has given us means of discriminating diseases which present pictures of marked clinical similarity. It has placed in the surgeon's hands a means of deciding whether the patient who consults him is too deficient in hæmoglobin or possesses blood of too poor coagulating power to make operation safe. The author feels that this is not a field for theorists alone, but for practical men as well.

Extrauterine Abdominal Pregnancy; Operation by the Vagina; Recovery. By Dr. Charles Gilbert Davis.—The interesting points in this case seem to be: (1) The apparent full maturity of the child developed *ex utero*. (2) The length of its retention without rupture of the sac. (3) The strong evidence of its being a primary abdominal pregnancy. (4) The vaginal method of operation.

Purpura Hæmorrhagica Following Acute Lobar Pneumonia; Recovery. By Dr. H. L. Underwood.

The Lane Lectures on the Social Aspects of Dermatology—VI. By Dr. Malcolm Morris.

Boston Medical and Surgical Journal, October 17, 1901.

The Value of the X Ray in the Diagnosis of Renal Stone; Report of Cases. By Dr. Paul Thorndike.—According to the author, it would seem that there is something to expect from x-ray photography in connection with the diagnosis of renal stone; for, in those cases, even when there is every clinical reason for thinking that the stone, if present, is composed of uric acid, it evidently needs only a small amount of urates or some other mineral salt to give a shadow which, although it does not show for much on the plate or print, is still capable of being recognized with some degree of precision by properly experienced observers. The author also refers to the method of lifting out the kidney on to the loin, and then splitting it along its convex border in such a way as to expose its whole interior to easy examination. In the author's experience of fifteen cases he has been able to carry out this exploratory technique in six instances, and has never had the least trouble from hæmorrhage or otherwise, either during or at any time subsequent to the operation. In the author's belief it is, in cases where it can be done, far less likely to injure permanently the renal tissues than the less certain and far less satisfactory method of exploring the kidney with the finger through an opening made in the convex border or elsewhere in the kidney substance.

Malignant Disease of the Tonsil. By Dr. F. E. Hopkins.—The occurrence of a unilateral enlargement of the tonsil in an adult, especially if of recent development, at once excites suspicion of malignancy; yet, with all the aids which can be gained from clinical history and microscopical examination, the diagnosis in the earlier stages

is often far from easy. One must distinguish between simple hypertrophy, syphilitic manifestations, tuberculous process, and even phlegmon.

Tubercular Peritonitis. By Dr. Henri T. Fontaine.—An excellent text-book article on this subject. The author points out that, until recently, the mortality in cases of tuberculous peritonitis was considered extremely high; but of late years frequent recoveries have been announced. Casinari gives the mortality as twenty-four per cent. It is only since 1882 that, by the recognition of Koch's bacilli with the microscope, or by evidence of their presence through inoculation experiments, the diagnosis of tuberculous peritonitis has been beyond criticism. Since then it has been proved, by indubitable cases, that the disease has a tendency to spontaneous recovery, that many are cured by laparotomy, and others by medical measures alone.

Privileged Medical Communications. By Dr. David W. Cheever.—The author takes exception to the law in Massachusetts where, if the physician refuses to testify as to his knowledge obtained in a professional capacity, he is to be held in contempt, and is fined and imprisoned. When, if ever, then, should the physician be obliged to speak? Only in cases of crime and where justice would miscarry as the result of silence. Let the criminal courts decide and relieve the doctor of his obligation of secrecy. In all civil suits let him be protected. But in crimes there can be no proper security for society, if the doctor becomes a *particeps criminis* by concealing the truth.

A Brief Résumé of the Life and Work of Ambroise Paré, with Biographical Notes on Men of His Time. By Dr. Charles Green Cumston.

Association of Anæmia with Chronic Enlargement of the Spleen. By Dr. Arthur H. Wentworth. (*Continued.*)

Philadelphia Medical Journal, October 19, 1901.

On the Coordination of Respiratory Movements. By Dr. R. du Bois Reymond.—In the course of certain experiments on excitation of the larynx from the medulla, it was noticed, that when the animal ceased to breathe, either from overdoses of ether, or from injuries to the medulla, and artificial respiration by manual compression of the thorax was resorted to, the glottis showed regular accessory movements synchronous with the artificial respiration. Excluding, by the conditions of the experiment, all known sources of excitation of the respiratory centres, the author ascribes the phenomenon to a hitherto unknown kind of reflex, in which the passive movements of the thorax act as a stimulus which gives rise to an afferent impulse exciting the motor centre of the larynx. The author believes that further research will bring to light additional confirmatory data.

A Case of Transplantation of the Ureter for the Cure of Uretero-vaginal Fistula. By Dr. A. Laphorn Smith.—The author's case is interesting, because the injury to the ureter was caused by delivery of a child. In the majority of cases it has resulted from difficult operations, mostly

vaginal hysterectomies. The case also shows the value of urotropine in making the urine aseptic. In no case, according to the author, should we implant the ureter into the bowel, or tie the ureter so as to cause hydronephrosis. Nephrectomy, even as a last resort, is hardly justifiable in view of the possibility of there being only one kidney, and of the splendid results of transplantation of the ureter.

Some of the Ocular Affections of Childhood Associated with Impairment of General Nutrition. By Dr. S. D. Risley.—The author reports and comments on two cases.

Address in Obstetrics. By Dr. David S. Funk.—Read at the meeting of the Pennsylvania State Medical Society, September, 1901. The author states that, now the science and art of obstetrics is fully abreast with the most advanced thought in other departments of medicine, there can be no question that the dawn of the new century finds the expectant mother surrounded with much less of real peril than ever before in the history of medicine. The author presents very briefly the present status of several of the more serious obstetrical complications and operative procedures.

Medical Record, October 19, 1901.

The Case of President McKinley.—Given in the *New York Medical Journal* for October 19th.

Failure of the Knife in the Treatment of Cancer. By Dr. Robert Reyburn.—For many years the author has advocated the thorough removal of all cancerous tumors by the knife. In recent years, however, the discouraging fact of the almost invariable return of these tumors, after being operated upon, has greatly modified his views as to the benefits to be derived from these operations. He quotes from other authorities who have had similar experiences. If we believe that the recurrence of cancer in cases operated upon is due to infection through the medium of the divided veins and lymph channels, the question arises, "Can we supplement the knife, or substitute for it any other plan for removing these tumors that will prevent this systemic infection?" It is the belief of the author that this can be done by adding to, or substituting for, the knife, the electric cautery, the thermo-cautery, or, in a limited number of cases, the use of arsenic or chloride of zinc for the removal of the morbid growths.

Report of the Summer Work of the Milk Commission of the Medical Society of the County of New York. By Dr. Henry Dwight Chapin.—Presented in the *New York Medical Journal* for October 19th.

Laboratory Aid in Surgical Technique. By Dr. George B. Broad.—Upon hands known to be infected with the *Staphylococcus pyogenes aureus*, the author made a number of experiments, with the discouraging result that, in spite of strong antiseptics, the infection persisted over three months, when the subject refused further experiment. He concludes, therefore, that the unprotected hands can be, and often are, a source of infection to the patient. No. 20 silk required boiling for sixty minutes after being infected

with the *Staphylococcus pyogenes aureus* before becoming sterile. No. 1 silk became sterile after eighteen minutes. He believes that much of the infection laid at the door of silkworm gut is really an infection from the skin of the patient. To the author, the perfect method in the sterilization of catgut is that by dry heat. Eighteen minutes' boiling suffices for the sterilization of rubber gloves. One other source of infection, which may or may not be of much importance, is the expired air, and, in this way, we may be able to explain an occasional case of suppuration, when an assistant or observer has been present who was suffering at the time from some suppurative disease of the nose or mouth.

British Medical Journal, October 12, 1901.

Sixty-ninth Annual Meeting of the British Medical Association.

Section of Medicine.

Introductory Remarks by the President on the Value of Research in Medicine and Therapeutics. By E. T. Wilson, M. B.

A Discussion on Chronic Diseases of Joints Commonly Included in the Terms "Chronic Rheumatism," "Osteo-arthritis," and "Rheumatic Gout."

I. Dr. A. E. Garrod. The speaker thinks that the cases commonly classed under the head of rheumatoid, or osteo-arthritis, may be grouped under two heads: First, the condition met with among female patients in early or middle life, characterized by the frequent implication of the small joints of the hands and feet, by the symmetrical distribution of the lesions, and by secondary muscular atrophy. The affected articulations are the seats of spindle-shaped swellings, with effusion into the synovial cavities, the swelling of the joints being emphasized by the muscular atrophy. There is usually well-marked constitutional disturbance. A similar form of the disease is met with in children, associated with enlarged spleen and lymph glands. In the second group of cases the sufferers are again most often females, but usually more advanced in life. The joint swellings are nodular and osteophytic, rather than fusiform and soft, and the terminal joints of the fingers, and especially the carpometacarpal joints of the thumbs, are the first attacked. Constitutional disturbance is absent, and muscular atrophy slight. The speaker suggests that the use of the term rheumatoid arthritis be confined to the first form, and that of osteo-arthritis to the second. No relation can be made out between these two diseases and gout or rheumatism. The rapid onset of the first form and the constitutional disturbances suggest an infective origin. The second form is probably a dystrophy. In the first form we should endeavor to correct any debilitating influence which may be constantly present (menorrhagia, etc.), and should search for, and remedy, any unhealthy condition of the mouth or gums, as it is held that oral infection plays an important part in these cases. Diet should be nourishing, and stimulants and tonics should be given. The second or nodular form of the disease is less amenable to treatment.

II. Dr. W. Osler. The speaker approves of Dr.

Garrod's classification of these cases, and calls special attention to the acute febrile onset of the disease in women, with symptoms resembling acute rheumatic fever. He deprecates the attempts recently made to differentiate the spondylitis of Betcherew, and the *spondylose rhizomèlique* of Marie, as distinct affections; they are only varieties of arthritis deformans, with special localization.

III. W. Armstrong, M. R. C. S. The speaker suggests: (a) That in all cases of arthritis there is more or less interference with the nerve nutrition of the affected joints. (b) In many cases the trophic factor is present in small degree only, and such cases are readily amenable to well-directed treatment. (c) When the trophic factor predominates, the cases are much more refractory. (d) Treatment should be directed, 1. To dealing with the basic cause, such as gout or rheumatism. 2. To eliminating every possible source of reflex irritation. 3. To building up the health of the patient, special attention being given to the nervous system, the most valuable agent being the electric bath. 4. To the prescription of a generous dietary, leaning toward more meat and the exclusion of the carbohydrates.

Dr. W. P. Herringham and Dr. C. O. Hawthorne disbelieve in the existence of several distinct forms of rheumatoid or osteo-arthritis. The disease is synovial in the young and osteal in the old, the tissues reacting differently in different individuals. But the disease is one and the same.

Dr. W. Calwell holds that osteo-arthritis is due to toxins, the poison that produces it being closely connected with that which appears in many cases of muscular rheumatism, lumbago, and sciatica.

Dr. E. J. Cave and Dr. S. West call attention to the great importance of searching for the original source of infection, which they hold to be present in every case. If this is found and eliminated early, the disease may be cured; later the arthritic infection may be self-propagating. In two cases, associated respectively with ulceration of the rectum and cystitis, the joint affections disappeared as soon as the original sources of trouble were disposed of. In every case every possible source of infection must be sought for, and the earlier the better. Once the joints are infected, not by a toxine, but by a living virus, then the difficulties are enormously increased. In the development of serum therapy in infections lies our great hope for the future.

Case of Cerebro-spinal Rhinorrhœa. By Dr. P. W. Williams and E. G. Stocker, L. R. C. P.—The authors report a case of cerebro-spinal rhinorrhœa occurring in a woman, aged forty years. Apart from the constant dripping of clear fluid from the nose, serious symptoms were conspicuous by their absence. The fluid was clear like water, it was faintly alkaline, reduced Fehling's solution, and had a specific gravity of 1004. It contained no albumin or mucin. About one pint was passed daily.

The Composition and Therapeutic Uses of the Cheltenham Waters. By Dr. A. P. Luff.—The author calls attention to the high therapeutic value of the Cheltenham waters in cases of congestion of the liver, etc., in the hope that some effort may be made to restore the spa to the former position it occupied as a health resort.

A Discussion on Peripheral Neuritis in Beer Drinkers; Its Precise Causation and Diagnosis.

I. Dr. E. S. Reynolds. The recent epidemic of arsenical neuritis in Manchester, has greatly strengthened the idea that there is something besides pure alcohol as a causative factor in "alcoholic neuritis." But it did not prove, and has not proved, that pure alcoholic neuritis does not exist, for there are three possibilities: 1. That the neuritis was entirely caused by the alcohol in the beer, and the new symptoms—namely, the irritations of the mucous membranes and the skin lesions, were caused by the arsenic. 2. That all cases of so-called alcoholic neuritis have really been caused by arsenic. 3. That the alcohol and arsenic, though each capable of acting alone, have in many cases, and in practically all cases in the present epidemic, really acted in combination. This third view is the one taken by the speaker.

II. Dr. J. D. Mann. The neuritis seen during the outbreak of arsenical beer poisoning was characterized by its severity and the tediousness of recovery therefrom. The most prominent symptom was extreme tenderness of the affected muscles. Whether this is a special feature of the disease or simply a symptom of rapid nerve degeneration, is an open question. The speaker holds that the outbreak was entirely due to arsenic, the ultimate result—the occurrence of fatty changes in the nerves—being caused by imperfect oxidation.

The Means of Arresting Acute Endocarditis.

By Dr. R. Caton.—The author treats cases of acute endocarditis as follows: 1. Absolute physiological rest for at least six weeks. This reduces the demands made upon the heart to a minimum. 2. The application of a succession of small blisters to the wall of the chest between the clavicle and the nipple. Only one blister is used at a time, and each is followed by a small poultice. 3. The administration of sodium iodide to absorb effusions and to remove thickening in fibrous tissues. The author has treated 92 cases of acute endocarditis by this triple method. Of these, 61 cases entered the hospital with endocarditis, and 41 left the hospital with apparently sound heart. In 31 cases the endocarditis came on in the hospital; of these, 28 were discharged well.

A Case of Indigouria. By A. McPhedran, M. B., and W. Goldie, M. B.—The authors report the case of a man, aged twenty-four years, complaining of general weakness and depression. The only striking objective symptom was the passage of greenish-blue, turbid urine. He had taken no methylene blue. Chemical examination showed the color of the urine to be due to indigo, which was present in large amount. Such indigouria is usually caused by bacteria, but in this case very few bacteria were present in the urine, and the source of the indigo was probably farther back—in the portal system and liver.

New Methods and New Results in the Bacteriological Investigation of Fœtid and Gangrenous Suppuration. By Dr. E. Rist.—The author calls attention to the imperfections of the various methods of growing bacteria that are used at present. This is shown by the fact that when a drop from a fœtid discharge is examined under the microscope, multitudes of organisms are seen, whereas

cultures will show only a scanty growth of a few varieties. This is due to the fact that whenever there is a foetid suppuration or gangrenous process, anaerobic germs are the cause; and such germs will not grow on the ordinary media. The author inoculates discharges from such cases into liquefied sugar-agar; this is rapidly solidified, and the anaerobic organisms grow well in the depths of the media, where they are protected from the air. Clinically the presence of anaerobic germs in pus points to a severe infection, whereas the spontaneously curable forms are generally caused by the ordinary pyogenic organisms. It is likely that the importance of the colon bacillus, often the only organism hitherto found in cases of gangrenous appendicitis, will be greatly lessened; the author has found that whenever the colon bacillus is found, anaerobic germs are present also.

On the Abortive and Curative Treatment of Acute Diseases, and Particularly Enteric Fever and Appendicitis, by a Judicious Use of Calomel, Water, Heat, and Quinine. By Dr. J. A. Rivière.

The Treatment of Phthisis by Means of Electric Currents of High Frequency and High Potential. By C. Williams, F. R. C. S.

The Treatment of Cardio-arterial Disease. By Dr. H. J. Campbell.

The Diagnostic Value of Tubercle Bacilli in Relation to Phthisis. By Dr. D. J. A. Chowry-Muthu.—The author sums up his article as follows: 1. The presence of tubercle bacilli in the sputum proves conclusively the existence of pulmonary tuberculosis. 2. There are other agents besides tubercle bacilli that cause destructive disease of the lungs, producing symptoms similar to those of tuberculosis. 3. The absence of bacilli in a case of pulmonary disease does not prove the absence of tuberculous disease. 4. It may be due to: (a) Simple phthisis; (b) faulty methods in the examination of sputum; (c) very early tuberculosis of the lung; (d) very late tuberculosis where signs of fibrosis are present. 5. A correct diagnosis becomes extremely difficult where bacilli cannot be found on several examinations, in which case the history, physical signs, and symptoms, should be more relied upon than the negative evidence. 6. In all cases of pulmonary disease a systematic examination of the sputum is of utmost importance, both for negative and positive evidence of bacilli.

A Case of Rheumatic Endocarditis. By C. G. Wilkin, L. R. C. P.

Meat Albumin Dietary in the Treatment of Tuberculosis. By Dr. F. W. Forbes Ross.

The Treatment of Chronic Bronchitis in the Elderly and Aged. By Dr. H. Campbell.—The author sums up as follows: In treating chronic bronchitis in those past middle life, the toxicity of the blood should be kept as low as possible. The air breathed should be pure, and nasal breathing insisted on. Every ounce of superfluous fat should be got rid of. The general health should be maintained at the highest possible level. The diet should be a bare sufficiency, and alcohol and malt indulged in sparingly, or not at all. A vigorous circulation should be maintained. Every precaution should be

taken against breathlessness. Breathing exercises should be resorted to in order to preserve the mobility of the thorax.

Section of Anatomy and Physiology.

Introductory Remarks by the President on the Anatomy Act and the Teaching of Anatomy. By Dr. A. Macalister.

A Discussion on the Topographical Anatomy of the Thoracic and Abdominal Viscera from a Systematic and Clinical Standpoint. By Dr. C. Addison and others.

The Physiology of the Lower Limb and the Military March. By T. S. Ellis, M. R. C. S.

Rotation of the Forearm. By Dr. R. J. Anderson. (Abstract.)

Socia Thymi Cervicalis. By N. B. Harman, F. R. C. S. (Abstract.)

Experimental Glycosuria. By Dr. F. W. Pavy, F. R. S., Dr. W. H. Thompson, Dr. Vaughan Harley, and Sir William Broadbent.

Observations on the State of the Vascular System in Death by Asphyxia. By Dr. J. A. MacWilliam. (Abstract.)

The Functions of the Rods and Cones of the Retina. By Dr. F. W. Edridge-Green. (Abstract.)

The Human Body as an Analytical Laboratory. By Dr. A. Haig.

Was Luigi Cornaro Right? By E. H. Van Someren, M. R. C. S.—An argument for the consumption of less and lighter food.

Lancet, October 12, 1901.

An Introductory Address. By Sir W. S. Church.

Introductory Address on Occultism and Quackery. By Dr. W. Hill.

The Present Treatment of Inoperable Cancer. By A. Cooper, F. R. C. S.—After reviewing the various modes of treatment which have been tried in cases of inoperable cancer, such as Coley's method, Vlaieff's anticancerous serum, and injections of various irritating substances, the author arrives at the following conclusions: 1. That in cases of inoperable sarcoma, more especially the spindle-celled variety, the patient should have the option of Coley's fluid given to him, since a certain number of cases have been cured. 2. That in cases of inoperable cancer of the breast in women of about forty years of age, in whom the menopause has not occurred, the operation of oöphorectomy should be proposed, and this treatment may be combined with thyreoid feeding. 3. That in cases of inoperable rodent ulcer and in the superficial malignant ulceration in other parts the Röntgen rays give a good hope of improvement. 4. That in cases where these other methods are declined or are inapplicable, the internal administration of celandine is worthy of trial, and when the case appears quite hopeless morphine should be pushed without hesitation. 5. Finally, before trying any of these remedies the risk should be fully pointed out to the patient, that the faint

hope that most of them afford should not be magnified, and the discomfort of treatment should be fully discussed; in fact, the surgeon should not do more than offer the treatment and leave the person to accept or receive it.

Recent Discoveries in Central America Proving the Pre-Columbian Existence of Syphilis in the New World. By T. Gann, M. R. C. S.

A Remarkable Case of a Foreign Body Impacted in the Rectum, with Remarks. By A. M. Sheild, M. B.—The author reports the case of a man, aged sixty years, who had forced an earthen jam pot up his rectum. He had attempted to remove it with the fire tongs, but some pieces had broken off and become imbedded in the mucous membrane. No motive could be assigned for the act. The bowel was divided posteriorly, the incision beginning at the coccyx, and the foreign body removed through the wound. The author reports several such cases collected from the literature. They are by no means devoid of danger, the risk of lacerating the mucous membrane being very great, and the impaction peculiarly tight.

A Case of Laparotomy for Multiple Septic Abscesses and Intestinal Adhesions Possibly Due to Salpingitis, Causing Obstruction, Followed by a Second Operation Nine Days Later for Acute Obstruction Due to a Band and Volvulus; Recovery. By A. E. Maylard, M. B.

Mucin in Dessication, Irritation, and Ulceration of Mucous Membranes. By W. Stuart-Low, M. B.—The author maintains that the abundant mucus formed in the nasal cavity and upper pharynx, is normally intended to be swallowed, and that, in this manner, not only is the œsophagus continually lubricated and protected, but the ultimate function of this swallowed nasal mucus is to assist in protecting the stomach, more especially the pyloric portion (to which it immediately gravitates), against attrition by lumpy food and irritation by the acid gastric juice. It also acts as a natural laxative. The author, having noted that patients with irritable stomachs, painful digestion, and hæmatemesis (gastric erosions or gastric ulcers) suffered simultaneously in many instances from the accompanying ailments of either dry or atrophic rhinitis and pharyngitis, together with the prominence of the symptoms of a clear non-mucous hyperacid vomit, constipation, amenorrhœa, and chlorosis, was led to use mucin in an endeavor to supply the obviously deficient mucus. In almost all cases of dry nose and throat, there is also complaint made of long-standing gastralgia and constipation. One of the leading indications for the administration of mucin is the presence of a clean, red, angry, or dry tongue, and a pale, semi-secretionless postnasal surface. The mucin is given in the form of a tablet containing five grains each of mucin and sodium bicarbonate. Or it may be dissolved in water and used as a wash or a douche for the dessicated nasal or pharyngeal cavities. Mucin acts by supplying what is deficient—viz., the protective, indifferent, non-peptonizable, and hygroscopic substance—mucus. By introduction into the stomach first, before digestion begins, the sensitive ulcer or erosion is covered over and shielded from irritation by the acid gastric juice, and by thus soothing the surface

layer, reflex secretion of the acid gastric juice is prevented. It gives the epithelium resting time to recover itself and revive, and thus to withstand the acid stomach contents. Further, its laxative action gives it a great advantage over bismuth, which, although protective, is also constipating. The author reports several cases of the kind above described, in which the administration of mucin brought about marked improvement in the condition of the patients.

Cancer, its Nature and its Treatment. By J. H. Webb, M. R. C. S.—The author holds that cancer is uncontrolled proliferation of a tissue; now, since the ultimate tissue elements are cells and fibres, we have three forms of cancer: (a) Carcinoma, uncontrolled proliferation of the cells derived from the hypoblast and the epiblast; (b) sarcoma, the same of cells derived from the mesoblast; and (c) myxœdema, the same of fibre. Now just as myxœdema is due to lack of a control-substance for the fibre growth—i. e., thyreoid secretion—so carcinoma is due to the absence of a control-substance for cell growth—cholesterin. But the cholesterin must be in solution to exert such a controlling action. We always meet with cholesterin as a morbid product—i. e., in its crystallized form. Malignancy is the crystallization of cholesterin from the living cell; the uncholesterin cell is the uncontrolled cell, and here, perhaps, comes in the connection of the disease with the drinking of rain-water. The solvent of cholesterin in the body is sodium-glycocholate, which is a soap, and it is the absence of this soap solvent which causes cancer. The peculiar odor of cancerous discharges is due to the crystallized and excreted cholesterin. The author therefore suggests the use of injections of soap solution as a mode of treatment for carcinoma; the cholesterin in the tumor is dissolved, and is enabled to exert its controlling action upon the cells, and so to inhibit their further growth. But as in all cases of carcinoma there is also some proliferation of fibrous tissue, thyreoid extract is also imperatively indicated. The author has had excellent results with this mode of treatment, and asserts that he has cured a primary cancer of the breast, the first on record. He injects about one teaspoonful of a warm soap solution, just thick enough for blowing bubbles. The injections should be given under an anæsthetic, nitrous oxide for preference, and they cause a reddish, inflammatory, hardened area, which, however, never suppurates and always disappears in two or three days. Inject at first every other day, and later once a week. [See editorial, *Cholesterin and Cancer*, *New York Medical Journal*, August 24th.]

A Complicated Case of Placenta Prævia. By J. Hoole, M. R. C. S.

Presse médicale, September 4 and 11, 1901.

Congenital Macroductylia.—M. Boinet says that this condition is not usually hereditary; it occurs more frequently in males than in females, and more often on the right than on the left side. The middle finger is most often attacked; then, in order, the index finger, the thumb, the ring-finger, and the little finger. The pathogenesis is not yet known.

Regulating Mechanism of the Composition of the Blood. By M. C. Achard.

Differences between Tubercle Bacilli and other Similar Organisms. By Dr. Hölscher.

On Eczema.—Dr. Jacob Frédéric says that the question as to the origin of eczema is still undecided, and that, in all cases, the possible internal, as well as the external causes, must be considered. His paper is an exhaustive bacteriological study of eczematous cases and of artificial inflammations of the skin.

Experiments on Disinfection of the Hands (conclusion).—Dr. T. Paul and Dr. O. Sarwey conclude their exhaustive paper by affirming that, even with the most scrupulous care and scrubbing, after soaking the hands in any aqueous or alcoholic solution of corrosive sublimate, or in alcohol or in any of the complex compounds of mercury, a surprisingly large number of bacteria may still be found. Still the authors recommend further research along these practical lines.

Indépendance médicale, September 11, 1901.

Foreign Bodies in the Bladder.—M. Hartmann, in speaking of the extraction of foreign bodies in the bladder, dwells upon the difficulties of lithotripsy. If there is a small meatus, a meatotomy must be first performed, and if a urethral stricture is present this must be dilated for the passage of the instrument. If there is a cystitis, this must be treated by irrigations of nitrate of silver. If a violent spasm of the bladder occurs, as is likely in the aged, it must be washed with an anodyne fluid before undertaking the operation. The author speaks of the spastic conditions and of the difficulty of not always being able to seize a calculus at once.

Centralblatt für Gynäkologie, September 21, 1901.

Decapitation. By Dr. K. A. Herzfeld.—A polemic article.

Ovarian Cyst Ruptured Intra-partum.—Dr. F. Kleinertz reports a case of a woman who died of purulent peritonitis. It was found at the autopsy that an ovarian cyst had ruptured during the labor (which was noted at the time), pouring its contents into the abdominal cavity. While the reporter does not believe that the cystic contents alone induced the peritonitis, he is convinced that the gross carelessness of the attending midwife was responsible for the infection, the cystic fluid offering a good culture medium for the bacteria introduced by the unwashed hand of the midwife. The author concludes by advising the extirpation, without exception of every ovarian tumor discovered during pregnancy.

Twin Birth with Long Interval. By Dr. J. Füh.

Wiener klinische Wochenschrift, September 12, 1901.

Diagnosis of Pericardial Concretions and Insufficiency of the Tricuspid. By Dr. Wilhelm Türk. (Continued article.)

Ether Intoxication and Its Uses.—Dr. Friedrich Teweles describes a method of surgical anesthesia by intoxication with *Latschenöl*. [An oil distilled from the fresh twigs and cones of *Pinus montana*, having a pleasant, aromatic smell and either colorless or shading toward greenish-yellow (Foster's Medical Dictionary)]. From fifteen to twenty drops of the oil are poured upon an Allis mask and the patient is instructed to breathe freely

and deeply, but not to swallow. The mask is gradually approximated to the face and is again withdrawn after two or three deep inhalations, when the feeling of oppression which existed previously for a moment, disappears. There is no suffocation. After ten or fifteen deep inspirations, the body becomes lax and analgesia appears simultaneously. This is the moment for operation. The patient sometimes utters a cry or tries to push away the knife, but this ceases at once, and the operation can be finished. There is no period of excitation, very small quantities of the oil are used, and the preparation of the patient is entirely psychic, his whole attention being fixed on the narcosis. It is a simple, cheap method, and is practicable in two thirds of all operations. It can easily be supplemented by ether or chloroform when it seems desirable. It is harmless. Its disadvantages are the alarm caused by the cry above referred to, the reaction at the first use of the knife and the possibility of its occasional failure.

Ether Intoxication an Experimental Psychosis. By Dr. Otto Lenz. (See above.)

Riforma medica, August 14, 1901.

The Virulence of the Diplococcus in Human Saliva as Influenced by Age and Seasons. Dr. Efsio Murgia.—In order to solve the problem of the relationship of Fraenkel's diplococcus, found in saliva, and the occurrence of pneumonia or of other infections due to the germ, the author inquired into the influence of age and season upon the virulence of this micro-organism. His conclusions were as follows: The diplococcus is more virulent in children under the age of ten years and in adults after forty. A low atmospheric pressure, a low temperature, abundant rainfall, and a marked degree of humidity seem to favor the pathogenic action of the diplococcus of Fraenkel. The following months are most favorable to its virulence: December, January, February and March.

August 16, 1901.

Subcutaneous Fracture of the Larynx. By Dr. Antenore Nizzoli.—The author reports a case in which a boy's larynx was fractured by an accidental blow upon the neck by the handle-bar of a bicycle. He could not speak, and was seized with an attack of cough and bloody expectoration immediately afterwards. His speech remained aphonic and he was suffering great pain. From time to time attacks of severe dyspnoea came on, and there were continued forced respiratory movements. Locally there was ecchymosis, subcutaneous emphysema, swelling, pain, crepitus and deformity in the region of the left side of the thyroid cartilage. The boy could breathe best with his head in extension, held immobile, and the author, profiting by this observation, made him lie in this position with a roll of cloth under his neck. The accesses of dyspnoea and painful cough continued during the first night and the following day; everything was in the meanwhile made ready for tracheotomy. On the second day the respiration became quiet, but the patient was kept in the same position. On the tenth day the thyroid cartilage had united and the boy was discharged cured.

Gazzetta degli Ospedali e delle Cliniche, August 11, 1901.

On the Degree of Compression which may be Produced by Ligature or Suture in a Vein without Compromising the Function of the Part. By Dr. Domenico Taddei.

The Treatment of Tuberculosis. By Imerio Monteverdi.—The author concludes that Maragliano's antituberculous serum is the most rational method of treating tuberculosis. The effects of this serum are best when the lesion is of recent origin, circumscribed, and when there is no fever, but the method spoken of also gives good results in more advanced cases with fever. In the author's patients the serum produced a disappearance of the night-sweats, and of the fever, as well as a diminution of the cough and expectoration. Such results are difficult to obtain with other methods of treatment. A reaction with untoward symptoms but very rarely takes place, if the serum is given in doses of one cubic centimetre every other day. The recent experiments of Fraenkel and Baronstein have demonstrated its innocuous nature, and it may be used without fear of injuring the patient.

Vratch, September 1, (September 13, New Style), 1901.

Mixed Infection in Bubonic Plague. By Dr. V. P. Kashkadamoff.—While the *Staphylococcus pyogenes aureus* inhibits the growth of plague bacilli, and even destroys them *in vitro*, such an antagonism between these germs is not observed in the body. Animals inoculated first with plague bacilli, and after twenty-four hours with staphylococci, and vice versa, first with staphylococci and then with plague germs, die of typical plague septicæmia. Animals inoculated with staphylococci exhibit for the most part a local infection. The antagonism between the two species of germs named above, however, is also shown in the body; for in the infiltrates formed in the place of injection of the staphylococci, and in the adjoining regions of the subcutaneous cellular tissue, the vessels, and the lymphatics, only staphylococci are to be found. Plague bacilli do not penetrate so far as this, in spite of the fact that the animal dies of general plague-septicæmia. Very few staphylococci in these experiments reached the general circulation. In white mice with mixed plague infection there was noted a certain acuteness of the disease. In these animals death came on, in the average case, twenty-four hours earlier than in check animals.

A Method of Increasing the Amount of Fat in Diluted and Sterilized Cow's Milk to the Normal Amount of Fat in Woman's Milk. By Dr. A. A. Romanoff.—The author has devised a simple method of modifying milk on the "cream mixture" principle. Fresh milk is diluted with equal parts of oatmeal water containing four per cent. of sugar. The mixture is poured into six bottles and sterilized in Soxhlet's apparatus for ten minutes. The bottles in the "bottle holder" of the sterilizer are then placed on ice for "from two to three hours." Then they are carefully removed, without shaking, and, by means of a siphon dipped to the bottom of each bottle, the lower half of their contents is drawn off. The remaining milk is shaken, warmed, and given to the infant. Examinations of this residue showed that it contained from three to four times as much

fat as the part removed by siphoning. The residue in the feeding bottle averaged from 2.9 to 3.6 per cent. of fat. As the dilution and addition of sugar before the sterilization corrected the differences between cow's milk and woman's milk as regards proteids and carbohydrates, and as it is easy with moderately rich milk to get an average of 3.5 per cent. of fat in the product by this method, the author recommends his procedure as a mode of obtaining an artificial milk mixture approximating woman's milk in composition.

Hæmorrhage in the Spinal Cord. By Dr. M. O. Skaikevitch.—The author gives the clinical histories of three cases of traumatism to the spine followed by symptoms of hæmatomyelia. He believes that, in addition to the typical cases of hæmorrhage into the spinal cord, as first described by M. L. S. Minor, there are cases in which there are no sensory disturbances as in syringomyelia and in which the white substance is largely affected instead of the gray matter. In the cases in which the white matter is involved there is also an involvement of the brain membranes. A band of syringomyelitic sensory disturbances is not always observed above or below the compressed and destroyed portion of the spinal cord. There are cases in which, a long time after the hæmorrhage, there are no clinical evidences of a gliomatous formation.

The Nettle (*Urtica Dioica*) in Uterine Hæmorrhages. By Dr. I. S. Kalabine.—In France, peasants use successfully tampons of cotton saturated with the juice of the nettle, in nosebleeding, and the women drink the juice or use it in vaginal injections in uterine hæmorrhage. The remedy is an old one, having been mentioned by Zacutus Lusitanicus, in 1694, in the treatment of hæmoptysis. In 1901 the author used it in six women with uterine hæmorrhages, and concludes that it may give satisfactory results in some instances. An examination was made of the contraction-curves of the uterus, produced by means of an "oncograph" and a Hering's kymograph, in a bitch, before and after the injection of twenty-five cubic centimetres of an infusion of nettle, one to ten into the femoral vein. The curves show a great increase in the force and latitudes of the contractions.

A Case of Cæsarean Section by Porro's Method on Account of a Deformed Pelvis. By Dr. I. A. Dynsky.—In this case the pelvis was deformed as a result of scoliosis. In recent literature there have been published only three cases of Cæsarean section for kyphoscoliotic pelvis. The choice of the method fell upon Porro's, because of its lower percentage of mortality.

Phenosalyl in Gummatous and Varicose Ulcers. By Dr. Th. I. Tchitcherine.

The Treatment of Intestinal Obstruction by Batsch's Method (Injections of Atropine). By S. I. Ivanovsky.—The author has obtained good results in two cases of obstruction by injections of atropine in doses of 0.003 grammes (one twentieth of a grain) in two doses administered within an hour. In both cases the symptoms began to disappear on the second day, and the patients were quite well on the third day.

A Case of Laceration of the Vas Deferens. By Dr. A. Aboutkoff.

Book Notices.

BOOKS, ETC., RECEIVED.

The Century Book for Mothers. A Practical Guide in the Rearing of Healthy Children. By Leroy Milton Yale, M. D., formerly Lecturer on the Diseases of Children at Bellevue Hospital Medical College, and Gustav Pollak, Editor of *Babyhood*. New York: The Century Company, 1901. Pp. xvi-3 to 461.

Circumstance. By S. Weir Mitchell, M. D., LL.D. New York: The Century Company, 1901.

Manual of Diseases of the Eye. For Students and General Practitioners. With 275 Original Illustrations, including 36 Colored Figures. By Charles H. May, M. D., Chief of Clinic and Instructor in Ophthalmology, Eye Department, College of Physicians and Surgeons, Medical Department, Columbia University. Second Edition, Revised. New York: William Wood & Company, 1901. Pp. xiii-408.

A Manual of Medicine. Edited by W. H. Allchin, M. D. Lond., F. R. C. P., F. R. S. Ed., Senior Physician and Lecturer on Clinical Medicine, Westminster Hospital, London, etc. Volume III. Diseases of the Nervous System. New York: The Macmillan Company, 1901. Pp. x-417.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc. Assisted by H. R. M. Landis, M. D., Assistant Physician to the Out-patient Medical Department of the Jefferson Medical College Hospital. Volume III. September, 1901. Diseases of the Thorax and its Viscera, including the Heart, Lungs, and Blood-vessels—Dermatology and Syphilis—Diseases of the Nervous System—Obstetrics. Philadelphia and New York: Lea Brothers & Company, 1901. Pp. vi-17 to 428.

Der Ursprung der Syphilis. Eine medizinische und kulturgeschichtliche Untersuchung. Von Dr. med. Iwan Bloch, in Berlin. Erste Abteilung. Jena: Gustav Fischer, 1901. Pp. xiv-313.

Morbus Hungaricus. Eine medico-historische Quellenstudie zugleich ein Beitrag zur Geschichte der Türkenherrschaft in Ungarn. Von Dr. Tiberius von Györy, Budapest. Jena: Gustav Fischer, 1901. Pp. vii-191.

Zur Lehre von der Blutzirkulation in der Schädelhöhle des Menschen namentlich unter dem Einfluss von Medikamenten. Experimentelle Untersuchungen. Von Dr. Hans Berger, Hausarzt der psychiatrischen Klinik zu Jena. Mit 5 Tafeln, 16 Kurven, und 1 Figur im Texte. Jena: Gustav Fischer, 1901. Pp. 78.

Handbuch der Geschichte der Medizin. Begründet von Dr. med. Th. Puschmann, Weiland Professor an der Universität in Wien. Erste Lieferung. Jena: Gustav Fischer, 1901. Pp. 176.

Twentieth Annual Report of the State Board of Health of New York. For the Year, 1899. With Maps.

Twelfth Annual Report of the State Commission in Lunacy of the State of New York. From October 1, 1899, to September 30, 1900.

Thirty-fourth Annual Report of the Managers of the Hudson River State Hospital, Poughkeepsie, N. Y., to the State Commission in Lunacy. For the Year ending September 30, 1900.

Twenty-fifth Annual Report of the Elmira Reformatory. For the Fiscal Year ending September 30, 1900.

Twenty-seventh Annual Report of the Secretary of the State Board of Health of the State of Michigan. For the Fiscal Year ending June 30, 1899.

Handbuch der physikalischen Therapie. Herausgegeben von Dr. A. GOLDSCHIEDER, a. o. Professor in Berlin, und Dr. PAUL JACOB, Privatdocent in Berlin. Theil I. Band I. Mit 69 Abbildungen. Leipsic: Georg Thieme, 1901. Pp. xiv-563.

Since von Leyden interested himself in the treatment of disease with other than drug remedies, especially since he exploited and introduced physical agencies in such treatment, a growing interest and

and earnest inquiry have been awakened in physical therapeutics. The work before us is one of the best efforts of the German school of modern therapeutics. The editors and collaborators are all well known, some even renowned in the various departments of medicine.

The work is divided into two parts, general and special. It is intended to present the technics and dosage of physical methods of treatment, to give the scientific basis of their action, to show their indications and counter-indications, their relations to the other branches of therapeutics, to view objectively and critically the experience thus far gained by their use, and finally to describe their uses in individual diseases. The second, or special, part of the work confines itself to the last of these topics.

The volume before us deals with climate therapy, which is treated from physiological and empirical points of view. The effects of high elevations and the experiences gained therefrom are next considered. Pneumatotherapy and inhalation treatment are adequately treated. One of the best chapters in the book is that on balneotherapy, and that on sea baths is no less praiseworthy. A good and interesting feature of the work is the historical introduction to each chapter.

The Hygiene of Transmissible Diseases. Their Causation, Modes of Dissemination, and Methods of Prevention. By A. C. ABBOTT, M. D., Professor of Hygiene and Bacteriology, and Director of the Laboratory of Hygiene, University of Pennsylvania. Second Edition, Revised and Enlarged. With 46 Illustrations and 20 Charts. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 15 to 350.

The second edition of this important work comes to us extensively revised and somewhat enlarged. Since the appearance of the first edition many important factors in the ætiology of certain diseases have been discovered, notably malaria, yellow fever, and plague, as well as the importance of insects and rodents as disseminators of these affections. The chapters dealing with these diseases, also those sections on dysentery, filariasis, and tuberculosis, have been largely revised.

The growing importance of definite knowledge of the causation of infectious diseases and the resultant employment of rigid prophylactic measures are becoming more and more recognized as the only way in which the ravages made by the severer epidemics can be minimized. It is in relation to these practical data that this small volume is so eminently useful, and the ease with which reference may be made to any given subject, the lucidity of the text, the condensation of facts, and the exceedingly practical methods of the hygiene of infectious diseases will win for the book the esteem and reputation which it deserves.

Die Impfung und ihre Technik. Von Hofrath Dr. med. CONRAD BLASS, Vorstand des königlichen Impfinstituts und städtischer Impfarzt in Leipzig. Zweite durchgesehene Auflage. Leipzig: C. G. Naumann, 1901. Pp. 83.

This brochure presents in comprehensive form the history, utility, and technics of vaccination, directions for the preparation of the virus, human and

bovine, a résumé of the methods best calculated to avoid undesirable complications, and a list of rules governing the practice of vaccination as enforced by the German authorities. The author recommends the following method: The skin, preferably over the lower portion of the deltoid area, is thoroughly cleansed, then, after the removal of all traces of antiseptics, is put upon the stretch. A rather dull-pointed knife, passed through the flame of a spirit-lamp and allowed to cool, is dipped into the virus. Four very superficial incisions, from 5 to 10 millimetres long and 2 centimetres apart, are made with the knife held vertically. The wound is then covered with a watch crystal to prevent access of dust and contact with the clothing.

In childhood ten years is held to be the average duration of artificial immunity from small-pox, but the period is shorter during adult life. The author insists upon the necessity of antiseptic preparation of the skin, and also emphasizes the importance of removing all traces of the antiseptics before beginning the vaccination.

Klinisches Jahrbuch. Herausgegeben von Professor Dr. Freih. von EISELBERG, in Wien, Professor Dr. FLUGGE, Geh. Med.-Rat, in Breslau, Professor Dr. Freih. von MERING, in Halle a.S., und Professor Dr. WERTH, Geh. Med.-Rat, in Kiel. Achter Band. Erstes Heft. Mit 2 Tafeln, 1 Abbildung, und 2 Kurven im Texte. Jena: Gustav Fischer, 1901. Pp. 160.

The opening article of the present number is the report of a case of lepra tuberoso-anæsthetica, by Uhlenhuth and Westphal. The case is presented with special reference to the histological and bacteriological findings and to the lesions of the nervous system. Bacilli were found in nearly all the organs, but the extent of the lesion seemed to bear no relation to the number of bacilli in a given organ. For instance, the kidney was the seat of only a relatively small number of organisms and was extensively diseased, while the eyes and ganglion cells, which were especially rich in bacilli, were but slightly changed. The authors therefore believe that either certain toxins may produce these changes or the presence of the bacilli for a considerable length of time is necessary. None of the specific organisms were found in the epithelial cells or the epidermis, while the endothelial cells contained a moderate number. The lymphatics as well as the blood-vessels appear to convey the bacilli. The chief sources of excretion of the organism appear to be the sputum and nasal mucus. The urine, fæces, saliva, and perspiration were free. Elimination of bacilli from intact epidermis also appears to be improbable.

The seat of primary infection seems to be the nose, as was also noted by Koch and Sticker in their observations. Many other interesting facts are brought out, and the article is one of much value.

The use of tuberculin in the early diagnosis of tuberculosis is the subject of a short paper by Neisser.

The concluding article, by Köhler, deals with the agglutination phenomenon, and many statistical and analytical tables are given. Every important theory that has been advanced, from Gruber's hypothesis to that of Duclaux, is detailed, and the list of references contains 614 articles.

Miscellany.

Diseases of the Faucial Tonsil and of the Circumtonsillar Tissue.—At the eight annual meeting of the American Laryngological, Rhinological, and Otological Society a number of papers bearing upon this subject, and a general discussion followed.

Anatomy and Physiology.—DR. NORVAL H. PIERCE, of Chicago, took up this topic. He said that lymphoid tissue was plentifully distributed throughout the body. It was abundant in the larynx, especially about the ventricles. It was absent from the trachea. This tissue was widely distributed through the animal kingdom, being present in the mammalia, with the exception of the rodents. At birth, the tonsil consisted of a sac, but it could rarely be recognized as the tonsil at this time. The supports, and consequently the shape, of the tonsil varied in individual cases. The supratonsillar space was triangular, its apex projecting up between the palatal muscles. In this space so-called tonsillar abscesses occurred. This space should always be explored in examining the pharynx. The author said that little was known of the function of the tonsil, though recent experiments seemed to indicate that it had the same office as the ductless glands.

Acute Suppuration.—DR. MAX A. GOLDSTEIN, of St. Louis, read a paper on this subject. He said that it was generally admitted that opportunities for infection and suppuration in the tonsil were unusually favorable, yet acute suppuration, limited to the tonsil and going on to abscess formation, was an unusually rare condition. The suppurative process was usually consummated in the circumtonsillar tissue—indeed, there might be intense abscess formations in this tissue while the tonsil remained small and healthy. He was inclined to the opinion that the glandular and lymphatic element of the tonsil played an important rôle in the transmission of pyogenic infection to the circumtonsillar tissue. Early surgical interference seemed to him rational and often imperative, to prevent sequelæ and the possibility of burrowing. Early incision, before the presence of pus could be recognized, was not necessarily an abortive measure, yet it was an exceedingly valuable procedure. He followed incision with the bistoury by the introduction of a blunt forceps, and then spread open its blades wide. This secured free drainage where pus formation and abscess occurred, and at the same time left only a small pharyngeal opening. He believed that early incision, even before pus could be recognized, was a valuable prophylactic. Œdema often followed, and might be relieved by incision or by the topical use of suprarenal extract. The patient's comfort might be materially increased by injecting into the pharynx a mixture containing two or three grains each of menthol and camphor and three or four drops of oil of sandalwood to the ounce of benzoinol.

Circumtonsillar Suppuration.—DR. HENRY J. HARTZ, of Detroit, read this paper. He said that the infection often spread from chronic latent tonsillar abscess through the lymphatics to the mediastinum, resulting in pleurisy and pyæmia. Latent tonsillar abscess could only be demonstrated by section of the tonsil and by microscopical study of the

micro-organisms. In this way it might be traced through the lymphatics to the mediastinum. Caries of the teeth, nasal operations, and abrasions of the pharyngeal membrane might give rise to infection. Circumtonsillar disease occurred most commonly in youths and adults, or at a time when retrograde changes in the lymphoid tissue were taking place. The circumtonsillar abscesses which he had seen had all shown a marked development of the so-called "capsule" of the tonsil. Obstruction to the natural channels of drainage was one of the chief exciting causes of circumtonsillar inflammation, and articular rheumatism following amygdalitis was probably the result of the deposition in the joints of germs entering the system from the tonsil. About one fourth of his patients had suffered from pain, indefinitely called rheumatism. When obstruction to drainage was removed, no recurrences took place, even in those who had had articular rheumatism. The obstruction to the drainage might be so firm as to force the infection into the pharyngeal tissue. In the recurrent cases it was sometimes advised to seek for the fistula by pressing with a probe upon the anterior pillar, when a drop of pus would make its appearance at the site of the fistula. The recurring abscesses were, for the most part, situated within the pharyngomaxillary space. Sometimes curetting, followed by the application of trichloroacetic acid, was sufficient. Excision of the tonsil was frequently the best treatment. Local scarification and the topical application of heat would assist in dissipating the congestion in the early stages of circumtonsillar inflammation. Gargling was often painful. Considerable comfort was afforded by a spray of a four-per-cent solution of cocaine.

Acute Lacunar Inflammation.—DR. M. R. WARD, of Pittsburgh, discussed this subject. He said that the essential lesion was a catarrhal inflammation of the lacunæ, or crypts. Its infectious nature was no longer in doubt, but its specific organism had not yet been isolated. Intranasal and pharyngeal operations were frequently associated with acute lacunar inflammation, no matter how carefully these operations had been done. The open wound might serve as an entrance for bacteria, or changes in the secretions of the parts, resulting from the irritation of packing or plugs, might be responsible for the trouble, or, lastly, this form of inflammation might be the result of the action of cocaine and similar substances upon the system. The theory of the microbic origin of rheumatism was to-day pretty generally conceded to be correct. Acute lacunar amygdalitis occurred most frequently in early life and in adolescence. Any portion of the lymphoid ring might be affected. Abundant clinical evidence could be adduced to show that acute lacunar inflammation was moderately contagious, and the severity of the resulting inflammation depended upon the nature of the micro-organism introduced. The treatment of this form of inflammation should be both local and constitutional. He could not personally profess to be able to abort this process. The local application of guaiacol was alleged by some to have this power, but he had never been able to abort an acute lacunar inflammation by this or any other remedy. All that could be done by treatment was to modify its severity, as it was self-limited, lasting only a few days. Small pieces of cracked ice or ice water were decid-

edly useful in the early stages. The patient should be freely purged with calomel or with effervescent phosphate of sodium. The value of the time-honored tincture of chloride of iron could not be overestimated, and it should be given throughout the acute stage. Codeine, salol, and phenacetine would relieve the headache and other pains. The tonsils should be removed in the interval of the attacks.

Mycosis.—DR. ARTHUR G. ROOT, of Albany, discussed this topic briefly. He said that pharyngomycosis was a rather uncommon affection. *Leptothrix* and the *Bacillus follicularis* were the organisms usually found in the deposits. The process was a slow one, and presented only objective signs. Mycosis was often mistaken for a follicular amygdalitis. Small, pearly-white tufts would be found dotted over the surface, and on attempting to remove them it would be noted that they were embedded deep in the tissues. If the disease were of long standing, these tufts would occasionally be found run together. He was not one of those who looked upon mycosis as a pretuberculous condition. Aside from building up the general health, the essential thing in the treatment was to destroy the fungous growth by the application of various astringents and antiseptics. It was still better to remove the tissue by the curette, forceps, and amygdalotome.

Tuberculosis.—DR. CORNELIUS G. COAKLEY, of New York, was the author of this paper. He said that the frequency of tuberculosis had been underestimated. One observer had found in a series of cases forty-eight per cent. of tonsils tuberculous. According to his own clinical experience, this percentage seemed much too high. The pillars of the fauces and the posterior pharyngeal wall were often involved. The tuberculous ulcers were usually irregular in outline, and showed a tendency to coalesce. The following remedies had given him the greatest satisfaction in these cases: The parts should be cleansed with a spray of sodium chloride and bicarbonate of sodium, then sprayed with a ten-per-cent. solution of cocaine, and finally treated with a twenty-five-per-cent. solution of lactic acid. This application should be repeated at intervals of three days, the strength of the lactic-acid solution being gradually increased. He had also found a solution of formic aldehyde a useful disinfectant in such cases. It had been demonstrated that tubercle bacilli might pass through the unbroken epithelium of the tonsil. Some cases of primary tuberculosis of the tonsil presented nothing in their appearance different from that of an ordinary hypertrophy of the tonsil.

Glandular Complications.—DR. TALBOT R. CHAMBERS, of Jersey City, read this paper. During the past year, gland involvement, he said, had not been frequently noticed. Guaiac, in frequently repeated doses, had caused a diminution in the size of the glands; enucleation should be preferred to incision and curetting. The rubbing of acutely or chronically inflamed glands was very reprehensible. He had met with an unusual number of cases of pachydermia laryngis, and the removal of this condition had been made easy by the use of cocaine and suprarenal extract.

DR. JONATHAN WRIGHT, of Brooklyn, opened the general discussion. He said that the structure of the normal faucial tonsil was practically the same as

that of the lymph glands. Long ago Huxley had made the statement that the tonsil was a diverticulum of the pharynx around which the lymph glands had been thrown. The theory of phagocytosis had been greatly modified of late, until now it was believed that it was the juice of the lymph cells which served to protect the body from invasion. The protective influence of lymphoid tissue had been thrown around the diverticula found at various places in the pharynx. This was probably because in these clefts bacteria would find easy lodgment. In the nose there was not the same reason for the development of such lymphoid structures. But there was a special necessity for such protective influence in the pharynx, which received the drainage from the nasal cavities, the ingestion of food by the mouth, and the upheaval of mucous particles from the bronchi and trachea. Before dust particles or bacteria could reach the terminal branches of the bronchial tree, they must be deposited upon the mucosa and be cast upward by the ciliated cells to the pharynx, and it was there that the lymphoid tissue of Waldeyer's ring was found.

DR. FREDERICK C. COBB, of Boston, said that it seemed to him that most cases of acute circumtonsillar abscess could be traced to a prior acute amygdalitis, though in many instances of abscess, on their first coming under observation, there was no sign of the precedent amygdalitis. The tendency now was to make the incision between the pillars rather than in the classical position in the anterior pillar. If the cut were at a right angle to the direction of the pus, the latter might or might not be reached. By cutting in the direction of the pillar, one cut in the direction in which the pus was going, and it was more easily reached. Looking over the histories of twenty cases, he had found that three had been opened to the supratonsillar fossa had closed again. In his hands a much larger percentage would close, if the incision were made in the old so-called point of election. He had seen a circumtonsillar abscess develop in the lower part of the tonsil after the upper part had been removed. In lancing circumtonsillar abscesses, two kinds of cases were to be considered: 1. Those in which the pus was for the most part between the anterior pillar and the tonsil. 2. Those in which the pus was in the anterior pillar. If the pus were in the anterior pillar, the pillar would be slanted forward and the posterior pillar backward, and *vice versa*; hence, one could decide whether to lance through the anterior or posterior pillar, or through the supratonsillar fossa. The speaker said that he had taken measurements of the depth of the average circumtonsillar abscess cavity from the edge of the anterior pillar, and had found it to be an inch and an eighth. If, therefore, the knife penetrated three fourths of an inch, the operator might feel safe.

DR. LEWIS A. COFFIN, of New York, endorsed what Dr. Hartz had said regarding the ætiology of circumtonsillar suppurations. If the drainage of the nose were defective, very slight causes would be sufficient to provoke inflammation. He was still sufficiently old-fashioned to make use of the old iron mixture, believing it to be very much better in a very large number of cases than the use of the salicylates or of guaiacol. He was inclined to think the good effect of guaiacol was, after all, chiefly due to its astringency. Astringent applications caused the

ejection of the occluding plugs, and this led to a prompt cure.

DR. T. PASSMORE BERENS, of New York, presented in connection with this discussion a specimen of papilloma of the tonsil itself.

DR. PRICE BROWN, of Toronto, said that Lennox Browne, in his recently published book, declared that periamygdalitis was in the great majority of instances the result of true tonsillar inflammation. He thought that circumtonsillar abscesses nearly always occurred as an extension from the tonsil, and cases of tonsillar abscess occurring independently of rheumatism showed additional enlargement of the tonsil after each attack, indicating that the inflammation was tonsillar and not circumtonsillar.

DR. M. D. LEDERMAN reported a case which had presented symptoms like those of influenza, and the appearance of the throat had been that of a pseudo-membranous inflammation. Under the microscope there were colonies of staphylococci. The pain had been very severe. Within two days after the subsidence of the membranous affection of the follicles, all the joints of the body had become involved, but relief had been quickly afforded by anti-rheumatic treatment. He had seen a case in which the tonsil had been incised seven times for periamygdalitis. The knife had to be carried directly backward for an inch and a half before pus could be reached.

DR. W. FREUDENTHAL, of New York, said that he agreed with Dr. Ward that it was impossible to prevent acute lacunar inflammation by the use of any drug, but it could be done by attention to the climatic factors, which played an important rôle in the ætiology of this affection. To prevent acute lacunar amygdalitis, he did not advise bundling up children in clothes, but hardening them to changes of temperature. Mucus dropping down into the nasopharynx and drying acted as a foreign body and caused an irritation which predisposed to lacunar inflammation. The obvious indication was to treat the nasopharynx.

DR. M. A. GOLDSTEIN, of St. Louis, suggested the possibility of there being but two avenues of infection. There were two forms of tonsillar infection having separate clinical characteristics. The circumtonsillar form was confined practically to the anterior pillar; the other was a supratonsillar abscess. He raised the question if it was not possible for a form of circumtonsillar abscess which was so closely associated with the tonsil, and so adjacent to the anterior pillar, to be a direct tonsillar infection, and the other an infection carried by the lymph-channels. He believed it was possible to distinguish these two forms. He agreed with Dr. Freudenthal as to the preventive measures indicated for acute amygdalitis. He had attempted in the last few years to thoroughly curette the lacunæ free from all detritus, and then apply to the lacunæ pure carbolic acid, pure guaiacol, or trichloroacetic acid. In most of the cases in which this had been done the duration of the tonsillar affection had been materially reduced.

DR. T. H. HALSTED, of Syracuse, N. Y., said that he had just seen an interesting case of tonsillar inflammation. A university student had been sick with a fever like that of typhoid. About the ninth day spots had appeared on the body, and a spot or two of ulceration on the tonsil. The throat symp-

toms had then rapidly become the more prominent. Another physician insisted that the case was syphilitic. When the speaker saw the case, two or three days later, the uvula was enormously oedematous and the left tonsil ulcerated. The temperature ranged between 100° F. in the morning and 102° F. at night. The case seemed to him to be one of typhoid fever complicated with a tonsillar inflammation, but he had never seen this complication before.

The Preparation of Wax Models for Teaching Purposes.—Dr. Jay F. Schamberg and Dr. J. Frank Wallis (*University of Pennsylvania Medical Bulletin*, September) in an excellently illustrated article, give the following description of the method of making wax models:

The first step in the making of a wax model is the preparation of the mould or cast. This is made of plaster-of-Paris, of which the variety used by dentists is the best. The skin is to be prepared for the reception of the plaster by painting it with olive oil. Wherever hair is present, as upon the eyebrows and moustache, this must be carefully anointed with a stiff ointment, such as resin cerate. The imprisonment of the hair in the plaster is a most painful and embarrassing accident. If the eyelashes are well greased with vaseline, they, as a rule, give no trouble. The eyelids should be kept well shut, in order to keep out the irritating particles of plaster. One may cover the eyelashes and palpebral cleft with moistened rice-paper (ordinary cigarette paper), and in this manner seal the conjunctival sac. In making a cast of the face it is necessary to leave open an avenue of respiration, and this is done by the insertion into the nostrils of quills, or, preferably, rubber tubing. Care must be exercised not to close up the apertures of these tubes, lest suffocation be induced, of which, however, with ordinary caution, there is little or no danger. It is necessary to limit the spread of the plaster in applying it to the skin. This is best accomplished by laying wet towels about the proposed boundaries of the parts. The plaster is sprinkled in handfuls or through a sieve into a basin of water until the latter absorbs no more plaster. After the plaster is entirely submerged, and not until then, the mass is stirred. The stirring should be carefully continued until the plaster acquires a creamy consistence. It is then rapidly poured upon the skin, care being taken to bring it in contact with the entire surface while yet fluid, in order that it may insinuate itself into all of the depressions of the skin. It is then built up to a desirable degree of thickness and allowed to set. The setting is indicated by the development of warmth. This ordinarily takes from five to eight or ten minutes, depending upon the consistence of the original plaster mass and the temperature of the water. The cast is then removed. If it is desired to make a cast of the whole circumference of a part such as the arm, or of a region where there are undercuts, it is necessary to make the cast into two or more sections. This is done by laying a well-oiled thread over the most prominent aspect of the part and pulling it through the plaster before the latter has become hard.

After the mould has been completed the wax may be immediately poured into it, or it may be set aside until any convenient time. If the cast is allowed to become dry it must be soaked in water for a half-hour or more before the wax is poured in, otherwise the model will be spoiled by the development of air bubbles.

Before pouring, it is desirable to build a wall of plaster about the edge of the cast in order to give it a basin shape, so that it will hold a considerable amount of the molten wax. The wax composition employed is as follows: White wax, 1 part; yellow wax, 2 parts; paraffin (about 54° C. melting-point), 1 part; starch, 2 parts; talcum, 3 parts. The wax and paraffin are melted together upon a water-bath in an ordinary double boiler, and the starch and talcum, previously mixed, are thoroughly stirred into the mass. More or less of a flesh-tint may be given to wax by incorporating carmine in it. Either a small quantity of powdered carmine may be rubbed up with the starch and talcum, or it may be dissolved in alcohol and the necessary quantity poured in and stirred. The wax is now poured into the mould up to the brim and then poured back again into the receptacle. It is important in this first pouring to bring the wax rapidly into contact with the entire surface of the mould, otherwise indelible furrows will be produced in the resulting models. The pourings are now repeated until the model has acquired a sufficient thickness (ordinarily from one-quarter to three-eighths of an inch). It is then allowed to cool, after which the plaster cast is broken piecemeal from the model. Where there are no undercuts the model may often be removed from the cast without destroying the latter. To accomplish this the model must be removed before it is quite hard, while it still has some elasticity. Powdered colors, water-colors and oil-colors may be used to properly color the models. Powdered colors are not permanent and may show implantation of visible granules. Water-colors have the advantage of transparency, and are particularly useful in applying the skin-tint. In order to employ water-colors a menstruum must be used which is capable of mixing both with water and wax. Such a preparation is "turkey-red oil"—a substance occurring as a by-product in the manufacture of alizarin. The writers have made exclusive use of oil-colors in these models, using very little paint in the applying of the flesh-tints. Oil-colors are the most permanent of the various pigments, and may be blended with greater facility.

Among the uses of wax models to the surgeon and physician are the portrayal of skin diseases, tumors, deformities, orthopaedic subjects, acromegaly, myxœdema, joint changes. To the pathologist they are useful to perpetuate the appearance of organs and tissues as seen at autopsies. The authors state that the art is not difficult to acquire, and is comparatively inexpensive, as regards cost, both of material and time.

The Relations between Malaria and Other Diseases.—In the *Journal of Tropical Medicine* for September 2d is published an abridged account of an extremely interesting and valuable clinical re-

port, by Dr. J. Bell, acting principal civil medical officer, and Lieutenant G. Stewart, of the Indian Medical Staff, acting assistant superintendent at Hong Kong, on Malaria as Seen in the Government Civil Hospital at Hong Kong during the first half year of 1901. The authors having been instructed by Captain Johnstone, of the Indian Medical Staff, a co-worker of Major Ronald Ross, in the technics of blood examination in malaria, the various forms of the disease, and the deductions to be drawn from microscopic slides, determined to examine the blood of all patients with fever and of as many as possible with symptoms suggestive of malaria. They have dealt with over 400 cases, in the majority of which malaria has been shown, sooner or later, to have been present. The following is a summary of their results:

Malaria and Phthisis. In seventeen cases of phthisis, malaria was found present in fifteen. While overcrowding and insanitary conditions may be responsible among the natives for the well-known intractability of phthisis in tropical countries, these conditions do not apply to the same extent to Europeans, and the authors consider that a malarial combination probably accounts largely for the rapid advance of the disease. Several of the cases have come in two or three times for fever without anything but malaria being found, until eventually they have returned with another attack of malaria, the sputum previously negative now full of tubercle bacilli and the lung symptoms in full swing. Unfortunately there is a reverse side to this picture, as, in most of the cases, after one or two attacks of malaria, the fever does not subside but takes on the hectic type and the case goes downhill. In this disease the authors think it is as well to examine for malaria, as they are inclined to think the combination much more prevalent than is generally supposed. Another practical suggestion is that in all cases with fever and cough, however slight, even though there be no lung symptoms, an examination of the sputum should be frequently made. They have by this means detected several cases in the very earliest stage, *i. e.*, the stage when treatment or change holds out most hope. The treatment adopted has been by carbolic acid in large doses, and a report of results is promised later.

Hepatic Abscess and Malaria. The only two cases of hepatic abscess both showed malaria in the blood, supporting the view of malaria as one cause of suppuration in the liver.

Appendicular Inflammation and Malaria. Only two cases of appendicular disease, both showing malaria.

Dysentery and Malaria. They find this combination very common. Of 37 cases of dysentery, 35 showed the parasite. None were fatal. Quinine was added to the usual saline and ipecacuanha treatment and the authors consider that wherever acute dysentery [in the tropics] does not improve in forty-eight hours, malarial complication, probably, demands quinine.

Typhoid and Malaria. The authors' remarks on this subject are of special interest. They say:

"Without a *post-mortem* examination our diagnosis in some of these cases may be called in question, but they were all seen several times by other medical men who agreed with the diagnosis in every

case, and if they were not typhoid it would be difficult to explain the long-continued fever. Of the ten cases examined, all showed malaria. The effect of the malaria on the chart was various. In some cases for several days the temperature intermitted regularly and markedly, until, apparently, the malaria dropped out and the typhoid element had free play; in others, however, notwithstanding quinine, there was no intermission, and the chart from the beginning was very suggestive of typhoid. We have not found much assistance from Widal's reaction, which is most of our cases has given a negative result—as late as the sixteenth and twentieth day in two fatal cases. Our only dictum on this subject is that held by most other practitioners—if after thorough treatment by quinine for ten days the temperature does not fall in the absence of any symptom to account for the continued rise, the case is in all probability typhoid and purgatives should be withheld. Typhoid is held to be a more fatal disease in the tropics than in temperate climates, but why this is so is not quite clear, unless the malarial element, which is present in the greater number of cases, has something to do with the high rate of mortality. The previous treatment of the malaria tends, we think, to keep the typhoid temperature lower than it would otherwise be. Our rate of mortality was 30 per cent."

Plague and Malaria. Eight cases of plague occurred, all being admitted as malaria, and parasites being found. Plague bacillus is not easily found till the cases are advanced. The authors suggest to practical bacteriologists, a search for a double stain—similar to that of Gabbett for tubercle bacilli.

Rheumatism and Malaria. Nine cases were examined—six showing malaria, three not, one, if not two, of the latter, being due to gonorrhœa.

Jaundice and Malaria. Jaundice is not a common sequel of malaria, though hepatitis is common. Of four cases of jaundice, three showed malaria.

Hepatic Colic and Malaria. One case. Recovered under quinine and morphine without jaundice.

Beri-beri and Malaria. Five cases of beri-beri, three showing malaria.

Pneumonia, pleurisy, and bronchitis with malaria. Thirteen cases of pulmonary trouble, malaria being present in nine. The authors suggest that many cases of "influenza" may be malarial with lung complication.

Asthma and Malaria. The parasite was found in six out of seven cases of asthma. Malaria has long been regarded as a cause of asthma. Hypodermic quinine and morphine has been found the best treatment.

Neuralgias and Malaria. The relation, of course, is long known. Four cases of neuralgias, three being malarial; one, syphilitic. In sciatica, hypodermics of quinine in the line of the nerve have proved excellent treatment.

Diabetes and Malaria. Only one case. No important deductions.

Alcoholism and Malaria. The authors think that alcoholism helps to precipitate an attack of malaria.

Chyluria and Malaria. One case, fever being due to malaria and not to filaria, as shown by its rapid subsidence under quinine.

Purulent Meningitis and Malaria. One case in a

Chinaman, supposed to be malarial coma. Autopsy showed extensive suppuration at base of brain without any primary cause apparent.

Pernicious Anæmia and Malaria. Two fatal cases.

Syphilis and Malaria. Four cases of syphilis, three showing malarial parasite.

Abscess and Malaria. Four cases of abscess ail malarial.

Injuries and Malaria. Shock even from slight injuries seems to bring on a malarial attack. Malaria present in five out of nine.

Gonorrhœa and Malaria. Four cases of gonorrhœa, all showing malaria.

Erysipelas and Malaria. Two cases of erysipelas, both showing malaria.

Measles and Malaria. Two cases of measles, one with malaria.

Fever with cases of burns, dyspepsia, endocarditis, otitis, anæmia and hepatitis, all gave negative results.

Uncomplicated Malarial Fever. Two hundred and sixty-one out of a total of 1,323 patients. Two hundred and sixteen of these were malignant; tertian fever in 30 cases, quartan in one. Fourteen cases of mixed malarial infection, but the combination of two forms of malaria does not seem to make the case more serious or obstinate. Five cases of "coma" malaria, all serious, two fatal.

Malaria without fever. Two cases. (1) Was admitted on January 24th with crescents and sporadic quartan parasites in the blood. On 25th, quartan, on 28th, quartan and malignant tertian, and on the 31st, crescents and malignant tertian were found. No rise of temperature throughout. (2) Admitted January 30th, with malignant and simple tertian parasites *en masse*. Patient felt very seedy, but had no fever. Under tonics and quinine he recovered.

Classification adopted. That of Captain Johnstone.

Simple Malarial. Simple tertian and quartan.

Malignant Malaria. (1) M. tertian (ring-shaped parasites with pigment). (2) M. quotidian (ditto without pigment). The authors think it is sufficient to distinguish between the simple and malignant forms.

Treatment: (a) *prophylactic.* Until mosquitoes can be exterminated, aim to prevent a second attack by good and cheap food, good water, well ventilated and dry houses, and avoidance of all excesses. (b)

Clinical. The authors' remarks on this important subject are as follows:

"We tried what, we believe, is known as the foreign method, viz., a large dose [of quinine] either at the fall of the fever or at its height, and we gave 15, 20, and 30 grains, in some cases in the morning, and in others in the evening. As far as our fevers go this system is useless, or not nearly as effectual as the old way in vogue in this hospital, to which we have returned. This consists in giving quinine in five-grain doses every two, three, or four hours, irrespective of the fever or the condition of the parasites as seen in the blood. We have no hesitation in saying that for this country [China] this is the best method and gives the best results. The use of antipyretics (phenacetine, antipyrine, etc.) we have entirely given up as we think their employment depressing, and of course quite useless, as far as the

destruction of the parasites go. In combination with the quinine we give a diaphoretic mixture (liquor ammoniæ acetatis, four drachms, and potassium acetate, twenty grains) every four hours whenever the temperature rises above 102° or 103° F. This acts as a diuretic and diaphoretic, and is, at any rate, harmless, though personally we have a high opinion of it as tending to the comfort of the patient. We may add that given in the above frequent doses we have seen no ill effects, nor have any of the patients complained of anything more than a temporary deafness. We may also state that we tried in one case iron in large doses and quinine in small (tinctura ferri perchloridi twenty minims, quinine two grains) every three hours, as recommended by a West Indian practitioner—and we certainly agree that it is worth a trial in those few cases which resist quinine. Diet and the after-use of tonics call for no remarks. Sir William Jenner's dictum, 'feed your fevers,' is as true of this fever as of any other."

An Explanation of Choked Disc.—Sourdille, in a communication in the French journal, entitled *Contribution à l'anatomie, pathologie et à la pathogénie des lésions du nerf optique dans les tumeurs cérébrales* (*Virginia Medical Semi-monthly*, September), after describing the respective theories as to the causation of choked disc, of Schmidt-Manz (serous effusion due to intracranial pressure), Leber-Deutschman (infectious perineuritis and neuritis due to the irritant action of phlogogenic products secreted by tumors and brought into contact with the nerve and its sheath by the intracranial fluid), and Parinaud (also a pressure theory consequent on the coincidence of internal hydrocephalus and the papillitis), enunciates the following theory of his own. He takes as his starting point the acknowledged fact of the coincidence of ventricular hydrocephalus and the optic neuritis. But how do these two conditions stand causally to each other? Whence comes this internal hydrocephalus, and how is it caused by brain tumors? According to Sourdille, the ventricular œdema is transmitted directly to the chiasm, and from thence to the optic nerve, owing to the intimate relations existing between the chiasm and the third ventricle. Examination of the chiasm shows that its anterior three-fifths are free, and are covered only by the pia mater and the visceral layer of the arachnoid, the posterior two-fifths project into the third ventricle, and are covered by ependymal epithelium. The upper surface of the chiasm contributes with the supra-optic gray layer to form the supra-optic recessus. This supra-optic layer, when it reaches the superior surface of the chiasm, divides into two layers—a posterior, which covers the posterior two-fifths of the chiasm, and an anterior, covering the anterior three-fifths. Thus the whole chiasm is covered with a layer of gray substance. This gray substance, which not only surrounds the whole chiasm, but also penetrates it to bind together the higher elements of the nerve, is prolonged upon the optic nerves, forming a sheath, which grows thinner and thinner, without, however, entirely disappearing, until it reaches the retrobulbar portion, where it again becomes thicker. It is this gray substance, consisting en-

tirely of neuroglia, which has been described by Fuchs under the name of "peripheral atrophy of the optic nerve." Thus we see the intimate relation between the chiasm of the optic nerve and the third ventricle, and how readily inflammation of the walls of the latter passes over to the former. The œdema having its origin in the gray matter of the third ventricle, passes by continuity to the neuroglia of the optic nerves. Just as facial paralysis, from exposure to cold, would not be produced if the facial did not pass through the aqueduct of Falloppius, this œdema would have by itself little effect upon the visual functions were it not that the optic nerve presents an anatomical disposition similar to that of the facial—the optic foramen, which is just large enough to allow the passage of the nerve, its sheaths and the ophthalmic artery. The optic nerve begins to increase in volume, it gets too large for the unyielding foramen, and it becomes compressed. Under the influence of this compression the return circulation of the blood from the veins of the optic nerve, which enter the cranial cavity, becomes interfered with, as does the lymphatic circulation. The interstitial œdema of the nerves increases; the veins of the pia mater become dilated; then results a serous exudate, which accumulates in the subarachnoid spaces; thus results the destruction of the sheaths of the nerves, and thus is formed the classic ampullar dilatation. Naturally, the circulation of the central vein and artery of the retina is interfered with. The artery becomes contracted, but remains pervious. The vein is reduced to a mere slit, and were it not that there developed communication between the papillo-optic circulatory system and the vessels of the chorioid and scleral ring, vision would be quickly abolished. This development of the collateral circulation is not, however, accomplished without notable changes in the part of the papilla, which changes are visible under the ophthalmoscope as the "choked disc."

The reason this immense swelling is confined to the region of the papilla and is not common to the retina in its whole extent is to be found in the enormous dilatation which the vessels traversing the lamina cribrosa undergo in their effort to be able to perform the extra work thrown upon them. Moreover, this capillary anastomosis is found only in the papillary region; hence the general retina remains free. Again, the development of this capillary circulation determines anatomical modifications in the structure of the lamina cribrosa, swelling of its connective tissue bundles, etc. Naturally the degree of swelling of the papilla varies with the permeability of the central vein of the retina, the relative largeness of the optic foramen, etc., and in some cases is visible only as a cloudiness of the papillary region, the often mentioned appearance presented by "a descending neuritis." Up to this time no permanent damage has been done to the nerve tissue, and a cure—the cause being removed by any means whatever—is a possibility. Even when nothing prevents the progress of the cerebral tumor, the vision is for a long time retained. One can even see the swelling of the papilla diminish. This may be due to atrophy of the optic nerve in the foramen, making a reflux of the fluid along

the canal again a possibility, or it may be due to development of a further collateral circulation by means of the veins of the dural sheath. Little by little, however, the vision diminishes, and is then finally abolished. Lesions of degeneration appear in the nerve, strangulation at the foramen, and then atrophy. The peripheral fibres are first attacked and later the central. This degeneration extends toward both chiasm and bulb. Generally we find the atrophy of cerebral portion of the nerves more marked than that toward the bulb. This is due to the fact that the larger part of the optic nerve fibres have their trophic centre in the retinal ganglion. Thus all of the phenomena exhibited in the side of optic nerves are the result of œdema of the ependymal neuroglia. This œdema of the neuroglia represents but an extension direct of the œdema of the gray substance found in all cases in the neighborhood of growing cerebral tumors.

Cancer of the Female Genitals.—Professor Campbell Kynoch (*British Medical Journal*, May 18; *Montreal Medical Journal*, August), says that the urethra, both in man and woman, is very rarely affected with cancer. This is especially the case when the growth is primary, but holds good to a very large extent when the disease spreads from neighboring parts, that of the cervix much more often spreading to the bladder than to the urethra, the patient usually dying before the latter is reached. In 311 cases of uterine cancer Gusserow found that the urethra was affected 56 times and the bladder 128 times. Many cases of cancer affecting the tissues around the urethra are mistaken for primary urethral growths, as the latter are not seen in time to distinguish between the two forms without very careful investigation. Urethral cancer may be found at all ages, but is especially liable to occur after the menopause. Melchiorj classifies urethral cancer as follows: (1) Only affecting the lower half of the urethra; (2) that involving the neck of the bladder and the pelvic fascia; (3) when extending to the symphysis and surrounding parts. Early recognition is important as regards prognosis, but this is, as a rule, unfavorable.

The Library of the Surgeon-General's Office.—According to the surgeon-general's report, this library contained on June 30th, 140,539 volumes, of which 4,644 had been added during the fiscal year preceding. There were also 236,728 medical pamphlets and theses, 8,211 having been added during the year. Volume VI., Second Series, of the Index Catalogue, includes the letters G to H, to Hernette, and forms a volume of 1,051 pages. It will be ready for distribution at the usual time. The appropriation for volume VII, Second Series, having been made, the MS. is in course of preparation for the printer.

Conception and Abortion through the Bladder.—A. von Meer (*Zeitschrift für Geburtshilfe und Gynäkologie*, Bd. iii, Heft 3; *American Journal of Obstetrics*, August) gives a description of a case of congenital malformation. The lower two thirds of the vagina were absent; the upper third opened by a tract the size of a fistula, just admitting a sound, into the bladder. Two years previously the woman had aborted, the five-months' foetus passing through this opening.

Original Communications.

ADDRESS IN SURGERY.*

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NEW YORK.

As we stand here on the threshold of the twentieth century it has seemed to me that we may with profit glance over the status of surgery during the past and note the change that has taken place in men, methods, and modes of thought during this time; and perhaps it may be interesting to speculate for a few moments on the position which surgery will attain during the hundred years which lie before us.

While the physician of the Middle Ages was the wizard who healed diseases with charms and philtres, the priest who used his supernatural powers and relied on his intelligence (*ψυχῆ*) for performing his cures; the surgeon, on the contrary, the *chirurgion* (*χειρουργός*) was the "handy man" whose skill lay in the clever use of his fingers, which served his purpose, as the mental faculties of the physician were called to aid in treating his patients.

This was not so much the case in the earlier times, for, in the words of Galen: "As man is the wisest of all animals, so the hands are the instruments which belong to a wise being. For man is not the wisest of animals because he has hands, so says Anaxagoras, but he has hands because he is the wisest, as says Aristotle, who judges very judiciously.

"In fact, it is not by his hands but by his reason that man has learned the arts. The hands are an instrument, as the lyre for the musician or the pincers for the blacksmith."

In the Middle Ages, however, with the decline of all civilization throughout Europe, medicine and surgery sank to a low ebb, and, with this general decline, surgery sank to a still lower plane than medicine in the estimation of the time. The physician held himself infinitely higher, and called in the barber to operate on such cases as required the knife, he himself being too distinguished a person to stoop to the soiling of his hands. The practice of many of the more difficult surgical operations was left in the hands of itinerant quacks, who handed down their secrets from father to son, as the "Incisors" and "Norsini," who cut for stone and operated for hernia.

As we glance over the pages of history, we see that surgery, in common with the other arts and sciences, has been like the waves of a rising tide upon the seashore, advancing and again retreating; at times making wondrous progress, only to follow this by a still more wondrous lapse into ignorance. But, as the centuries have rolled by, the forgotten skill

has been rediscovered, and, in addition, new ideas, new theories, new methods of practice, have been introduced, so that the science and art of surgery today has reached a height of which the past never dreamed.

The art of surgery seems to date from the beginning, as we find that far back in the Stone Age people trephined the skull; while the Egyptians had a treatise on anatomy which was attributed to Athothis, son of Menes, who reigned over seven thousand years ago.

We read in the Old Testament occasional references to the physician, and learn that he who injures another must pay the cost of his injuries: "If men strive together, and one smite another with a stone or with his fist, and he die not but keepeth his bed, then shall he that smote him pay for the loss of his time, and cause him to be thoroughly healed."¹

And yet we learn that faith was regarded by many as being superior to the physician in healing power, for we read that "Asa, in the thirty and ninth year of his reign, was diseased in his feet until his disease was exceeding great; yet in his disease he sought not unto the Lord but to the physicians. And Asa slept with his fathers."² This doctrine has held sway throughout all ages, and of it Guy de Chauliac, in the fourteenth century, remarked: "The fifth sect is of women and of many fools, who refer the sick of all diseases to the saints solely, saying: "Le Seigneur me l'a donné ainsi qui il luy a plû: le Seigneur me l'ostera quand il luy plaira le nom du Seigneur soit benit. Amen." This same cult has even now its followers who may be classified in much the same way as was done by de Chauliac six hundred years ago.

Passing from the remote and shadowy past, which is of only historical interest, there is nothing that arrests our attention until we reach the time of Hippocrates, who was born at Cos, about 460 B. C., and was the son and grandson of physicians. The schools of Cos and of Cnidos were the most famous of the Greek temples of Æsculapius, and as Greece was then the fountain head of all the civilization of Europe, so was it the chief source of all medical and surgical knowledge.

Resections of joints, incisions of the kidney for abscesses, and trephining in cases of fracture of the skull, were known at this time.

It is five centuries before the next great light shines forth, and Claudius Galen, born at Pergamos, 131 A. D., wrote his treatise. During the five hundred years that intervened between these masters decided advances were made in the art of surgery. The use of the ligature was known. It was used by

*Read before the Mississippi Valley Medical Association, at the annual meeting at Put-in-Bay Island, Ohio, September 12, 13, and 14.

¹Exodus, xxi, 19.

²Chronicles, II, xvi, 12, 13.

Antyllus in his operation for the cure of aneurysm, but seems not to have been employed for some curious reason in amputations; though Celsus speaks of using it in castration. Lithotomy was practised by specialists, and stones too large to be extracted entire were broken up by a sort of cold chisel and hammer, the calculus being held by a crotchet in order to steady it.

Civilization now began to decline in Europe, and we turn to the Mahommedans for our next great medical author. The greatest in repute among the Arabs was Avicenna, a native of Persia; though his works do not contain so much surgical information as those of Albucassis, who lived in the end of the ninth century, and whose writings contain the first illustrations of surgical instruments. Their writings, and those of Galen and Celsus, were the chief medical text-books of Europe for at least five hundred years.

Not till we reach the sixteenth century do we find any definite mark of progress. Not till we encounter Ambroise Paré do we meet a man with the power to make history, his predecessors for the most part merely quoting from the ancients. Having made use of the ligature to stop hæmorrhage in wounds, it occurred to Paré that the same method might be employed in amputations instead of the cautery, and putting his theory into practice, being careful, however, to have the cautery at hand, he had the joy of finding he was correct. Strange that so simple an expedient for the arrest of hæmorrhage, which had been known at least 1,500 years, should not sooner have been employed in amputations; and stranger still that one hundred years later the practice should have been denounced in the Gale lecture before the Barber-Surgeons of London.

From the sixteenth century surgery began once more its forward movement, and each decade was marked by new suggestions as to treatment. When we consider the conditions under which the surgeons of that time labored, the wonder is, not that they did so little, but that they had the courage to attempt so much. The barriers surrounding the study of anatomy rendered exact knowledge possible only for the few, and the difficulty of operating without anæsthesia made simply impossible many of our modern operations.

It is true that various substances were used from time immemorial as sleeping potions, as, for example, this receipt from *The Physicians of Myddvai*, published in the thirteenth century: "Take the juice of orpine, eringo, poppy, mandrake, ground-ivy, hemlock, and lettuce, of each equal parts. Let clean earth be mixed with them and a potion prepared; then without doubt the patient will sleep. When you are prepared to operate upon the patient, direct that he shall avoid sleep as long as he can; and then

let some of the potion be poured into his nostrils, and he will sleep without fail.

"When you wish to awaken him, let a sponge be pounded in vinegar and put in his nostrils. If you wish that he should not waken for four days, get a pennyweight of the wax from a dog's ear and the same quantity of pitch; administer it to the patient and he will sleep. When you would that he should awake, take an onion compounded with vinegar and pour some into his mouth, and he will awake."³

These anæsthetics, however, were but seldom used, and in spite of the suggestion by Sir Humphrey Davy, in 1800, that "nitrous oxide gas may probably be used to advantage in surgical operations," and the statement, in 1828, by Hickman, that he had produced insensibility by the inhalation of certain gases, it was not until 1846 that the successful administration of ether by Morton in the Massachusetts General Hospital, during an operation by Warren, and the introduction of chloroform in the following year by Sir James Y. Simpson, of Edinburgh, gave the world the great boon of insensibility to pain under surgical procedures, and rendered possible the surgery of to-day. We of the present time can hardly realize the change in methods brought about by this discovery, but may gain a little insight into the enormous impetus that it gave to surgery, by learning that, before the introduction of anæsthesia, the average number of operations performed in the Massachusetts General Hospital was three a month, while at present it is over ten a day.

The next great advance in surgery was the establishing of antiseptic and aseptic surgery on a firm and enduring basis, when Lister applied to the practice of surgery the principles elaborated by Pasteur in his laboratory, and successfully abolished supuration.

Looking backward over this vast field of human endeavor, we see that more has been done in the past one hundred years than in the seven thousand that preceded them. Men of intelligence and daring originated bold operations in the past, many of which were performed only to be forgotten, and rediscovered and again forgotten, as their execution under existing conditions called for such exceptional qualities, both on the part of surgeon and patient, that opportunities for their performance were rare indeed. But, thanks to the influence of anæsthesia and asepsis, the nineteenth century has seen such strides in surgical science as make all that has gone before sink into insignificance.

In the last quarter of the past century, also, we have seen developed methods of research that were not at the disposal of our ancestors; and surgical practice has changed from being the empirical trial

of methods suggested by chance, to the practical application of scientific truths discovered in the laboratory.

The equipment of the recent college graduate of the present century far surpasses that of the middle-aged practitioner of fifty years ago. The course of study which was merely a repetition of a series of lectures on seven subjects for two sessions or perhaps less, has given way to a graded system of instruction covering four years of study, in which practical acquaintance is had with all the modern means of research; and the surgeon of the twentieth century who would make his mark must not only be endowed with keen perception, decision of character, and dexterity of touch, but must have that general knowledge of physics—chemistry, microscopy, and bacteriology—that will enable him to summon to his assistance all the latest methods of scientific laboratory research in the diagnosis and treatment of the diseases with which he is brought in contact. He need not necessarily himself be a thorough master of all the technics of the laboratory, though it were well that he should be; but he must have such a knowledge of these subjects as will enable him to associate with himself those who can clear up obscure points in the diagnosis of uncertain conditions by the exact methods of modern science.

Let us for a moment glance at some of the advantages which may be derived from the laboratory by the modern surgeon.

The examination of the blood is one of the most important aids to him, as, by its means, a simple anæmia that only requires proper treatment for its relief can be diagnosticated from the pernicious variety. In detecting an early sepsis, examination of the blood is one of our most reliable aids. It is striking how small an amount of pus can raise the count of the white cells. According to Cabot, a felon which contains less than half a drachm of pus often gives a leucocytosis of between 15,000 and 22,000; a gum boil, 27,000, etc. In fact, active supuration in a confined space is almost invariably accompanied by leucocytosis, which subsides slowly after operation. In addition to the increase in the numbers of the white cells, Goldsberger and Weiss have described a reaction to iodine in the leucocytes. They use a solution as follows:

R Sublimed iodine. 1 part;
Potassium iodide. 3 parts;
Distilled water. 100 "
Gum. enough to make a syrup.

This solution is painted on a slide and the unstained cover glass pressed down on it. Normal blood or that of non-suppurating diseases, gives red cells dark yellow, white cells, light *yellow*, with re-

fractile yellow nuclei, while, in pus cases, leucocytes are *brown*. As the septic process diminishes, this reaction gradually disappears.

The counting of the white cells is best done in the same preparation with the red. It requires a Zappert chamber (Ewing's modification). Dilution must be made with Toisson's fluid:

R Methyl violet, 5 B.025 gm.;
Iodine chloride. 1.000 "
Iodine sulphide. 8.000 "
Neutral glycerin. 30.000 c. cm.;
Distilled water. 160.000 "

In a few minutes the leucocytes show a bluish color.

In a case of obscure abdominal pain, elevated temperature, and bowel disturbance, the surgeon may well be in doubt as to the condition with which he is confronted, and the importance of promptly making a certain diagnosis is evident, as it may mean the difference of life or death to the patient. A great aid in arriving at such a diagnosis in the examination of the blood, adding to the count of the cells the reaction discovered by Widal, who has demonstrated that if the serum from a typhoid patient is added to a bouillon culture of typhoid bacilli, the latter lose their motility and become agglutinated in masses. While the serum from a blister, etc., may be used, that from the blood is best for the purpose. Blood dried on a glass slide may be kept for days and be transported anywhere. Park finds it as active as serum. Before use, it is dissolved by moistening with water and added to the bouillon culture. The Widal reaction should occur in five minutes if typhoid is present, when a dilution of one to twenty is employed.

Cabot, from over a hundred cases of appendicitis concludes:

(1) Red cells: No change occurs save in old chronic abscess.

(2) Coagulation is slow, but fibrin is increased.

(3) As in most infections, the mildest and the severest cases show no leucocytosis. This absence in a case which is distinctly serious is as bad a prognostic as in pneumonia or diphtheria.

(4) Catarrhal appendicitis is really accompanied by leucocytosis.

(5) An increasing leucocytosis is equivalent to a spreading process and may be the sole evidence of this fact; a steady increase is a very bad sign and is more important than a large count that does not increase.

(6) After walling off, the count remains stationary or decreases.

On the other hand, the blood in typhoid fever shows very different reactions. The whole blood

commonly suffers concentration from the diarrhoea and hæmorrhages. Fibrin formation is usually deficient. *Red cells* during fever generally show a gradual decline, but are never under four million, and often over five million. This, however, is negative.

The white cells. The more severe the typhoid infection the lower is the count. This may go down to from one thousand to two thousand. When leucocytosis exists, it is from ulcers, hæmorrhage, or pneumonia. Cold baths mass the white cells in the peripheral capillaries. We distinguish typhoid fever from suppurative processes by multinuclear leucocytosis.

Fever and chills due to malarial infection, also, can be differentiated from pyogenic sepsis by finding the plasmodium of Laveran in the blood, and the spirillum of relapsing fever, discovered by Obermeyer in 1873, may clear up a diagnosis in case one encounters this rare disease.

The surgeon for years has made use of urinary examination, but I fear often in a perfunctory kind of way, as a preliminary to the choice of the anæsthetic; doing no more than determining the presence or absence of albumin and sugar, and leaving to the genito-urinary specialist such refinements as examining for blood, blood pigment, or indican, so suggestive of obstruction of the intestinal canal or of carcinoma of the liver and stomach, and the still further refinement of removing the urine from each kidney separately, by the ureteral catheter, or Harris's segregator. Urine thus collected may give information of the utmost importance in the early diagnosis of renal calculus, a pyelitis, or tuberculosis, and a timely operation may save the patient's life.

The physiological chemist comes to the aid of the surgeon in diseases of the stomach. In gastric ulcer or in cancer originating from an old ulcer, an increase of free hydrochloric acid is found, while the total absence of hydrochloric acid is quite a characteristic, but not universal, symptom of gastric cancer. In the same way, a marked lactic acid reaction is extremely significant, but not absolutely pathognomonic of cancer of the stomach. The absence of lactic acid does not, however, preclude the existence of it. We should therefore expect to find in cancer of the stomach that the free hydrochloric acid was greatly diminished or absent unless the growth had, as a base, an old gastric ulcer. The ferments are not unfrequently absent. Lactic, acetic, and butyric acids are present in quantity after a Boas breakfast. Mucus, coffee ground material, stagnant food, and the Boas-Oppler bacillus, whose unusually long rods are frequently joined by their ends, forming characteristic long coagulating threads stained by methy-

lene blue and other aniline dyes, go to make up the laboratory diagnosis.

The chemist also helps the surgeon in studying the motive power of the stomach by the ingenious salol test. One gramme of salol in capsule is taken after a meal. The patient then urinates, at intervals of one hour, for twenty-four hours in separate vessels. Each specimen is tested for salicyuric acid by sesquichloride, of iron, which gives a violet color. As the salol is decomposed only in alkaline fluid, the presence of violet in the urine shows that the salol has passed into the alkaline intestine. In normal cases this should appear in one hour. If delayed beyond this, it shows a lack of motor power in the stomach, and, if its presence is not manifest after twenty-four hours, that there is stenosis of the pylorus.

The following abstract from Butler's *Diagnostics of Internal Medicine* are worthy of reproduction here in this connection:

Technics to Determine Total Acidity.—This is due to free hydrochloric acid; the hydrochloric acid combined with the proteids of the food; the organic acids (if present); the acid salts.

The gastric fluid is titrated with the decinormal soda solution, phenolphthalein being used as an indicator. This turns red in alkaline solution. A one-per-cent. alcoholic solution is used, two or three drops are added to 10 cubic centimetres of juice in a test tube. The soda is run in the test tube and shaken till rose color is permanent. The titration must not stop here; the color must turn to a dark red hue. The number of cubic centimetres of decinormal soda required to neutralize the acidity of 100 cubic centimetres of juice is taken as a convenient indicator of total acidity, consequently the result obtained as above is multiplied by 10. It may be expressed in terms of hydrochloric acid by multiplying the number of cubic centimetres by .00365.

To Determine Free Hydrochloric Acid.—Fill burette with decinormal sodium hydrate solution (4 grammes to 1,000 cubic centimetres of water). Take 10 cubic centimetres of filtered juice, add 3 or 4 drops of dimethylamidoazobenzol, which will give red in presence of hydrochloric acid. Then run in the soda till the red color is replaced by yellow. One cubic centimetre of soda neutralizes .00365 gramme of hydrochloric acid. The product of these multiplied by 10 gives the free hydrochloric acid percentage.

To Determine the Presence or Absence of Ferments.—(A) If hydrochloric acid is present: Put .05 gramme of white of hard boiled egg in a test tube with 25 cubic centimetres of filtered juice. Keep at 37° to 40° C. If digested entirely at the end of three hours, the ferments are normal. (B) If hydrochloric acid is absent: Add to the juice five

drops of officinal dilute hydrochloric acid. If digestion proceeds, it shows pepsinogen to be present and to have been converted into pepsin by the added hydrochloric acid, for, in the absence of hydrochloric acid, the zymogen alone is found. If, however, digestion fails, it shows that neither pepsin nor its zymogen is present (p. 609).

Acetic and Butyric Acids.—Evaporate ethereal extract without heat.

Acetic Acid may be recognized by the odor. Neutralize with sodium hydrate, add two drops of very dilute perchloride of iron. If acetic acid is present, a claret color results.

Butyric Acid, rancid odor. Add to the remainder of the ethereal residue a fragment of calcium chloride. If butyric acid is present, it will separate in small oily drops.

Test Meals are necessary since the stomach secretes only when food is in it. The conditions necessary are: (A) A definite quantity and quality of food. (B) Removal of contents at a definite period of digestion.

Ewald's Test Meal.—One or two slices of dry bread (from 35 to 70 grammes), from 300 to 400 cubic centimetres of water or weak tea; taken in the morning. Wash out in from an hour to an hour and a half.

Boas's Test Meal.—(This is used particularly where gastric cancer is suspected because there is in it absolutely no lactic acid.) Wash the stomach the night before, or one hour before giving the meal. Give oatmeal soup, made by adding a tablespoonful of oatmeal to one quart of water and boiling down to one pint. Add a little salt. Remove in from an hour to an hour and a half.

Time does not allow me to do more than allude to the last contribution of the physicist to surgery—namely, the x-ray. Its use has rendered unnecessary the probing for bullets, and those who have not employed stereoscopic skiagraphy can hardly understand how beautifully the depth of objects from the surface is shown by this method, and how distinctly fractures and dislocations are recognized in their proper relation. The presence of abscess in bone and of early tuberculous processes is made clear, while the location of disease in the lungs, empyema, pericardial effusion, and new growths in the stomach, are all rendered much simpler by this means.

Calculi in the kidney, ureter, and bladder can be detected by its aid, and a diagnosis at times is possible between the various kinds of calculi from the density of the shadow that is present, oxalic calculi casting the densest shadow, phosphatic the next, while the uric-acid stones are very easily penetrable by the x-rays, and require skill on the part, both of the skiagrapher, and also of the photographer who

develops the plate, in order to bring them into relief.

One of the most important additions to modern medicine is the so-called serum therapy, and it is not alone in medicine that it has its uses. The surgeon also has sought its aid, and not sought in vain. Tetanus, so long a mystery, until the discovery of its microbe by Nicolaier, in 1894, and still so dreaded in its effects, seems to be amenable to injections of antitetanic serum, if employed early enough. The Italians have had by far the best results in its use; perhaps, as Holstein thinks, on account of the superiority of Tizzoni's serum, but the results in other countries also promise much. Erysipelas is now combated by antistreptococcic serum, and in certain cases of "inoperable" malignant bone tumors, Coley's fluid has been used with success.

It does not seem too wild a dream, therefore, to hope that, ere another hundred years have passed, serumtherapy shall have done for tuberculosis, syphilis, and a host of other diseases, what vaccination has done for small-pox.

The great surgeon of the past was he who interpreted properly the clinical field in which he made his explorations. The great surgeon of the future must add to this talent the faculty of using the improved methods of research that progressive science has made ready to his hand.

One great obstacle to scientific progress in medicine and surgery has been the lack of suitable endowment for scientific laboratories, and it is owing to this lack in our own country that we have been indebted to Europe for many of the discoveries in bacteriology, as she has been far in advance of us in providing proper remuneration for those who have decided to devote themselves to experimental research in the laboratory, rather than to the more lucrative field of operative work.

I rejoice to say that during the past few years provision has been made for the support of such laboratories in a greater degree than heretofore, and that, within the past twelve months, a most generous plan for the encouragement of scientific research has been made by one of our wealthy citizens. I believe the day is not far distant when properly endowed laboratories for the scientific study of medical and surgical problems will be as common as the struggling medical colleges have been in the past.

Another change that has come over the people, and one which is making itself more conspicuous every day, is the knowledge that they can be cared for better in a hospital, nine times out of ten, than they can in their own homes, no matter how costly the latter may be, and, in consequence, many of them from preference are treated in hospitals who formerly could not have been induced to enter one except by the direst necessity.

The community is beginning to realize the fact that, just as the artist requires special conditions in order to do his best work, conditions which are found rather in his own studio than elsewhere, so the surgeon has many more chances of success when operating in a proper hospital than in the bed chamber of his patient.

Another very potent factor in the high development which surgery has reached during the past few years is the growth of specialties, and it is in this direction, in my opinion, that the great advances in our present century will be made. I do not advocate making a specialist of a man who has not a broad foundation on which to rest, else he may dig so deep in the ground, while keeping in his own particular rut, as never to be able to see anything outside the furrow he has plowed; but I feel sure that the science of surgery is so comprehensive that he who would attain to the perfection of his art must devote himself to those parts of it which he would master, with such assiduous care as to compel him of necessity to leave other fields untouched.

THE LANE LECTURES ON THE SOCIAL ASPECTS OF DERMATOLOGY.

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LECTURE VIII.

Delivered at the Cooper Medical College, San Francisco, September 5, 1901.

Nervous Disorders of the Skin; Mechanism of their Production; Neuroses of the Skin; Itching; Causes of Itching; Pruritus; Lichenification; Local Varieties of Pruritus; Is Itching a Disease or a Symptom? Urticaria; Urticaria Factitia; Dermographism; Witchmarks; Stigmata; a Miraculous Cure.

We pass now to the consideration of nervous disorders of the skin dependent, directly or indirectly, on defective or disordered innervation. Cutaneous neuroses do not, as a rule, in themselves threaten life, though they may be the expression of grave constitutional disorder. But they often cause sufficient disfigurement to make the patient wish to shun society, and not seldom they occasion an amount of suffering which, though not pain, may without exaggeration be called torture, and which makes life a burden and sometimes drives the unhappy sufferer to suicide. The manifestations of neurotic states of the skin range from the simple erythema caused by transient vasomotor disturbance to necrosing condi-

tions dependent on grave structural lesions of the nervous system.

MECHANISM OF NERVOUS SKIN LESIONS.

The mechanism of the production of skin lesions by disordered nerve action is mainly vasomotor disturbance (angeioneurosis), which may be set up by purely nervous influence or may be a result of a toxæmia of some kind. The angeioneurotic process consists essentially in a disturbance propagated from the centre or reflected from the periphery, which sets up a corresponding disturbance in the vasomotor centres, whereby the circulation at certain parts is thrown into disorder. Little is as yet definitely known as to the share which particular parts of the nervous system have in the production of cutaneous phenomena. The effect of momentary disturbance of the brain centres is manifested in the sudden blush of shame or the deadly pallor of anger or fear; it is also seen in more lasting form in such conditions as erythema, dermatitis herpetiformis, and lichen ruber planus, which often come on immediately after some violent mental emotion. Cerebral shock may also manifest itself in pigmentary changes such as whitening of the hair; and discoloration of the skin has been noted in association with cerebral tumor. The effects of toxins are seen in the rashes of infectious fevers and in the eruptions caused by certain drugs. In these cases the cerebro-spinal centres are irritated by the poisonous material circulating in the blood, and this irritation is reflected on the skin through the medium of vascular disturbance.

Peripheral irritation, as by the application of caustic, may be followed by immediate reaction manifesting itself in an excessive afflux of blood to the part. This is in response to the direct irritation of the nerve endings. But the effect does not end here. By and bye the irritation makes itself felt in the nerve centres which reflect the disturbance in a heightened form to the parts about the original seat of irritation. The result is the production of what in political language is called a disturbed district of skin, in which the slightest irritation, as by scratching, will at once evoke a multitudinous echo of the primary lesion. A typical example of reflex angeioneurosis is seen in urticaria, in which a peripheral irritation—namely, of the pneumogastric nerve by the presence of shell-fish or some other offending substance in the stomach—is reflected from the centre to the skin. Other eruptions, such as transient erythema, urticaria, and rosacea, may also be caused by reflex irritation from the stomach, uterus, and possibly some other organs.

The posterior columns of the cord are largely concerned in the nutrition of the skin, and this fact explains the frequent association of cutaneous erup-

tions with spinal lesions, as is seen in locomotor ataxy, syringomyelia, and leprosy.

Herpes zoster, or zona, is the skin disease in which the relation of the cutaneous lesion to lesions affecting particular nerves has been most clearly defined. Their distribution corresponds to that of the nerves from one or more of the posterior spinal roots on the skin, and a definite lesion is always to be found somewhere in the continuity of the nerve itself, in the posterior ganglion, in nerve roots, or in the cord.

The effects of injuries to nerves, as by gunshot wounds or other causes, also manifest themselves on the cutaneous surface by a number of conditions arising from impairment of local nutrition due to loss or diminution of conductivity in the trunks of the supplying nerve. These conditions may take the form of vesicles, bullæ, ulceration, the peculiar condition of "glossy skin" first described by Weir Mitchell, pigmentary changes, and chronic œdema.

Skin lesions may also arise indirectly from nervous disturbance as the result of diminished resistance on the part of the skin due to impaired innervation; examples of it are seen in the development of conditions due to the invasion of pus cocci and other organisms, which may either give rise to skin affections *de novo* or complicate any that exist already. To disordered innervation must doubtless be attributed the skin affections not infrequently associated with insanity and hysteria.

In this province of skin disease, as in others, one of the difficulties we have to deal with is, that apparently the same functional disorder or organic lesion of the nervous system may express itself in the most diverse ways on the skin. Further, as in most nervous affections associated skin lesions are the exception and not the rule, it is obvious that other factors of which we know nothing are concerned in their production.

NEUROSES OF THE SKIN.

It is impossible in the present state of knowledge to offer a classification approaching finality of the multifarious skin disorders dependent on disordered nervous action. They may be roughly grouped into: 1. Motor neuroses. 2. Sensory neuroses. 3. The effect of circulating disturbances (angeio-neuroses). 4. Disturbances of nutrition (tropho-neuroses). In a large proportion of cases two or more of these conditions may be combined. Angeioneuroses in particular are often associated with other signs of nervous disturbance or with inflammatory or trophic processes.

I need hardly say anything as to motor neuroses which manifest themselves chiefly in the production of goose skin, by spasm of the little muscles which in the words of Job make the hairs of the flesh stand up. Most of the sensory neuroses—anæsthesia,

hyperæsthesia, loss of the normal feeling for heat and cold—I need do no more than mention; they depend for the most part on disease of the central nervous system and as such do not come within the province of the dermatologist. I have, however, known cases in which mere hyperæsthesia of the skin made it impossible for a man to concentrate his mind on anything.

ITCHING.

But there is one form of sensory neurosis which concerns the dermatologist very particularly, as it is the most prominent subjective feature in the symptomatology of skin disease. This is the sense of itching. It is not only a cause of most serious discomfort in itself, making the patient irritable and restless during the day and sleepless at night, but its continuance leads to the development of objective conditions or to the aggravation of existing lesions by causing the patient to scratch himself and thus open the way to parasitic invasion and secondary infection.

What is itching? That is another of the unsolved problems of dermatology. The boldest effort to grapple with it, as far as my knowledge goes, is that of your distinguished fellow-countryman, Dr. E. B. Bronson, of New York,¹ who propounds the theory that there is a special sense of contact distinct from ordinary touch, and that itching is due to disturbance of this special sense. He concludes that "the disturbance in pruritus is of the nature of a dysæsthesia due to accumulated or obstructed nerve excitation with imperfect conduction of the generated force into correlated forms of nervous energy." I take this to mean in plain English that itching is a bottled up excitement which finds only partial vent in appropriate but wrongly directed action. If I am right, Dr. Bronson's theory of itching might with equal justice be applied to explain the results of "obstructed nerve excitation" displayed in an angry man who kicks the cat off the hearth rug instead of swearing at his wife. Dr. Bronson sees in itching a sensation in which there mingles something of the nature of sexual excitement, and it may be admitted that there is a distinct analogy between the two things. Patients will tell you that they find a fierce delight in tearing their skin till the blood comes, and this local depletion is accompanied by a kind of orgasm, after which they are relieved. You may remember the description of Napoleon lacerating his thighs, quoted in an earlier lecture. One might conceive that there may have been persons who, in the words of Hudibras, had

. Catch'd

The itch on purpose to be scratched.

¹The Sensation of Itching. *Medical Record*, October 18, 1890.

As to this, however, most people will probably share the opinion of the elder Mr. Weller in regard to matrimony, that it is not worth going through so much to learn so little.

As to the mechanism of itching little or nothing is known. It is certain, however, that it may arise from central causes, such as conditions in the brain and spinal cord, and also from changes in the peripheral nerve endings. As instances of what he calls "brain itch," Dr. L. Bremer, of St. Louis, points to the pruritus which is a frequent complication of mental disease and neurasthenia. He says that to his mind it is quite evident that in such cases an abnormal nutritive and functional process having its seat in the cortex is projected from that organ to the skin or such areas innervating them.² In itching of peripheral origin it is probable that pressure on the nerve ends by hyperæmia or oedematous processes occur suddenly. The fact that the itching is relieved by scratching, which gives issue to fluid and relieves tension, is in favor of this hypothesis.

CAUSES OF ITCHING.

Itching may be caused by animal parasites. Pediculi, bugs, and fleas not only sting, but probably inject a fluid which irritates the nerve ends; in the case of parasites which actually burrow in the upper layers of the skin, as in scabies, the irritation of the sensory nerves is probably mechanical. Itching may also be the result of toxic material in the blood, as in diabetes, gout, uræmia, jaundice, and generalized cancer. How these conditions produce it is not known. Neisser cites a case of lymphosarcoma reported by Blaschko in which itching was very troublesome. After removal of the tumor the itching at once ceased, but with the development of new tumors it reappeared. The itching caused in many persons by opium, cocaine, coffee, etc., is probably to be explained by an idiosyncrasy in regard to these substances which makes them toxic to the individual's cutaneous nerves. The itching complained of by devotees of morphine and cocaine is of a somewhat remarkable character. They attribute the irritation of their skin to hairs, creeping animals, etc. The abuse of cocaine often gives rise to a peculiarly unpleasant sensation of wriggling of worms under the skin. Itching, again, may be connected with an underlying nervous condition, such as disease of the spinal cord, general paralysis, or exophthalmic goitre. It may be an expression of reflex irritation, as in pregnancy, in uterine, ovarian, and gastrointestinal affections; in piles, stone in the bladder, urethral vegetations, etc.

PRURITUS.

Lastly, there may be itching without any visible or discoverable cause to account for it, and which, as far as we know at present, must be classed as a substantive disease. To this we give the name "pruritus," which is only the Latin for itching, but the thing is so definite that it is convenient to have a name for it. Pruritus, then, is a particular variety of the class of itching affections. It is a true sensory neurosis due to some functional disorder of the related nerves independently of any known source of irritation in the skin. It may be general or local. Of the former there are several varieties, according to the season or the age at which it occurs. There is a winter (*æstivalis*) and a summer (*hiemalis*) variety, and there is one peculiar to old age, and hence known as *senilis*. The latter may perhaps be accounted for by changes in the skin due to age, diminished elasticity, loss of fat, and changes in the sweat glands.

In all these forms of the affection there is itching, variable in degree and also in distribution, sometimes affecting one part, occasionally extending all over the body. There is no visible lesion except the marks of scratching, mingled perhaps with pustules and crusts resulting from secondary infection. In the senile form the finger-nails, as a rule, leave no trace on the skin. Itching is, fortunately, not constant. During the day, when the patient's thoughts are occupied about other matters, he feels little of it; his worst times are when he gets into his bed at night and when he leaves it in the morning. Sometimes the skin is so sensitive that a breath of cold air or the touch of the finest clothing material brings on an attack.

EFFECTS OF PRURITUS.

In severe cases the patient's life may be completely wrecked. He can neither work nor play. His disease becomes an obsession which he cannot by any mental effort rid himself of. The attacks of itching are so violent as almost to justify their being described as acute delirium of the cutaneous nerves, and in the intervals he is either like the captive wild beasts which

In a deep hideous purring have their life
And an incessant pacing to and fro,

or he is sunk in the blackest depth of melancholy. I have seen men of great energy and high intellectual power, in the full vigor of manhood and apparently in perfect health otherwise, reduced by this terrible neurosis to a condition in which death would have been a release. Sometimes actual insanity supervenes, and the sad story may have a still sadder ending in suicide.

Many patients are decidedly neurotic, but it is difficult to say whether this is the cause or the effect

² Reprint from the *Journal of Nervous Diseases*, December, 1898.

of the abnormal irritability of their skin. In many cases—perhaps in most, if the examination were sufficiently searching—there is an underlying constitutional state—gout, rheumatism, jaundice, diabetes, Bright's disease, visceral cancer, lithæmia, or oxaluria—which would bring the pruritus within the category of itching diseases caused by toxæmia. It is possible, too, that pruritus might sometimes on close investigation prove to be due to the presence of an unsuspected parasite. A casual pediculus may be picked up anywhere and is easily overlooked. I remember many years ago reading a paper by an American physician, whose name has unfortunately escaped me, in which he gave uncompromising expression to the belief that winter pruritus was in fact mostly due to pediculi. In support of his opinion he cited a case of a medical friend who was suffering from the complaint, and who, on making search, discovered the *fons et origo mali*.

Again, there may be delusions of parasites. Persons fancy themselves the prey of pediculi or other vermin. I have had a patient who, on coming into my consulting-room, insisted on stripping himself stark naked and eagerly called my attention to the imaginary lice which he shook off him. This, of course, was a case of insanity, but it is common enough to see people who see vermin, or merely hear about them, at once begin to itch so realistically that they have to find relief in scratching. Incessant scratching may produce a condition which has been called "lichenification" of the skin. This consists in a general thickening and hardening of the surface, which is dotted with flat papules of a dull-red color. The patches vary in size, and on some of them the papules are packed close together in such a way as to intensify the normal furrowing of the skin and produce an effect resembling "cross-hatching."

LOCAL VARIETIES.

Of local varieties of pruritus the principal are those of which the arms, vulva, scrotum, palm of the hand, and sole of the foot are the seats. In most cases some local cause of irritation in the parts affected will be found if carefully looked for. Pruritus ani has a place in the ordinary symptomatology of hæmorrhoids, ascarides, hard fæcal masses in the rectum, etc.; and pruritus vulvæ is a common indication of sugar in the urine, or it may be dependent on disease of the internal or external genitals. But I have now seen many cases in which the most intense local irritation had no physical coefficient whatever. In these cases the patients secluded themselves from society and, like the Indian philosophers who give themselves up to the contemplation of their own navels, fixed their whole thought on the affected part. In the intervals of their paroxysms of scratching they applied every conceivable cooling and seda-

tive ointment and lotion, without effect. These cases are desperate indeed if dealt with by ordinary therapeutic methods, but good can often be done by moral suasion or rather command. I order all the local treatment to be discontinued, and tell the patient, not too gently, to cease thinking about his unsavory affliction and to return to rational life. In this way I have often succeeded. Hypnotism has found a sphere of usefulness in such forms of pruritus.

IS ITCHING A DISEASE OR A SYMPTOM?

Before leaving the subject of itching I may refer to another problem of dermatology as to which there has been much debate, especially between French and German authors. The question in dispute may be briefly formulated as follows: Is itching a disease or a symptom? Does itching cause skin disease, or does skin disease cause itching? Thus stated, the question may recall the famous discussion of the Greek philosophers as to which comes first—the egg or the chick? The point in dispute is, however, more than a verbal one. It is whether in pruriginous affections the itching, that is, the sensory neurosis of which it is the expression, is to be the feature of a definite group of diseases, or whether these should be grouped according to the character of the cutaneous phenomena. French authors prefer the former principle of classification. Thus, Brocq makes a class of *dermatonévroses prurigineuses* which he subdivides as follows:

1. *Névrodermies*: *a*, *prurits généralisés*; *b*, *prurits localisés*; *i. e.*, dermatoses with insignificant skin reaction.

2. *Névrodermites*: *a*, *lichens*: 1. *Lichen simple aigu* (urticaria papulosa, strophulus). 2. *Lichen simple chronique* (dermatitis lichenoides pruriens). 3. *Lichen ruber*; *b*, *prurigo Hebræ*; *c*, *prurigo diathésique* (the polymorphous lichen of other writers); *d*, *névroses urticariennes pures* (urticaria); *e*, *dermatite herpétiforme* (Dühring). Neisser, while recognizing that the sensory disturbance, that is to say, the itching, is the most important clinical symptom in these diseases, does not think that nerve disturbance can in all of them be held accountable for the onset of the disease. He points out that the vasomotor element and the urticarial character of the lesions in several diseases included by Brocq among his pruriginous dermatoses are completely ignored.

Neisser includes among urticarial dermatoses, besides pure urticaria, strophulus (*lichen simplex acutus*) and Hebra's prurigo. In all these affections the vasomotor urticarial "moment" of the skin disease impresses a peculiar stamp on the disease, and Neisser holds that this should be taken into account. Nor does he think it right to subordinate

the specific forms of skin disease in lichen ruber and dermatitis herpetiformis to nerve changes expressing themselves by itching, but otherwise only conjectural.

URTICARIA.

Urticaria is a type of the aneioneurotic process. I need not describe the appearances or symptoms of this disease, which is familiar to every one. Pathologically it is the result of reflex vasomotor disturbance, the characteristic wheal being a circumscribed oedema of the skin due to paralytic dilation of the arterioles, followed by exudation of serum and migration of leucocytes. Neisser thinks that the physiological foundation of urticaria production is to be found in the experiment whereby it can be shown that electrical stimulation of the lingual nerve containing the vasodilator bundles causes at once great swelling and redness of the corresponding half of the tongue. At the very instant the stimulus ceases the redness and swelling disappear. If the stimulus is kept up for a long time, the swelling assumes large dimensions, not only by dilatation of the vessels, but also by lymphatic transudation into the tissues (acute oedema).

Heidenhain has shown that there are a large number of chemical lymphagogue substances—particularly of such a kind as give rise to urticaria in man, such as cancer juice, ecchinococcus fluid, etc.—which cause a great increase of lymph production without increase of blood pressure. Some years ago Professor Wright,³ of the Army Medical School at Netley, pointed out that persons whose blood coagulability was diminished were particularly liable to urticaria, which he described as “serous hæmorrhage” into the skin. On the ground of this theory he propounded a method of treatment by calcium chloride, which has the effect of diminishing the coagulability of the blood. The treatment is not, however, very successful in practice. Urticaria may occur mechanically by pressure of lymph on the blood-vessels. The affection is often associated with functional and organic disease of the uterus and other organs, with nervous disorder, with gout, indigestion, jaundice, rheumatism, and asthma. In the latter case the asthmatical symptoms are probably due to urticaria of the bronchial tubes. It is also often produced by external irritants, such as nettle stings, insect bites, the contact of hairy caterpillars, etc., and internal irritants, such as shell-fish, and in certain individuals strawberries, parsley, oatmeal, etc. The neurotic temperament is a powerful predisposing factor, and a violent mental emotion may determine an attack.

DERMOGRAPHISM.

When a person has become urticarIALIZED—if I

may be allowed to coin a word—his skin becomes so sensitive that the least scratch or even touch will produce a crop of wheals. A condition of chronic excitability of the skin is established, so that even where there is no actual urticaria the apparently healthy skin can be written or drawn upon with the finger or a blunt pencil. In a higher development of this condition the skin becomes a sensitized plate which retains and exaggerates impressions made on it or even simply suggested. An interesting study of this condition, which is known as “dermographism,” has been made by M. Barthélemy, whose view as to the nature of the process concerned in its production may be gathered from the name “toxi-vasomotor dermatoneurosis” which he has given to it. Dermographism varies greatly in appearance and in degree. It may be red or white in color, flat or raised, or even hypertrophic, and in degree it ranges from a simple flat erythema to impressions of the hand or other objects standing out in bold relief and lasting a considerable time. M. Barthélemy is of opinion that for the production of these phenomena there are required on the one hand toxins which act on the vasomotor centres, and on the other a specially susceptible nervous system. Dermographism may give the clue to a previously unsuspected hysteria. Mesnet states that it was the hypersensitive state of the skin alluded to that led him to recognize certain persons as hypnotizable. Barthélemy cites the case of a strong man of twenty-eight at the head of a thriving business who suddenly became stone-deaf. The aurists could do nothing for him, and after a year and a half he gave up his business career and his life seemed to be wrecked. M. Barthélemy, under whose observation he came, having remarked that the man was the subject of dermographism, prescribed a stay in the country, a simple hygienic regimen, and a cold douche every day. In less than a month the man was well and the cure was permanent.

It is not, however, the most hysterical subjects that are most dermographic, and in some dermographism is the only symptom of hysteria. Violent or sudden emotions may be suddenly followed by dermographic phenomena. As an illustration may be cited the case of a young mother who had a shock on seeing the mantle board fall on her child's neck like a guillotine, and for several hours afterward had a red mark round her own neck. Another illustrative case is that of a man of letters who, learning of the death of a friend from sciatica, had for twenty-four hours an urticated erythema along the tract of the sciatic nerve corresponding to the side affected in his friend. Cases are also on record of persons who just before a surgical operation have suddenly been affected with a widespread eruption of simple or purpuric erythema.

³ *British Journal of Dermatology*, March, 1896.

WITCH MARKS.

These phenomena may serve to explain the witch marks of which we read in old books—marks of a black hand and so forth—which were taken to be the sign manual of the devil and caused many poor hysterical wretches to be burnt. Eruptions, from simple erythema to bullæ which burst and leave ulcers, may be caused by mental excitement in hysterical subjects.

STIGMATA.

The stigmata which are said to have been impressed on the bodies of many holy personages as special marks of the divine favor are probably to be explained as cutaneous manifestations of hysteria, which is, if not an essential, a very common accompaniment of religious mysticism. It is not at all necessary to invoke the theory of fraud to explain them. An adequate explanation is to be found in the hysterical state expressing itself in a neurotic hyperexcitability of the skin. Stigmata are said to have been produced by suggestion by Bourru and Durot, Jendrassik, and others. From that to the production of stigmata by autosuggestion there is but a step.

HYSTERICAL ŒDEMA.

Hysterical lesions sometimes assume the appearance of the most formidable disease. Charcot has recorded several cases of an "hysterical œdema" which may become ulcerated and closely simulate cancer, and Weir Mitchell has described a similar condition under the name "unilateral swelling of hysterical hemiplegia." Hysterical œdema was first described by Sydenham, who was the first clearly to recognize hysteria as a special form of disease. According to his most recent biographer, Dr. J. F. Payne, this is rightly thought to be one of the titles of our English Hippocrates to originality in medical science. The condition consists of a hard swelling of a violet color, and when it reaches a certain degree of intensity it may induce necrosis of the skin, leaving deep and extensive ulceration. Such cases have sometimes furnished apparently solid ground for the belief in a miraculous cure.

A MIRACULOUS CURE.

A striking example is supplied by the case of Mlle. Coirin, which figures among the miracles attributed to the Deacon Paris. Charcot, in his paper entitled *La Foi qui guérit*, gave an account of this case, of which the following are the details relevant to my present purpose:

In 1716, Mlle. Coirin, who was then thirty-one years of age, had two falls from her horse in close succession; the second time she fell "on the left side of her stomach, which came in contact with a heap of stones. The pain was so violent that she fainted

away." Six weeks later she began to vomit blood. This occurred at frequent intervals and was attended with prostration. During one such period of prostration, which attacked her three months after her accident, it was found, on arranging the bandages on the stomach, that her left breast was extremely hard, swollen, and violent in hue. The disease was diagnosed as cancer of the breast, which is described as having become as big as a man's head. The "cancer" continued to make progress, and about the end of the year 1719 a small purulent cavity appeared close to the left nipple. This cavity gradually spread round the nipple, which "fell off bodily," leaving a hole rather bigger than a 20-sous piece, from which issued an offensive discharge. In 1720 two doctors proposed to amputate the breast, but Mlle. Coirin's mother refused to permit an operation. It should be added that in 1718 the invalid had been stricken suddenly with paralysis of the whole of the left side. On August 9, 1731, she commissioned a pious woman of Nantere to keep a nine days' vigil of prayer for her at the tomb of the blessed Francis of Paris, to touch the holy place with a shift which she gave her, and bring her some earth from the neighborhood of the tomb. No sooner was the shift on her than she turned herself in bed without help. On the following day she applied the earth to her "cancer" with her own hands, and "immediately she perceived with astonishment that the deep hole in her breast, whence had issued for twelve years past without ceasing a purulent and noisome discharge, was stanchd on the spot and began to close up and heal." It must be added that the sore did not heal completely till the end of the month.

Charcot confesses that not many years ago it would have been difficult to explain this curious case. It presents features characteristic of hysteria in the vomiting of blood and the paralysis, but until the subject had been worked out by Professor Renault, of Lyons, the hysterical nature of the œdema and consecutive gangrene would have remained mysterious. Looking at the facts in the light of Renault's observations, it may be affirmed that the œdema was due to vasomotor disturbance. Under the psychical influence produced by the application of the shift which had touched the tomb of the Deacon Paris the œdema disappeared almost instantaneously and the breast regained its normal size. It is well known how rapidly circulatory disorders may appear and disappear. When the œdema disappeared the local conditions affecting the nutrition of the tissues were favorably modified and healing took place naturally.

The case is still a miracle, but the thaumaturgic action was that of Nature, whose mysterious workings we are only just beginning to understand.

SCIENTIFIC AIDS TO DIAGNOSIS.*

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In discussing Scientific Aids to Diagnosis it is not so much with the intent of developing new aids as to call attention to, and impress upon, the general practitioner, some of the aids upon which he may rely in perfecting his diagnosis in certain cases. In recent years, many of the indications which the Fathers considered pregnant with suggestions of cause or effect of particular diseases, have fallen into neglect by reason of other, more reliable and exact, methods of determining the actual condition present. Especially are these aids of importance to the rural practitioner, who, unlike the urban practitioner of internal medicine, must rely very largely upon his own power of observation and deduction, to determine just what the cause of the deviation from the normal state may be. The metropolitan medical man has subject to his call a score or more of trained specialists, upon whom he can rely to interpret the danger signals Nature displays. The general practitioner in his kingdom among the hills or on the broad prairie is the "Light in the East," the only hope of thousands, and his correct interpretation of symptoms means relief from suffering and a renewal of life; his failure to appreciate and read aright these same symptoms results in days and nights of anguish, and of not only possible, but probable, death. Hence, it is important that he be prepared to make use of all the reliable aids he can command, to the end that his ultimate conclusions may be correct. It is not our purpose to discuss the importance of a careful examination by percussion and auscultation both of heart and lungs in every case in which there is the slightest suspicion that morbid changes are taking place in either of these organs, and we shall only allude to the importance of both a chemical and a microscopical examination of the urine, not only when the symptoms indicate an abnormal condition of the kidneys, but in all those cases when the symptoms are vague, and, consequently, the diagnosis rather indefinite. It is rather our intention to emphasize, in the first instance, an aid that has not found general favor with the profession—to wit, the use of the ophthalmoscope in the diagnosis of many affections of the brain and spinal cord, while it has been satisfactorily demonstrated that it is of much value in these cases.

There seems to be an impression in the mind of general practitioners that the ophthalmoscope belongs to the armamentarium of the ophthalmologist, and that it has nothing in it of value to them. Having made use of it for the last twenty years in many

cases of real or suspected disease of the brain, I have been more and more persuaded of its value as an aid in diagnosis in such cases. It certainly ranks with the endoscope, laryngoscope, and sphygmograph, in value, but, like them, it has failed to attract the mass of practitioners sufficiently to have them familiarize themselves with its use. The fact was first pointed out by Galezowski and subsequently confirmed by others, that the blood-vessels supplying the disc were entirely independent of those supplying the retina, and especially that the supply to the disc was a part of the blood supply of the brain; it follows, then, that changes in the circulation of the disc are a part of similar changes in the circulation of the brain. The disc, then, is the dial on which we may read the changes taking place within the cranium. Here we may read of congestions, inflammations, hyperæmias, as well as of anæmic conditions, existing in the encephalon. We can also determine the toxic forms of amanrosis and the retinitis which are casually induced by different constitutional diseases. By the use of this instrument I have been able to make a diagnosis between permanent organic changes and functional disturbances. It is within the province of the general practitioner to make use of the ophthalmoscope, as it requires comparatively little use of it to be able to see everything within its scope, and to become familiar with the normal appearances of the retina and luminous disc; and having once acquired this knowledge, any deviation from the normal is quickly recognized and its significance noted. Of the 118 cases observed by the writer in the last twenty years, forty-seven were either lost sight of or no satisfactory history was subsequently obtained; of the remaining seventy-one, autopsies were made only in twenty-nine; a brief outline of a few of these cases will serve to impress the value of the use of the ophthalmoscope.

CASE I.—M. G., a man aged fifty-two years, was struck over right parietal bone with sufficient force to knock him down; he did not suffer any inconvenience for ten weeks, when he began to suffer from pain over the right side of the head and face supplied by fifth nerve. Only temporary relief was obtained as the result of any treatment; the severity of the pain increased, and, at the expiration of six months, he bought stronger lenses for his spectacles, as it troubled him to read with those he had been using; at that time, an ophthalmoscopic examination showing an anæmic condition of retina, was made, and the disc seemed pale and somewhat contracted. From this time, while the progress of the case was rather slow, it was continually bad. First, there was paralysis of right side of face and gradually of left arm. At the expiration of twelve months from the time of the accident the patient was confined to his bed; the sight of the right eye was entirely lost, and that of the left much diminished, and at this time another examination of the fun-

*Read before the Mississippi Valley Medical Association at the annual meeting, held at Put-in-Bay, Ohio, on September 12, 13, and 14, 1900.

dus of the right eye showed decided atrophy of disc; the left was ischæmic and contracted. Autopsy revealed a hard fibrous tumor about the size of an English walnut in the middle lobe of the cerebrum.

CASE II.—Mrs. C., aged thirty-five years, the mother of four children, and five months pregnant, complained of dimness of vision. Ophthalmoscopic examination of both eyes showed retinitis, the disc was opaque, irregular, and dotted with pearl-colored spots, the arteries were contracted, the veins enlarged and somewhat tortuous. Examination of urine developed the presence of albumin, hyaline, fatty casts and granular matter. This case went on to full term with an easy labor without convulsions; the changes in the eye improved to some extent, but the patient died at the end of nine months. The kidneys were found to be contracted and granular. Heart normal.

CASE III.—Mr. M., aged forty-two years, mechanic, suffered from general neuralgic pains, weakness, insomnia, frequent nausea, and drifted from one doctor to another without apparent benefit; vision was hazy. From repeated examinations of his urine it appeared very different at different times, occasionally showing a trace of albumin and a few cylindrical casts; again normal in these respects, but always with diminished urea. He gradually lost strength, and, at the end of five months, died. At autopsy, the left kidney was found contracted, granular, weighing two ounces; the right, large white kidney, weighing five and one-half ounces. On examination of the eyes, two months before death, the retina was dotted with white spots, especially round luminous spot; the veins, full; the outlines of disc, irregular.

These cases illustrate in a brief way the value of these examinations to the general practitioner. The first exhibits the changes arising from a morbid growth in the brain and consequent interference with the circulation. The second emphasizes the changes which take place in the fundus of the eye in chronic albuminuria. Jackson, in a recent article, says that "noticeable changes are found in fifty per cent. of such cases; and distinct albuminuric retinitis occurs in not less than ten per cent." The third was an obscure case, and, save for the examination of the eye, would probably have failed to be correctly diagnosticated.

Hæmatomantia,¹ or diagnosis by examination of the blood, has been before the profession for so short a time, that it has not become the accepted aid to the general practitioner that by its merits it is entitled to be. It is true that the busy doctor has little time to perfect himself in the use of the microscope; he can, however, provide himself with a counting slide and hæmometer, and call to his aid the State and municipal laboratories, and the increasing number

of private ones; hence, there is no reason why the most remote country doctor cannot avail himself of these aids to accuracy in determining the cause or nature of the malady afflicting his patient. As yet, it can be said to establish a complete diagnosis in but a few diseases, but, taken in connection with other carefully observed manifestations, it becomes an important factor in arriving at a correct diagnosis. Before considering in detail the pathological conditions found in different diseases, we must start with the examination of blood in its normal, or healthy, state.² Suspected typhoid and malarial fever are the two diseases in which the examination of blood has become most frequent. Sufficient time has elapsed since Widal commenced his serum reaction as an aid to diagnosis in cases of suspected typhoid fever for other observers to verify his conclusions. Cabot has collected 5,978 cases in which various observers have applied the test; of this number, 95 per cent. gave positive reaction. Of 1,478 cases which I have collected from various sources, which by clinical diagnosis were classed as genuine typhoid, the Widal reaction occurred in a fraction over 94 per cent. It seems to be well established that instead of a dilution of 1 to 10, as at first practised, it should be 1 to 20, and, some have asserted, 1 to 50. Serum agglutination has appeared usually from the fifth to the fourteenth day, although, in some cases, it has been delayed until the third week. We should not base a diagnosis on one examination with a negative result. On drawing blood for examination in these cases, its coagulation and fibrin seem normal. The red cells, 4,000,000—1,300,000, in the third week begin to decrease. The white cells show no increase; in late weeks, a decrease. The hæmoglobin loss is relatively greater than the loss of cells. The white cells increase in their proportion of young leucocytes.

In suspected malaria, the presence of the plasmodium malarie in the blood is absolute proof of this disease. The red cells, ranging from 2,000,000 to 1,000,000, are reduced in number after each paroxysm, with a tendency toward regeneration during the afebrile interval. Hæmoglobin diminished, with red cells which are deformed in size and shape, in a measure resembling their condition in pernicious anæmia. In cases of suppuration in any part of the body a blood examination will show a great increase in leucocytes. This diagnostic point is of great value in many cases of appendicitis in determining whether suppuration has, or has not, taken place. Laignet-Lavastine asserts, as an aid in distinguishing catarrhal from suppurative cases, that the eosinophilic cells in the blood increase, from the fourth to the eighth day, to three, or even six, per cent, dropping back to one per cent. later.

¹For many of the facts connected with blood examinations I am indebted to Dr. Stone, of the Vermont State Laboratory.

²See tables at the close of this article.

In septicæmia there is diminution of red cells, 3,000,000 to 1,000,000; very little deformity; hæmoglobin often exuding and staining the serum. Increase of white cells and fibrin, leucocytes, with large number of polymorphonuclear type of cell; usually the infecting organism can be found. In anæmia, of which chlorosis is the type, we find specific gravity low, a slight diminution of red cells and a greater diminution of hæmoglobin. The cells are small and pale, many are deformed. White cells may not vary much from normal, but there will be an increase of lymphocytes. In pernicious anæmia the blood is pale and coagulates slowly, the red cells much diminished, 1,500,000 to 1,000,000, their size increased, and they are deformed. While hæmoglobin is decreased, it is still higher than the red cells; megaloblasts are present in great numbers, and a less number of normoblasts. White cells much diminished, 4,000 to 500; percentage of lymphocytes large, of myelocytes small.

Of leucæmia we have two forms, the splenic myelogenous and the lymphatic. In the first, the red cells will be as low as 3,000,000, with numerous nucleated forms; the hæmoglobin reduced two thirds. White cells only slightly reduced, but a large percentage of myelocytes. In the lymphatic form, while the red cells and hæmoglobin remain about the same as in the splenic form, the nucleated forms are rare and the white cells are largely lymphocytes.

We shall only refer, without going into detail, to the aid derived from an examination by means of the x-rays in both medical and surgical cases, and to chemical and microscopical examination of the urine. By recourse to these various methods of examination we can arrive at a very accurate diagnosis in many cases heretofore shrouded in uncertainty, leading us to feel that we are most assuredly approaching the time when we may claim for medicine a place with the exact sciences. Surely the time has arrived when the physician, be he an urban or a rural practitioner, must constantly make use of all these aids to an accurate diagnosis or be relegated to the domain of the inefficient and unworthy. Certainly, no worthy surgeon can long maintain his own self-respect or the confidence of the people, unless such of these aids are called into use as may be necessary to make his diagnosis accurate. In all cases demanding operative intervention, except emergency cases, he should decline to operate until after the result of a blood examination has been made known.

NORMAL BLOOD AND ITS VARIATIONS FROM THE NORMAL IN DISEASE.

Normal Blood.

Quantitative—

Red cells . . . 4,500,000—5,500,000

White cells. 6,000—10,000

Blood plates. . . 200,000—300,000

Hæmoglobin. 100—90 degrees (Fleischl)

Qualitative—

Red cells, uniform size and shape. No nucleated cells in adult blood.

White cells—

Young.

Large lymphocytes. 20-30 per cent.

Small lymphocytes. 4-8 " "

Adult (polymorphonuclear neutrophiles). 62-70 " "

Old (eosinophiles). ½-4 " "

Mast cells. ¼-½ " "

Primary Anæmias.

Chlorosis.

General.—Blood as a whole very pale in marked cases, coagulates rapidly. Fibrin not increased. Specific gravity low.

Quantitative—

Red cells, 4,000,000.

White cells normal.

Hæmoglobin, 25 to 60 degrees.

Qualitative—

Red cells, small, pale, often deformed. Nucleated corpuscles rare.

White cells, increase in lymphocytes.

Blood plates, increased.

Pernicious Anæmia.

General.—Blood excessively pale, watery, and fluid; coagulates slowly. Uneven, streaky appearance of drop.

Quantitative—

Red cells, 1,500,000 to 1,000,000 or less.

White cells, 4,200 to 500.

Hæmoglobin, 60 to 20 degrees (usually high in proportion to number of cells).

Qualitative—

Red cells, increase in average size. Deformity of shape (poikilocytosis). Staining changes. Nucleated corpuscles present: Megaloblasts (most numerous); normoblasts.

White cells, large percentage of lymphocytes; small percentage of myelocytes.

Leukæmia.

General.—The drop as it emerges from puncture looks perfectly natural, very sluggish, coagulation slow.

Splenic Myelogenous Form.

Quantitative—

Red cells, about 3,000,000.

White cells, about 450,000.

Hæmoglobin, 30 degrees.

Qualitative—

Red cells, nucleated forms numerous.

White cells, 30 per cent. myelocytes.

Lymphatic Form.

Quantitative—

Red cells, 3,000,000 or lower.

White cells, 100,000 or lower.

Hæmoglobin, 30 degrees.

Qualitative—

Red cells, nucleated forms rare.

White cells, 90 per cent. lymphocytes.

Typhoid Fever.

General.—The blood appears normal on puncture.

Coagulation and fibrin are normal.

Quantitative—

Red cells, 4,000,000 to 1,300,000; in the third week begin to decrease.

White cells, no increase; in late weeks decrease.

Hæmoglobin, loss relatively greater than loss of cells.

Qualitative—

White, increase in proportion of young leucocytes.

Serum, agglutinin appears on the average in from 5 to 8 days.

Malaria.

General.—The presence of the plasmodium malarie is absolute proof of this disease.

Quantitative—

Red cells, 2,000,000 to 1,000,000. Reduced in number after each paroxysm. A tendency toward regeneration and restitution during the afebrile periods.

White cells, numbers subnormal, decreasing during paroxysms and rising toward normal again during the afebrile period.

Hæmoglobin, diminished with red cells.

Qualitative—

Red cells, deformity in size and shape. Normoblasts, megaloblasts, and ghost cells (resembling pernicious anæmia)

White cells, lymphocytosis. Increase in eosinophiles.

Septicæmia.

General.—Blood in macroscopic appearance normal. The infecting organism can usually be separated by cultural methods.

Quantitative—

Red cells, 3,000,000 to 1,000,000; diminution depending on severity of disease.

White cells, marked increase in majority of cases.

Hæmoglobin, running parallel with red cells, often exuding and staining serum.

Qualitative—

Red cells, very little deformity.

White cells, polymorphonuclear variety most in evidence.

In conclusion, we would impress upon the rural practitioners, who make up the great bulk of the profession, the great possibilities that these various aids present to them, if they only choose to avail themselves of, and perfect themselves in, the use of these advances in scientific accuracy.

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the subsequent questions are as follows:

VI.—How do you use quinine for the prevention and cure of malarial disease, and what other treatment do you employ? (Answers due not later than November 11, 1901.)

VII.—What is your method of preventing laceration of the perinæum in labor? (Answers due not later than December 9, 1901.)

VIII.—In fractures of the upper third of the femur, how do you manage the tendency of the upper fragment to tilt forward? (Answers due not later than January 10, 1902.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested that the answers be short, no one answer to contain more than six hundred words. We shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers as original communications.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted this month has been awarded to Dr. S. A. Knopf, of New York, whose paper appears below.

PRIZE ESSAY NO. V.

HOW DO YOU TREAT HABITUAL CONSTIPATION?

(Concluded from page 788.)

REGULAR HABITS TO BE INSISTED ON.

Dr. R. C. Burton, of Savannah, Ill., writes:

Unless one has the entire confidence of his patient, and that patient has an intelligent, persisting, and patient desire to cooperate, it is useless to attempt more than a palliative course of treatment for this very stubborn and often serious condition.

After years of fecal pressure by hardened masses, resulting in a paretic condition of the rectal reflexes

and trophic changes in the mucous and muscular structures, my first step is to unload and keep unloaded for a time the colon and especially its sigmoid portion.

For this purpose I use preferably Epsom salts in sufficient doses to be effective. Then I continue in gradually decreasing doses the same or the sodium phosphate, according to which seems best applicable, until I have established, aided by other measures, a habit more nearly normal and allowed the baggy colon to assume its normal calibre and tone. At the same time I impress upon the patient's mind the absolute necessity of speedily answering or even anticipating the first sign of a desire for defecation, and the cultivating of a desire at a regular hour, preferably after the morning meal.

As an aid to the recovery of tonicity in a relaxed or enervated bowel strychnine, in doses of a sixtieth to a thirtieth of a grain, three times a day, has been with me of decided advantage.

I recommend large quantities of water to be drunk, and strong tea and coffee to be sparingly taken or let alone. The liberal eating of fruits in season should be encouraged. But, above all medicines and all methods of dieting, I am inclined to lay most stress on oft-repeated promptings to increased regularity of action. No drug can be depended upon, and in my estimation much medication is better avoided.

I particularly caution against excessive doses of any laxative, believing an increased peristalsis must be followed by decreased sensibility. It has been my custom to prescribe ipecac for a dry mucous membrane. I use it nearly up to the point of tolerance (in amount very variable), with a view to increasing mucous membrane activity, and I think it aids materially in this way, and also as an hepatic stimulant. This and the strychnine should be continued for two or three months, always bearing in mind that the constipation is not cured until all foods are being disposed of without trouble.

Occasionally systematic massage must be resorted to as an aid in giving tone to a flaccid abdominal wall, supplemented by moderate and *regular* exercise.

Where the mental, moral, or physical conditions are such, that preoccupation and structural changes cannot be overcome, a palliative treatment may be recommended, in which the less energetic laxatives should be given the preference. In the old, and especially in great dilatation of the rectum, douches containing salines or lubricants give temporary relief. But all drugs wear out their usefulness after a short time, with only the benefit of the day gained.

To recapitulate, I would lay particular stress on: 1. Epsom salts or other salines in sufficient but decreasing doses. 2. Strychnine and ipecac given

regularly and persistently. 3. Appeals to senses for regularity and watchfulness with a set time for going to stool. 4. Massage and exercise, moderate and regular. 5. Laxatives only where hope of cure is abandoned on account of the mental or physical condition.

THE NEED OF REGULARITY OF HABIT.

Dr. A. Noel Smith, of Dover, N. H., says:

The best and surest way to treat habitual constipation is to prevent it. The drug element must be eliminated as much as possible in the management of these cases. We are creatures of habit, good or bad, and "habit" is the key to the whole situation here. We can educate the peristaltic movement and the rectum in the regular elimination of waste material from one extremity of the intestinal tract—a good habit—as easily as we can train the other extremity in the use of narcotics—a bad habit.

Now, the cure of habitual constipation means the establishment of regular evacuations from the bowels. But regularity is an elastic term, as some people have a habit of not being relieved oftener than every other day or once in two or three days. But I believe that to reduce auto-infection to the minimum, and to insure a good working intestinal tract for an average lifetime, the bowels should move daily.

When there is a marked fæcal accumulation, it should be swept out by salines and the use of enemata, and the tone of the muscular coat of the intestinal tract restored by the use of strychnine or nuxvomica. If the bowels must depend for a while upon a crutch, I employ the simplest remedies, such as compound licorice powder, for example. But the formidable array of laxatives and cathartics I long since discarded, depending wholly and successfully upon massage, the establishment of the right habit, and regulation of the diet. The diet should be mixed, fruit and soft vegetables predominating.

Massage may be regularly employed, and the patient can do this for himself. He should be instructed as to the course of the colon, kneading up along the ascending, across over the transverse, and down over the descending colon. No doubt massage favors the contraction of the large bowel.

But first, last, and all the time, habit must be cultivated. Habit is often a powerful factor in the causation of diseased conditions; but it is equally potent in the prevention and cure of disease. In the case of our domestic animals, especially, I have often noted that there is great regularity as regards defecation. And how easy it is to teach our dogs and cats to evacuate the bowels at a given time. Let us strive to maintain our superiority over the brute creation, or at least in this regard show our equality, and teach our bowels to move once a day. It does

not matter so much what hour of the day, but a certain time must be fixed upon, and that fixed time religiously kept. At the first, some of the efforts may prove futile, but here, as elsewhere, eternal vigilance is the price of success.

THE INJURIOUS EFFECT OF ADDICTION TO DRUGS.

Dr. Joseph L. Spruill, of Columbia, N. C., says:

Like all other diseases, constipation is due to a cause, and, as in other diseases also, each case must be treated individually, and the cause sought for and removed before much good can be accomplished. Want of sufficient exercise, thereby causing lack of secretion from the liver, the pancreas, and the intestinal tract; neglecting the calls of Nature, thus causing the rectum to become accustomed to overdistention by fæces without giving the desire for evacuation; imperfect action of the muscular fibres of the intestine; derangements of the nervous system, such as neurasthenia, melancholia, etc.; diseases of the liver or pancreas; eating food which leaves little or no residue; and, finally, according to Osler, "the most injurious of all habits, *drug taking*," are the causes. In addition, one of the most common causes in women is the wearing of tight clothing, which presses on the transverse colon and pushes the other abdominal and pelvic viscera down on the rectum. In children the chief cause of constipation is lack of fat in their food.

As to treatment, the first thing to do is to find and remove the cause if possible. The general treatment may be divided into hygienic, dietetic, and medicinal.

Hygienic.—See that the patient takes moderate exercise regularly; not violent, since this causes the skin to act too freely, thus taking from the intestinal tract too much of its secretion. Walking, and particularly horseback riding, are beneficial. Frequently a complete change brought about by a few weeks' travel will accomplish more than any forced exercise. If the patient is a woman, see that her clothing does not exercise any pressure on the colon or push the abdominal viscera into the pelvis. Have regular hours for the patient to go to stool, and insist on the efforts being made, whether there is the inclination or not. With care and patience the bowels can be trained as well as the stomach. If the patient will go to stool regularly once a day, preferably after breakfast, since the taking of food causes some intestinal peristalsis, in mild cases the inclination to empty the bowel will return within a short time. Under this head may be considered massage, which of late has been used so successfully in constipation due to lack of tone or power of the intestinal muscles. The large intestine, from the cæcum to the rectum, should be thoroughly massaged in the direction of the colon, since here is where the trouble usually lies.

Dietetic.—Such food should be used as will leave a large amount of residue in the intestinal tract, such as brown bread, wheat, rye, and corn bread, oat-meal, etc., fresh vegetables, such as lettuce, corn, tomatoes, and celery; fruits, ripe or dry, such as apples, peaches, figs, and prunes. The last, when stewed with enough sugar to make a syrup, are particularly useful. Good results may be obtained in mild cases by eating a ripe apple or orange and taking a draught of water just before going to bed, and more water the first thing in the morning.

Medicinal.—Without due attention to the rules of hygiene and diet, medicines do little good in treating constipation; but with the observance of those rules much can be done. Purgatives, as a rule, should not be used. If constipation is due to lack of secretion, small doses of sodium phosphate or the sulphate of magnesium, or even of calomel, may do good; particularly when the stools are hard, pasty, and bad-smelling, showing lack of bile. When muscular contraction is at fault, tincture of nux vomica, extract of belladonna, or small doses of strychnine combined with cascara sagrada, may be used in connection with massage. When the trouble is due to anæmia, iron combined with some mild laxative, such as manna or sulphur, will be found useful. The following pill has given me great satisfaction in cases due to weak muscular contraction:

R Extract of cascara sagrada.....	1 grain;
Extract of nux vomica,	} each, ⅛ of a grain.
Extract of belladonna leaves,	
Powdered ipecac,	
Podophyllin,	
M. To be taken at night.	

In long-standing cases of chronic constipation, with the lower bowel full of impacted fæces, nothing acts better than injections of from twelve to twenty ounces of olive oil, given with the patient in the dorsal decubitus, with the hips elevated, the oil being allowed to flow very slowly. This may be repeated daily until the intestinal tract is clear, when smaller doses at longer intervals will suffice. The ordinary soap and water enema will sometimes do good.

By closely observing, and carrying out these lines of treatment, in my judgment the most obstinate cases of constipation can be very much benefited if not completely cured.

THE IMPORTANCE OF HYGIENE.

Dr. Harold Duncan Cochrane, of Albany, N. Y., says:

The first step in the successful treatment of chronic constipation is to secure the hearty cooperation of the patient with the treatment we propose to inaugurate, impressing upon his mind that drugs alone will not effect the desired cure and that the

result rests largely upon the faithfulness with which he carries out instructions.

The following is an outline of the hygienic regulations I give to each patient suffering with habitual constipation. I definitely specify, according to their constitution and surroundings, the duration and kind of daily exercise, the quantity of water to be taken, and the kinds of food prescribed and proscribed, thus making the directions personal and avoiding generalities.

1. Regularity of the daily visit to the closet at a specified hour, taking precedence over all other duties, thus educating the peristaltic movements of the bowel and overcoming spasmodic, irregular, and fruitless efforts.

2. Daily outdoor exercise of an active nature, such as wheeling, tennis, and walking, supplemented by "home gymnastics" morning and night. The latter device is very greatly adapted to those delicate patients who are prevented from taking their daily constitutional during the rigor of our northern winters, and who are so frequently subjects of habitual constipation. Exercise has for its object the overcoming of intestinal atony and stimulation of the normal secretions.

3. Pure drinking-water should be taken in large amounts. One or two glasses, cold or hot (preferably the former), should be drunk upon arising in the morning. Water tends to overcome the dryness of the intestinal mucous membrane and renders the stools of proper consistence, so that they may be passed with ease.

4. Correction of errors in diet, prohibiting the use of pastry, hot bread, cheese, and articles known to disagree with the patient, and encouraging the use of vegetables, fruits and whole wheat bread, which leaving a large percentage of waste material, is advisable.

5. Dress warm in winter and cool in summer; chilling of the body tends to produce atony of the bowels.

If these measures do not accomplish all that is desired, I advise abdominal massage morning and evening by a skilful operator if practicable, otherwise I personally instruct some member of the family or a friend in the art, the rubbing to follow the direction of the large intestine.

As to medicinal measures, if the bowels have not moved for some days prior to beginning treatment, I direct the patient to take half an ounce of castor oil, in order to thoroughly clean out the bowels. The following evening he is to take of the aromatic fluid extract of cascara sagrada from fifteen to thirty minims (depending upon the susceptibility of the patient). If the dose selected does not prove all that is to be desired, increase it each night by five minims until a comfortable movement is produced. Continue this dose each evening for two weeks, in the

mean time paying strict attention to the hygienic regulations. Now decrease the dose each day by one minim until the zero mark is reached. The non-medicinal treatment, modified, should be continued indefinitely.

There are cases of extreme intestinal atony where electricity is beneficial, and others of chronic constipation due to constriction of the sphincter ani where divulsion is the *sine qua non*.

I believe that if this course of treatment is faithfully carried out the results will be all that can be expected.

Having set our patient upon the firm ground of health, there are two dangers I would caution him against; one is the spasmodic use of cathartics and laxatives and the other is that of slipping back into the old non-hygienic mode of living, his feet becoming once more entangled in the miry clay. "Eternal vigilance" is the price of a healthy body.

THE VALUE OF CASTOR OIL.

Dr. J. Molgaard, of Salinas City, California, says:

The first thing to determine in laying out a plan of treatment is the cause of the disorder, because the course to be pursued varies greatly according to the origin of the trouble. Different diseases of the stomach, for instance, ulcers, cancer, and catarrh, must be looked for, and organic changes in the walls of the stomach or intestines (old appendicitis and adhesions of the peritonæum) must be excluded. Having ascertained that the main trouble is in the intestines, it is of importance to inquire into the habit of living, whether sedentary or active, and into the usual diet, whether the patient is in the habit of taking a great deal of meat or milk. Then we must ascertain whether there is any relaxation of the walls of the abdomen, any displacement of the organs of generation, or relaxation of the ligaments, and in general notice whether the patient is of a nervous disposition.

If no particular complications exist, I usually put the patient on a diet consisting of oatmeal, vegetables, apple sauce, prune sauce, Graham bread, and sometimes rye bread, with a little fresh meat once a day, with tea and water to drink—no milk in any form. At night I give a tablespoonful of castor oil; this dose to be decreased as the patient improves. If necessary, I give, at the beginning of the treatment, an enema of water or oil; in the case of children one part water to two parts of glycerin to be preferred. In a very obstinate case it is sometimes advisable to give some magnesium compound, for instance, equal parts of sodium bicarbonate and hydrated magnesium carbonate, a teaspoonful three times a day.

Continue this till the castor oil is sufficient, and then gradually decrease the amount of oil to a tea-

spoonful daily, then a teaspoonful every second day, and so on, till there is one spontaneous passage a day of normal consistence, being particularly careful that it does not become hard or lumpy.

Strong laxatives, like aloes, podophyllin, etc., must be absolutely prohibited.

The after-treatment is of the greatest importance. The patient must be taught to pay strict attention to the bowels. If they begin to act sluggishly or the passages become smaller in amount or lumpy, a small dose of oil must be taken at once. The patient's habits must be regulated. He must go to stool at a regular time every day.

Castor oil, like other oils, is decomposed in the duodenum, ricinoleic acid is set free, and thus probably acts as an irritant on the mucous membrane and causes peristaltic action. Some authors maintain that castor oil causes disorders of the stomach when taken for any length of time. I have not found it so when proper attention is paid to the diet. Castor oil is particularly valuable when the constipation is due to intestinal dyspepsia, and of that trouble we undoubtedly have more than is generally diagnosed.

THE CAUSE MUST BE ASCERTAINED.

Dr. L. F. Jermain, of Milwaukee, writes:

The majority of cases of habitual constipation are the direct result of: 1. A faulty diet. 2. Lack of expulsive or peristaltic power, coupled with deficiency of hepatic or intestinal secretion.

In the treatment of habitual constipation each individual case must be carefully studied, the causative factors determined and removed, modified, or lessened.

Regulation of the diet I consider of prime importance in every case. If the patient's diet consists chiefly of concentrated foods, such as meats, in which little residue remains to excite peristalsis, a change to a diet consisting chiefly of vegetables and fruit is necessary, such coarse vegetables as cucumbers, cabbage, lettuce, potatoes, beans, peas, and corn, with Graham bread are given. Of fruits, prunes, peaches, strawberries, apples, and pears are preferred. Cold or carbonated drinks given on an empty stomach, preferably before breakfast, are of distinct value. Detailed observation is, however, necessary in each case, as it is well known that milk, for instance, will produce constipation in one individual, while in another it produces diarrhoea, and the same applies to sweets and fruit.

Next in importance to diet in the management of these cases I consider attention to habit and regularity. These patients should be compelled to visit the closet daily at a certain hour preferably in the morning after breakfast, even though there exists no desire to defecate at that time. Inattention to the calls

of Nature leads to over-distention and a loss of sensibility of the bowel to the faecal masses in the rectum; consequently the vicious habit of procrastination must be combated, if a cure is to result. Of equal importance to diet and habit is exercise. A sedentary life leads to secretory inactivity and a loss of tone of the abdominal muscles, both of which greatly favor constipation. Walking, riding, rowing, lawn tennis, etc., are insisted upon and if possible such gymnastic movements as bring into action the abdominal muscles are advised. Patients who are unable to indulge in the exercises above mentioned find in massage of the abdomen a valuable substitute. Massage acts by stimulating peristalsis. It heightens the tone of the abdominal muscles and should be employed after breakfast or at any other set time of the day.

In obstinate cases hydrotherapy is a useful adjunct in relieving this condition. Cold sitz baths of from five to ten minutes' duration are exceedingly valuable, also cold douches and especially the Scotch douche should be tried.

Enemata as a means of relieving habitual constipation I consider injurious if long continued, and they should be used only for the purpose of relieving an over-distended bowel preparatory to the institution of the measures outlined above.

In like manner, drugs occupy a subordinate position in the treatment of this disorder, and should be placed at the bottom of the list of remedial agents. The constant use of purgatives tends to bring about this condition and certainly aggravates it if present. If it is necessary to use some drug to unload an overloaded bowel, a single dose of Epsom salts, Rochelle salt, or some laxative bitter water can be used. The only drugs I have ever found to be of permanent value in the treatment of this disorder are strychnine and belladonna. Both act by improving the nerve supply to the intestinal tract, and are especially indicated in patients suffering from neurasthenia, hysteria, or general weakness.

THE MAIN ELEMENT OF TREATMENT IS THE HYGIENIC.

Dr. M. M. Saliba, of Savannah, says:

A special study of the ætiology of each case is very necessary, so that, if possible, it may be removed or remedied before attempting to cure.

The treatment must respond to the following indications: 1. A suitable regulation of diet. 2. An enforcement of healthy habits of life. 3. Medicinal treatment.

My first instruction to the patient is to take slowly a tumblerful of cold water, as free as possible from lime salts, the first thing in the morning, the last thing in the evening, and also half an hour before

the principal meal of the day. The latter may be taken hot if preferred.

Slightly mineralized, effervescing waters will also serve the purpose, such as Seltzer water, Appollinaris water, etc.

Foods leaving considerable amount of undigested residue must be given, but great care must be taken not to irritate the bowels by too large quantities of coarse and indigestible substances.

The following list shows what I recommend my patients to rely upon in their diets:

Bread.—Brown, rye, or ginger bread.

Vegetables.—Fresh spinnach, lettuce, asparagus, tomatoes, celery, sorrel, beet-root, water-cress, salads, plainly boiled Spanish onions, oatmeal, maize-meal, linseed tea, ripe fruits, grapes, figs, baked apples, stewed pears and prunes, oranges, and bananas.

Animal Food.—The amount should be strictly limited and should be in comparatively small proportion to the vegetable element.

Fats and Oils.—Fresh butter, olive oil, milk with coffee, but not alone.

Avoid all use of alcoholic drinks, both fermented and distilled.

Healthy habits of life are of great importance, especially regular exercise for physical inactivity from indolence or too studious habits and from too assiduous devotion to sedentary occupation. Bodily exercise is a means of exciting peristaltic action in most persons, due to the increased action of the diaphragm and abdominal muscles by the quickened respiration, but it must be unattended by such profuse perspiration as to lead to an excessive loss of water by the blood.

The following is the method I follow in applying abdominal massage:

Begin by kneading the abdominal integuments and muscles, press gently over the cæcum with the tips of the fingers; then, by means of the closed fists, apply gentle but deep massage along the whole course of the colon. The bladder must be empty beforehand, and the process should not last longer than from fifteen to twenty minutes. A substitute for this is the rolling of a heavy metallic ball over the abdomen. The wearing of an abdominal bandage is of value in stout persons or in women whose abdomens are relaxed from child-bearing.

The need of a periodical, habitual solicitation of an action of the bowels, *i. e.*, at a given hour daily, should be pointed out, and this is particularly necessary with young girls at the age of puberty, when they are apt to be very neglectful in this respect.

Daily habits of cold sponging or bathing with friction of the surface, which may be reinforced by cold douches or the application of cold compresses to the abdomen, should be resorted to. Perineal

and anal douches have also proved useful by exciting, locally, the muscles of defecation.

Rectify any habitual pressure from tight clothing round any part of the abdominal cavity.

Whenever it is easy or possible to overcome the habit of constipation without recourse to drugs, these should certainly be avoided; and in all cases avoid the use of active cathartics as far as possible. At the outset completely clear the intestinal canal of all fæcal accumulations, and ascertain by manipulation and percussion that the large intestine is thoroughly emptied. A pill containing calomel, aloes, and hyoscyamus may be given daily for such a purpose until by examination we are satisfied that no fæcal accumulation has been left behind. If any hard lumps remain in the large intestine, or if small, dry, light concretions float on the surface of the fluid evacuations, the large intestine must be washed by enemata through a long tube, while the patient is placed either on his left side or, better still, in the knee-chest position. Each enema should be retained for ten or fifteen minutes. The enemata may be best composed of hot water and soap, from one to two pints, according to the capacity of the colon. This enema should be given daily until we are satisfied it has accomplished the purpose. In very chronic and obstinate cases the enema should consist of cold water, common salt, and sodium bicarbonate. To each pint of cold water add a teaspoonful of common salt and half a teaspoonful of bicarbonate of sodium. In cases where no enemata can penetrate the hard fæcal accumulations in the rectum, it is necessary to mechanically free the rectum by means of the fingers or a scoop of some kind. The use of enemata, in my opinion, promotes muscular contraction, imparts tone to the bowels, and prevents atonic dilatation.

In cases where the rectum or sigmoid flexure is subjected to mechanical pressure, and where the patient experiences a difficulty in defecation owing to the dryness and hardness of the fæcal mass, the use of glycerin, with or without water, is very valuable. I have met with better results by the use of glycerin mixed with water. In chronic cases of years' standing I am in the habit of using the following dinner pill with great success:

R Extract of aloes 1 to 2 grains;

Powdered ipecac,	} each 1 grain.
Extract of nux vomica,	
Powdered soap.	

M. S. To be taken immediately before dinner.

Quinine may be added to the pill.

[It is unusual to give so much nux vomica in a single dose, and we should advise caution in regard to it.—EDITOR.]

In cases where biliousness or hæmorrhoids are present, it is necessary to promote the outflow of bile by the use of cholagogues.

Cases associated with general debility and anæmia require tonic as well as aperient treatment.

After the intestinal canal has been completely cleared of the fæcal accumulations, a regular course of aperient medicine may be begun.

There is considerable choice of drugs which increase peristalsis. Those in use for habitual constipation are aloes, belladonna, cascara sagrada, nux vomica, senna, rhamnus frangula, sulphur in the form of confection, lozenges, or tablets, citrate of magnesium, sulphate of sodium, compound licorice powder, and many other aperients.

My experience in using belladonna is that when it is used alone it is more efficacious in women than in men, and it is best at first to try its effects alone or with nux vomica, in pill form, to be given at bedtime; if it fails it may be combined with aloes, ipecac, or both or with other aperients. Belladonna and aloes are valuable adjuvants in particular cases. Nux vomica is often added in cases where the muscular tone has been lost by protracted over-distention.

Cascara sagrada, in the form of the fluid extract, given in small doses, from five to ten minims, three times a day, directly after meals, has proved often, in my hands, of great value. The point in its administration is to give just the quantity needful to procure one soft evacuation daily and no more.

The natural purgative waters have been used in habitual constipation with success.

The insufflation of boric acid into the lower bowels, about forty-five grains at a time, has been strongly advocated for the relief of constipation that depends on torpor of the colon. It must be systematically applied daily, so that permanent improvement may be in time secured.

I don't use electricity and the Swedish movements in the treatment of habitual constipation, because they weaken the patient, while the constipation is due to weak abdominal muscles.

New Laboratory Building of the Marion-Sims Medical College, St. Louis.—The handsome new laboratory building of the Marion-Sims Medical College, St. Louis, is ready for occupancy. This building is the first one of its kind ever built there. It is three stories high, and is subdivided into four large laboratory rooms, one large lecture hall, a museum and several offices. The special feature of the laboratory building is its vestibule and grand stairway. The former is 20 feet by 40 feet and of marble from floor to ceiling; and the latter also is of marble, supported upon steel

Therapeutical Notes.

The Treatment of Ankylostoma Duodenale.—Dr. W. B. Gray (*Virginia Medical Semi-monthly*, September 27th) reports the case of a young woman, twenty-five years of age, who suffered from this parasite. He directed her to take nothing but liquid food for twenty-four hours, and next morning administered the following (originally prescribed by Dr. Hobart Amory Hare for *Tania solium*):

℞ Oleoresin of male fern, } of each. . . . 45 minims;
Tincture of vanilla, }
Powdered gum acacia. ½ a drachm;
Distilled water. 1 ounce.

M.

The entire draught was taken and followed in two hours by an ounce of magnesium sulphate in a glass of water. It acted promptly and copiously, bringing away great numbers of ova and parasites, and the patient making a rapid and permanent recovery.

Copper Salts in Chlorosis.—M. F. Bouillat (*Journal des praticiens*, September 7th), in a Paris thesis, gives the following formulæ for the use of copper salts in chlorosis.

1. In patients with a lymphatic or scrofulous taint:

℞ Neutral acetate of copper. . . . 1½ grain;
Extract of cascarrilla bark. . . . 9 grains.

M. Divide into twenty pills. From one to five to be taken during the principal meals.

2. Where there is tuberculosis:

℞ Neutral acetate of
copper. from 1½ grain to 3 grains;
Phosphate of sodium. 15 grains;
Glycerin and licorice powder. . . . q. s.

M. Divide into twenty pills. Two pills to be taken at the two principal meals for one, two, or three months, without interruption. The stomach is said to support these doses very well.

3. The value of sulphate of copper in chronic malarial anæmia led Cervello to its use in chlorosis.

℞ Copper sulphate. 1⁄10ths of a grain;
Sugar of milk. q. s.

M. For one wafer. From one to three to be taken at the principal midday and evening meals.

4. In three cases of scrofulous patients, where chlorosis was associated with facial neuralgia, the following pills of Biett for epilepsy proved very satisfactory:

℞ Ammoniacal copper sulphate. . . . 15 grains;
Extract of valerian. 75 "

M. For sixty pills. Two at midday and evening, at meals.

A Nutritive Enema.—*Nouveaux Remèdes* for October 8th ascribes the following to de Maurange:

℞ Sodium glycerophosphate. . . . 30 grains;
Tincture of kola. 150 minims;
The yolks of. 2 eggs;
Peptone. 450 grains;
Malaga wine. 1½ ounce;
Milk. 10½ ounces;
Laudanum. 5 drops.

M.

For Chronic Bronchitis.—Saint-Philippe is credited by the *Journal de médecine de Paris* for September 1st with the following:

℞ Arsenic iodide. 4½ grains;
Distilled water. 450 minims.

Dissolve cold.

Begin with five drops at each meal, and increase by one drop morning and evening until arriving at from fifteen to twenty drops at each meal.

Remain stationary at the maximum dose for a month. Then decrease in like proportion until five drops are reached. Intermit for eight days and recommence.

The Treatment of Capillary Bronchitis in Children.—Professor Markan (*Medical Press and Circular*, October 2d) says that warm bathing is *de rigueur*, and twice a day mustard should be put in the bath. When the person who holds the child in the mustard bath feels the skin of her arms commence to burn the child must be taken out. Warm and mustard baths consequently constitute the main treatment of capillary bronchitis and broncho-pneumonia.

Care must be taken to keep up the strength of the patients by food and stimulants. Under fifteen months milk alone should be given, over that age eggs may be beaten up with the milk. As stimulants, tea, coffee, and the following mixture:

℞ Tincture of cinnamon. 15 drops;
Cognac, } of each. 4 "
Syrup of ether, }
Solution of acetate of ammonia. . . 15 "
Syrup of acacia. 2 ounces.

M.

To be given by teaspoonfuls.

In the period of decline the chest and back should be rubbed night and morning with equal parts of olive oil and turpentine, and a layer of cotton wool applied; in children under six months balsams are not well borne, but in older children the following mixture may be given:

℞ Terpene. 6 grains;
Sodium benzoate. 12 "
Syrup of acacia. 2 ounces.

M.

For Malarial Liver Trouble.—M. Lemanski (*Nouveaux Remèdes*, October 8th) gives the following:

℞ Sodium cacodylate. 1⁄100ths of a grain;
Powdered cinchona, } of each. . 7½ grains.
Sodium bicarbonate, }

M.

For one wafer. Three wafers to be taken daily. Frequent purgation, by means of the following formula, is also often effective:

℞ Calomel. 12 grains;
Cascara, } of each. 9 "
Powdered rhubarb, }
Powdered belladonna. 7½ "

M.

Divide among three wafers, to be taken fasting in the morning, at intervals of a quarter of an hour, once a week.

The Treatment of Gastralgia.—Melbec (*Journal de médecine de Paris*, September 1st) is credited with the following:

A. During the access:—

1. Take alternately in tablespoonful doses every quarter of an hour until the pain is relieved, the two following mixtures:

℞ Cocaine hydrochloride. 4½ grains;
Tincture of star-anise. 15 minims;
Orange-flower water. 1,800 "

M.

℞ Saturated chloroform water. . . 900 minims;
Syrup of belladonna. 450 "
Peppermint water. 450 "

M.

2. If the pain persists or is very severe, give a hypodermic injection of eight minims of the following, and a second one a quarter of an hour after the first:

℞ Cocaine hydrochloride. ¾ of a grain;
Morphine hydrochloride. . . . 1½ grain;
Boiled water. 160 minims.

M.

B. In the intervals:—

1. Seek and combat the cause, chlorosis, neurasthenia, etc.

2. Daily cold lotions of the body with alcoholized water and rubbing with a hair glove.

3. Take, three days weekly, a tablespoonful of the following mixture:

℞ Strontium bromide. 300 grains;
Syrup of hyosciamus. 750 minims;
Syrup of bitter orange peel. . . 750 "
Water. 2,250 "

M.

4. Touch the epigastric region about every eight days with the fine cauterizing point.

For Tracheobronchitis in Children.—Professor Markan (*Medical Press and Circular*, October 2d) recommends the following in cases in which the cough is out of all proportion to the inflammation, and when it prevents sleep:

℞ Syrup of orange flowers, } of each. . 4 drachms;
Syrup of codeine, }
Tincture of aconite. 6 minims;
Water. 1 ounce.

M.

A teaspoonful daily for every three months of the child's age. "In this dose codeine is without danger, even in the youngest children, and gives good results," says Professor Markan.

The Treatment of Acute Albuminuria after Scarlet Fever.—Dr. Otto Maier (*Post-Graduate*, October) adopts the following treatment: One hot bath every day; milk and ice cream diet.

℞ Pilocarpine. 1 grain;
Infusion of digitalis. 3 fluid ounces.

M. One teaspoonful every three hours.

℞ Calomel. 2½ grains;
Powdered jalap. 4½ "

M. ft. pulv. One to be taken twice a week.

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THE SLIGHTED MEDICAL CORPS OF THE ARMY.

We have often commented on the apparent nigardliness of Congress in the matter of failing to provide for an adequate enlargement of the medical corps of the army. We believe that it is apparent rather than real, for Congress cannot, we think, have had properly presented to it the needs of the army from the point of view of the medical service. That service was not instituted for the purpose of magnifying the dignity of the medical profession or that of any of its members, but in order that the officers and men and their families might have the benefit of the best attainable medical aid, and the military resources of the country be correspondingly strengthened. Nevertheless, the dignity of the medical officers should be heightened in every proper manner by the government, but the government seems to have forgotten the obligation. When an officer of the army approaches the age for his retirement, it is customary to promote him, so that he may be retired on terms approximately commensurate with his services; but the medical corps has been singularly slighted in this respect.

For example, we have before us the record of a high officer of the corps who will be retired within a very few months. This gentleman's service in the regular army has been continuous ever since his appointment as an assistant surgeon in 1861, the opening year of the civil war, and it has been meritorious in the extreme. Shortly before the close of the war, in 1865, he was brevetted a major. In 1866 he was made a captain and in 1876 a major in the regular army. In 1887 he was appointed executive officer of the surgeon-general's office. In 1891 he was promoted to the grade of lieutenant-colonel and made assistant medical purveyor. In 1896 he was

promoted to the rank of colonel and appointed as assistant surgeon-general. Since then he has rendered conspicuous services in the war with Spain and in the Philippines, but all this time he has remained a colonel, although mentioned in general orders in 1900 "for most efficient and hazardous services in the medical department in the Cuban and Puerto Rican campaign," etc., and been twice recommended by his superiors for promotion to the grade of brigadier general of volunteers, first by General Miles and shortly afterward by Surgeon-General Sternberg. In addition to most meritorious performance of his strict military duties, this gentleman has repeatedly been designated to represent his corps at important medical meetings, such as those of the American Medical Association and the American Public Health Association, and he is the author of more than one manual by which certain functions of his corps are now governed.

Certainly a man with such a record deserves better at the hands of his country than to be retired without the promotion that is so freely accorded in other branches of the service. It seems that in the British army the number of medical officers who have received the Victoria Cross is relatively larger than that in any other corps. Is our government less appreciative than the British of the value of medical service? That we are not alone in our view of the matter is shown in the following, from the *Army and Navy Register* for October 26th: "The medical department is entitled to some practical recognition on account of the important work performed under all sorts of trying and hazardous conditions by its officers, and there seems to be no reason why the corps should not be recognized by the appointment of Colonel Greenleaf to be brigadier general. There is quite as much reason for such an individual reward and tribute to the corps as has been similarly expressed frequently by the promotion of officers of other staff corps to brigadier generalcies." This is a matter, we may add, in which the American medical profession at large feels a keen interest; a slight to the medical corps of the army is a slap at the profession itself.

THE POISONOUS PLANTS OF THE UNITED STATES.

Although it deals chiefly with plants that are poisonous to the domestic animals, a recent reprint

from the *Yearbook of the Department of Agriculture* for 1900, entitled *Some Poisonous Plants of the Northern Stock Ranges*, by Mr. V. K. Chesnut, of the Division of Botany, is of considerable value as a contribution to toxicology in general. We often read in the newspapers of instances of the poisoning of human beings, for the most part children, from eating some plant which, being called by its local popular name, it is not easy to identify.

"Gigathism," as Mr. Chesnut informs us, is the condition of poisoning attributable to the seeds of the cockle (*Agrostemma githago*), which have sometimes found their way into cereal preparations, although improved machinery now enables the miller to eliminate them. It is in Europe that the term "gigathism" was first applied to the chronic poisoning produced in man and animals by these seeds, which contain a sapotoxine-like substance. Several varieties of "water hemlock" (*Cicuta virosa*, *Cicuta occidentalis*, *Cicuta Douglasii*, and *Cicuta vagans*) are common causes of poisoning in the human subject. It is especially in the early spring that the fleshy root-stocks, erroneously termed "wild parsnip," are apt to be eaten, for then they are exposed by being washed or frozen out of the ground. Like most of the members of the carrot family, to which the water hemlocks belong, says Mr. Chesnut, they have a peculiar penetrating odor and taste, which are due to the aromatic oily fluid that is found throughout them, and especially in the roots and seeds. He thinks it is probably on account of this odor that the plants are usually compared with the parsnip, but in the case of the water hemlocks it is more decidedly musky and much more disagreeable. The parsnip has a single large, fleshy tap-root, and never becomes poisonous when growing wild, whereas the water hemlocks have a cluster of fleshy roots which are highly poisonous. It is said that the roots have a benumbing effect on the tongue after long chewing, but the first taste is rather sweet and not disagreeable enough to deter children, or even adults, from quickly eating enough of them to prove fatal. The Indians are said to be acquainted with their poisonous properties, and to use them occasionally for suicidal purposes. Death sometimes takes place within an hour and a half after the plant has been eaten. It is probable that all the American water hemlocks contain cicutoxin, which was first isolated from the European plant.

It is described as an uncrystallizable resinous principle, of an acid reaction and a disagreeably bitter taste.

All the species of *Zygadenus* (death camas), fortunately few in number, are poisonous and sometimes fatal to both man and beast. The best-known of them are *Zygadenus venenosus*, *Zygadenus paniculatus*, and *Zygadenus elegans*, the bulbs of which are apt to be confounded, even by the Indians, with those of the true camas (*Quamasia quamash*). Mr. Chesnut's monograph is clearly illustrated, and it ought to prove of great service in putting the people on their guard against the poisonous plants with which it deals.

THE WALDEYER DINNER.

Last Saturday evening the Deutsche medicinische Gesellschaft der Stadt New York gave a dinner at Delmonico's in honor of Professor Wilhelm Waldeyer, of the University of Berlin, who, as many of our readers are aware, lately came to America to receive the degree of doctor of laws from Yale University. The company, numbering perhaps somewhat over a hundred, was made up almost wholly of German physicians living in New York, but it was the privilege of a few of us of American birth and descent to share in the notable festivities, and we shall never forget the occasion. In the first place, Professor Waldeyer's personality is most genial. This fact, of course, was not new to the great majority of the men who were present, but renewed communion with such a spirit is always a charming occasion.

Professor William H. Welch, of the Johns Hopkins University, made the only speech that was delivered in the English language, but it is not to that fact alone, it seems to us, that it owes its special significance to us Americans, for the speaker told us more vividly than we have ever been told before of our deep indebtedness to the Germans.

It appears that at an early period of his career Dr. Welch was a student in the University of Strassburg when Waldeyer was a professor in that faculty; therefore he was able to bring up personal reminiscences common to himself and the illustrious guest of the evening. The whole company was interested in these recollections, and they repeatedly moved Waldeyer to a genial and mirthful nod of the head, but they only led up to a brief but masterly

review of the external influences brought to bear upon American medicine since the establishment of the republic. In the beginning of our existence as an independent nation, Dr. Welch reminded his hearers, hardly any original work was done by us in medicine, as, indeed, none could have been expected under the circumstances. At first our young men resorted to Edinburgh for instruction, and there found scholarship and hard-headed logic in their plentitude. But the world soon began to move, and Paris, represented notably by Louis and subsequently by Trousseau, became the Mecca of American students of medicine and so continued for a considerable length of time. After that there came the lustre of the Vienna school, with Rokitansky in the lead, to be eclipsed only by the Germans, and pre-eminently by the domination of one man, Rudolf Virchow, who had torn himself loose from the maze of speculative philosophy which reigned throughout Germany.

Not half-heartedly, certainly not grudgingly, but right cordially, do we, the American medical profession, declare our appreciation of the beneficent influence that German research and German thought have had upon us, an influence conveyed, as Dr. Welch put it, not only by our native students who have gone to Germany for further instruction or for teaching in special branches, but also by the many Germans who have cast in their lot with us. They have become good Americans—Americans by choice, not by the accident of birth—and they have done much to make us good students of science. Not to our knowledge has this view of the matter ever before been so graphically brought forward as by Dr. Welch at the Waldeyer dinner. It was a memorable affair. Professor Waldeyer will take back with him the renewed benison of many an old friend and the hearty good wishes of not a few men who have now been brought face to face with him for the first time. We believe that his visit to our country has given him some pleasure, and we are sure that it will result in distinct benefit to us.

THE BACTERICIDAL ACTION OF THE BILE.

The bactericidal properties of the various secretions and juices of the organism are generally being estimated at their proper relative value. As regards those of the bile, Talma (*Zeitschrift für klinische Medicin*, xlii, 5, 6; *Berliner klinische Wochenschrift*, August 26th) has found experimentally that

the biliary secretion contains a substance that checks the development of the colon, typhoid-fever, and diphtheria bacilli. The sensitiveness of the different bacilli varies greatly, and so does the bactericidal power of the bile in different animals. The force in which micro-organisms have invaded the biliary passages is of great influence. The epithelium of those passages and the hepatic cells offer a powerful resistance to invading microbes, especially the diphtheria bacilli.

TRIONAL POISONING.

In our issue for October 12th we published an account of a case, by Dr. Edward M. Thompson, in which unusual symptoms had followed the administration of two twenty-grain doses of trional, given two hours apart. A correspondent regards the case as by no means clearly one of poisoning, for there was no hæmatoporphyrinuria. He says: "In the extensive literature that has appeared on this drug there is not a single instance of trional having produced an elevation of temperature, together with an increase of the pulse and respiration. In fact, this is entirely contrary to its distinct sedative influence." We do not understand that the appearance of hæmatoporphyrin in the urine is invariably observed in trional poisoning, and experiments on animals have shown that there may at first be an increase in the number of respirations and heart beats. On the other hand, it should be borne in mind that Dr. Thompson's patient was a neurasthenic, and that in such subjects symptoms not infrequently arise which it is natural to impute to the action of some drug that has been taken, whereas they may be only remotely due to the drug and chiefly the manifestations of the disordered nervous condition.

AN EARLY SIGN OF INFANTILE PNEUMONIA.

The October number of the *Revue mensuelle des maladies de l'enfance* states that Dr. Weill, of the Lyons faculty, has called attention to what he considers as a new sign of pneumonia in infants, one that he has found almost invariably present and of early occurrence, namely, lack of inspiratory expansion in the infraclavicular region of the affected side. Weill may be in error in thinking that this has not before been observed, but it is important, we think, to note some of the points on which he insists. Absence of expansion, he says, is witnessed in various other pulmonary affections, but in them it corresponds to the situation of the disease, while in pneumonia it is limited to the infraclavicular region and is even more marked in cases in which the inflammatory process is confined to the lower portions of the lung. He cautions the reader against confounding elevation of the clavicle with expansion.

THE COMPARATIVE INFLUENCE OF FATHER AND MOTHER ON THE VITALITY OF THE CHILD.

This subject may perhaps be reckoned among the side issues of medical inquiry, but it is far from being insignificant. Dr. A. Rupp (Deutsche medicinische Wochenschrift, 1901, No. 26; Wiener medicinische Blätter, August 8th) has sought to throw light upon it by investigating the proportion of children of mixed parentage born dead. He finds it to be 35.88 per cent. in children of Christian parents, 32.07 per cent. in those of Jewish parents, 35.76 per cent. in those of Christian fathers and Jewish mothers, and 33.17 per cent. in those of Jewish fathers and Christian mothers. He argues from these observations, which cover a period of twenty-five years, that the father greatly predominates over the mother in contributing vitality to the offspring. It must be said, we think, that the author has resorted to an ingenious way of bringing out the fact.

THE TOPICAL USE OF ALCOHOL IN GYNÆCOLOGY.

We may not readily arrive at the *modus operandi* of alcohol, applied to the abdominal wall and within the vagina, in curing or mitigating inflammatory affections of the endometrium, the perimetrium, the parametrium, and the uterine annexa, but gratifying success is reported in a Munich thesis (summarized in the *Centralblatt für Gynäkologie* for September 28th) by Dr. S. Schmid. Over the sides of the abdomen, as far up as the navel, he applied compresses moistened with dilute alcohol, ranging from sixty per cent. at first to ninety-five per cent. Evaporation was prevented by a gutta percha covering, and the compresses were renewed three times a day. In the vagina he used tampons saturated with a thirty-per cent. dilution of alcohol. The treatment was intermitted during menstruation. Antiseptic irrigations, rest in bed, massage, and an unirritating diet were also employed.

ICHTHYOL IN THE TREATMENT OF ERYSIPELAS.

Fresh illustrations of the therapeutical value of ichthyol are frequently cropping up. Among the more recent, we may mention Eschle's use of the drug in erysipelas (*Heilkunde*, 1901, No. 6; *Centralblatt für innere Medizin*, September, 28th). He applies a thin layer of wadding, described as varying in thickness from that of a spider's web to that of cambric, and paints it with undiluted ichthyol. Great alleviation is at once felt, especially of the sense of distention. In some instances the painting is repeated on the third day. The wadding dries and drops off, leaving a sound, rosy skin. Certainly no treatment could be simpler.

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general, during the week ending October 26, 1901:

Smallpox—United States.			
California.....	San Francisco.....	Oct. 6-13.....	3 cases. 1 death.
Kentucky.....	Lexington.....	Oct. 12-19.....	2 cases.
Louisiana.....	New Orleans.....	Oct. 12-19.....	5 cases.
Massachusetts.....	Boston.....	Oct. 12-19.....	18 cases. 2 deaths.
Nebraska.....	Omaha.....	Oct. 6-19.....	6 cases.
New Hampshire.....	Concord.....	Oct. 6-12.....	1 case. 1 death.
New Jersey.....	Camden.....	Oct. 12-19.....	6 cases.
New York.....	Elmira.....	Oct. 12-19.....	6 cases.
	New York.....	Oct. 12-19.....	4 cases. 1 death.
Pennsylvania.....	Norristown.....	Oct. 12-19.....	1 case.
"	Philadelphia.....	Oct. 12-19.....	69 cases. 10 deaths.
"	Pittsburgh.....	Oct. 12-19.....	1 case.
"	Steelton.....	Oct. 13-20.....	1 case.
Rhode Island.....	Newport.....	Oct. 12-19.....	1 case.
Utah.....	Salt Lake City.....	Oct. 12-19.....	1 case.
Vermont.....	Burlington.....	Oct. 12-19.....	15 cases.

Smallpox—Foreign.

Austria.....	Prague.....	Sept. 28-Oct. 5.....	4 cases.
Belgium.....	Brussels.....	Sept. 28-Oct. 5.....	1 death.
Colombia.....	Cartagena.....	Sept. 23-29.....	1 death.
"	Panama.....	Oct. 7-14.....	125 cases.
France.....	Paris.....	Oct. 5-11.....	6 deaths.
Gt. Britain.....	London.....	Sept. 28-Oct. 5.....	169 cases. 7 deaths.
"	Southampton.....	Sept. 28-Oct. 5.....	1 case.
"	Calcutta.....	Sept. 7-14.....	2 deaths.
India.....	Madras.....	Sept. 7-13.....	2 deaths.
Mexico.....	Mexico.....	Sept. 29-Oct. 6.....	2 cases.
Nova Scotia.....	Halifax.....	Oct. 6-12.....	20 cases.
Russia.....	Moscow.....	Sept. 14-28.....	5 cases. 1 death.
"	Odessa.....	Sept. 28-Oct. 5.....	2 cases.
"	Warsaw.....	Sept. 14-21.....	1 death.
Spain.....	Madrid.....	July 15-Sept. 9.....	26 deaths.
Uruguay.....	Montevideo.....	Aug. 16-24.....	22 cases. 2 deaths.

Plague—United States.

California.....	San Francisco.....	Oct. 6-13.....	1 case. 1 death.
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Plague—Insular.

Philippines....	Manila.....	Aug. 18-24.....	11 deaths.
		Aug. 31-Sept. 7.....	2 deaths.

Plague—Foreign.

China.....	Hong Kong.....	Aug. 31-Sept. 7.....	6 cases. 6 deaths.
"	Newchwang or Newchang.....	Aug. 31.....	2 cases.
India.....	Bombay.....	Sept. 10-17.....	250 deaths.
"	Calcutta.....	Sept. 7-14.....	18 deaths.
"	Karachi.....	Sept. 8-16.....	13 deaths.

Yellow Fever.

Costa Rica.....	Port Limon.....	Oct. 5-12.....	2 cases. 1 death.
Mexico.....	Merida.....	Sept. 21-28.....	3 deaths.
"	Valladolid.....	Sept. 21-28.....	4 deaths.
"	Vera Cruz.....	Sept. 28-Oct. 5.....	7 cases. 4 deaths.

Cholera.

India.....	Bombay.....	Sept. 10-17.....	11 deaths.
"	Calcutta.....	Sept. 7-14.....	8 deaths.
"	Madras.....	Sept. 7-13.....	113 deaths.
Java.....	Batavia.....	Aug. 31-Sept. 7.....	80 cases. 68 deaths.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending October 26, 1901:

DISEASES.	Week end'g Oct. 19		Week end'g Oct. 26	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	100	23	77	25
Scarlet fever.....	101	6	117	7
Cerebro-spinal meningitis.....	0	2	0	2
Measles.....	56	6	130	4
Diphtheria and croup.....	210	25	213	37
Small-pox.....	4	1	8	3
Tuberculosis.....	231	130	235	154

Society Meetings for the Coming Week:

MONDAY, November 4th.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medi-

cine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vermont, Medical Association; Providence, Rhode Island, Medical Association; Hartford, Connecticut, Medical Society; South Pittsburgh, Pennsylvania, Medical Society; Chicago Gynecological Society.

TUESDAY, November 5th.—Medical Society of Virginia (first day—Lynchburg); New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Maine, County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, November 6th.—Medical Society of Virginia (second day); New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Maine, County Medical Society (Bangor); Bridgeport, Connecticut, Medical Association.

THURSDAY, November 7th.—Medical Society of Virginia (third day); New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, November 8th.—Medical Society of Virginia (fourth day); Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, November 9th.—Obstetrical Society of Boston (private).

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending October 26, 1901:

ATKINSON, R. T., Assistant Surgeon. Detached from the *Wabash* and ordered to the *Prairie*.

BEYER, H. G., Surgeon. Detached from the *Wabash* and ordered to the *Prairie*.

BISHOP, L. W., Assistant Surgeon. Ordered to the *Independence*.

EDGAR, J. M., Surgeon. Ordered to the *Wabash*.

GRUNWELL, A. G., Assistant Surgeon. Ordered to the Naval Hospital, Norfolk, Virginia.

KENNEDY, R. M., Passed Assistant Surgeon. Ordered to the *Franklin*.

KERR, D. B., Assistant Surgeon. Ordered to the *Wabash*.

PICKRELL, G., Surgeon. Detached from the *Columbia* and ordered to the Naval Dispensary, Washington.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending October 26, 1901:

CARTER, W. F., Major and Surgeon. The leave of absence granted him is extended fourteen days.

DOUGHERTY, J. C., Contract Surgeon, is granted leave of absence for one month.

HOLMES, THOMAS G., Contract Surgeon, will proceed from Detroit to Fort Walla Walla, Washington, and report to the commanding officer for duty.

KENYON, FRANK P., Captain and Assistant Surgeon, United States Volunteers, having tendered his resignation, is honorably discharged from the service.

STARK, ALEXANDER N., Captain and Assistant Surgeon, will proceed to Fort Monroe, Virginia, for temporary duty.

SUMMERALL, WILLIAM B., Captain and Assistant Surgeon, United States Volunteers, is granted leave of absence for one month.

TEN EYCK, BENJAMIN L., Captain and Assistant Surgeon. The leave of absence granted him is extended two months on account of sickness.

WHITMORE, EUGENE R., First Lieutenant and Assistant Surgeon, is detailed as a member of the examining board at Fort Sheridan, Illinois, during the temporary absence of FRANCIS J. IVES, Major and Surgeon.

Changes of Address.—Dr. Sewell S. Hepburn, Jr., from West River, Maryland, to State Circle, Annapolis; Dr. Edward Wallace Lee, from Linmar Building, St. Louis, to Chatham Court, Central Park West and Sixty-seventh Street, New York.

Dr. Hannah E. Longshore, the first woman to practise medicine in Philadelphia, died there on Friday, October 18th, at the age of eighty-two. She graduated from the Woman's Medical College of Pennsylvania in 1851. She was immediately elected demonstrator of anatomy.

Artificial Limbs, etc., for the Army.—According to the surgeon-general's report, dated October 8th, there were furnished during the year ended June 30, 1901, 37 artificial legs, 2 arms, and 2 feet, while commutation certificates were issued and paid in the cases of 151 amputated legs, 113 amputated arms, 9 amputated feet, and 2,748 cases in which the loss of the use of a limb was regarded as proved by the evidence on file. The cost of 192 appliances was \$1,528.77, while that of 1,054 trusses supplied to soldiers was \$7,607.44.

Medical Staff of a Hospital Resign in a Body.—The medical staff of the New Rochelle Hospital have adopted a resolution notifying the board of governors that they will not serve after November 1st because that body has passed a resolution making their terms only one year. The ten leading physicians of that city formed the medical staff. They say it was agreed that when once a physician was appointed to the staff he should enjoy a perpetual tenure of office. The hospital authorities, in view of the support given the staff by the other local doctors, will be forced to go outside the county for a medical staff. The hospital is supported by moneys voluntarily contributed. Among the members of the medical staff are Dr. T. P. Berens, Dr. Z. Edwards Lewis, Dr. C. Nelson Raymond, and Dr. D. J. Roberts.

The First Regular Women Practitioners in Germany.—It is reported that two Berlin women have passed their State examination and have become regular practising physicians of Germany. They are the first women to receive this honor, and are graduates of Hallé University, who have fulfilled all the legal requirements for a physician, and have studied the entire course in Germany. Those German women who have studied medicine have previously taken rank as "Heilkunstler" and not as regular physicians.

Southern Manitoba Physicians Organize.—At Napinka, Manitoba, on October 9th, a meeting was held of the physicians of that province for the purpose of forming an association, the bounds of which should include the three southern lines of railway west of Winnipeg and the Pipestone

branch. The election of officers resulted as follows: President, Dr. B. J. McConnell, of Morden; vice-president, Dr. F. L. Schaffner, of Boissevain; secretary-treasurer, Dr. T. J. Lamont, of Treherne; executive council, Dr. Riddell of Crystal City; Dr. Longheed, of Glenboro; Dr. McEown, of Hartney; Dr. Brown, of Carman, and Dr. Cleghorn, of Baldur.

The Rockefeller Institute for Medical Research.—A number of persons engaged in various lines of medical research are now working in various parts of the country under the direction of the Rockefeller Institute for Medical Research. A tentative working plan has been adopted by the officers of the institute. The directors have discussed the following suggestions for activity on the part of the institute: To expend \$20,000 a year, divided so as to provide for forty scholarships. To make appointments for one year. To have candidates recommended by heads of various laboratories to the board of directors. To choose only persons pursuing or about to pursue investigations on some important subject in pathology, bacteriology or hygiene.

The board of directors of the institute comprises Dr. William H. Welch, professor of pathology, Johns Hopkins University, president; Dr. T. Mitchell Prudden, professor of pathology, Columbia University, vice-president; Dr. L. Emmett Holt, clinical professor of diseases of children, Columbia University, secretary; Dr. C. A. Herter, professor of pathological chemistry, University and Bellevue Hospital Medical College, treasurer; Dr. Theobald Smith, professor of comparative pathology, Harvard University; Dr. Simon Flexner, professor of pathology, University of Pennsylvania, and Dr. H. M. Biggs, director of the laboratories of the board of health.

New York State's Health Officials in Session.—A representative delegation from every part of the State attended the initial session at Albany on October 24th, of the first annual convocation of health officials of the various cities, towns, and villages in the State. Dr. Daniel Lewis, of New York, State Commissioner of Health, conceived the idea of bringing the local sanitary officials together every year for the purpose of exchanging thoughts and suggestions, and with a view of affording a sort of a clearing house in the work of sanitation for those who are devoting their time to this end. Topics were discussed by Robert C. Taylor, who for many years was counsel for the Medical Society of the County of New York, on The Powers and Limitations of Local Health Boards Under the State Public Health Law, and by Professor Herrman Biggs, of the New York City Department of Health, on The Attitude of Health Officers Toward Consumption in the Smaller Cities and Towns. The session ended with a banquet.

Philadelphia Physicians and Druggists Combine to Bring About Mutual Reforms.—The physicians and druggists of Philadelphia propose to commence work against what they assert is an abuse of the free dispensary system of the public hospitals. They will, it is said, ask the next legislature to enact

a law requiring that hospitals keep a record, open to public inspection, giving the names of all persons obtaining medicines. The State Medical Association and the Philadelphia Retail Druggists' Association have appointed a joint committee to bring the matter to the attention of the next legislature. It is thought that little difficulty will be encountered in securing the enactment of the desired laws. Most of the hospitals maintain free dispensaries for the benefit of the poor. Many people fully able to pay for treatment take advantage of this liberality, to the detriment of both doctors and druggists, and it is hoped that publicity will tend to discourage the practice.

The New York School of Clinical Medicine.—A course of clinical lectures with demonstrations will be given on Tuesday evenings, beginning October 22d. The following subjects will be considered in the autumn course:

October 22d. Various types of chronic endometritis and their treatment. Dr. Augustin H. Goelet.

October 29th. Scalp wounds and cranial fractures, with clinical and operative demonstrations. Dr. Thomas H. Manley.

November 5th. Some new studies on delirium tremens and alcoholic toxæmia, illustrated. Dr. Thomas D. Crothers.

November 12th. The operative treatment of traumatic and pathological lesions of the joints, with anatomical demonstrations. Dr. Robert H. Cowan.

November 19th. Diseases of the nasopharynx and their treatment, with operative demonstrations. Dr. Max J. Schwerd.

November 26th. Diseases of the testes and their investments. Dr. Carl E. Pfister.

December 3d. How to measure, fit, and adjust the corset for movable kidney, with demonstrations. Dr. A. E. Gallant.

December 10th. Treatment of chronic gastric catarrh, with clinical demonstrations. Dr. Heinrich Stern.

December 17th. Trachoma (granulated lids) and its treatment, with clinical demonstrations. Dr. J. Albert Meek.

The Population of the New York State Hospitals.—The population of the several State hospitals of New York on September 30th last, the close of the fiscal year, showed an aggregate increase of 571 over the previous year. The following table gives the population of the various hospitals during the last three years:

	1901.	1900.	1899.
Manhattan.	6,098	5,822	6,525
Long Island.	3,975	3,869	3,735
Utica.	1,148	1,107	1,119
Gowanda.	351	311	313
Willard.	2,236	2,266	2,253
Poughkeepsie.	2,094	2,091	2,053
Middletown.	1,237	1,210	1,188
Buffalo.	1,913	1,880	1,812
Binghamton.	1,350	1,376	1,342
St. Lawrence.	1,671	1,606	1,480
Rochester.	581	550	554
Total.	22,654	22,088	21,374

The Civil Service Examination for the Position of Assistant Surgeon, which has been postponed to November 12 and 13, 1901, will consist of the subjects mentioned below, which will be weighted as follows:

Subjects.	Weights.
1. Letter writing.	5
2. Anatomy and physiology.	10
3. Surgery and surgical pathology.	20
4. Chemistry, materia medica, and therapeutics.	5
5. Bacteriology and hygiene.	5
6. Theory and practice of medicine and general pathology.	25
7. Obstetrics and gynecology.	15
8. Experience (practice).	15
Total.	100

Applicants will be given credit for practical experience according to length and character. Maximum credit will be given only to those who have had three or more years' experience in private practice or two years' in hospital work or dispensary service. The examination will be divided as follows: First day, first four subjects; second day, remaining subjects. Age limit, twenty years or over. From the eligibles resulting from this examination it is expected that certification will be made to the positions of assistant surgeon at the Freedmen's Hospital, Washington, at a salary of from \$1,000 to \$1,500 per annum, and to other similar vacancies as they may occur.

This examination is open to all citizens of the United States who comply with the requirements and desire to enter the service. All such persons are invited to apply, and applicants will be examined, graded, and certified with entire impartiality and wholly without regard to any consideration, save their ability as shown by the grade attained in the examination, except that preference may be given to residents of States or Territories which have not received an excess of their share of appointments under the apportionment. Persons who desire to compete should at once apply to the United States Civil Service Commission, Washington, for application forms 304 and 375, which should be properly executed and promptly forwarded to the commission.

The Craig Colony Prize for Original Research in Epilepsy.—Dr. Frederick Peterson, of New York, has offered a prize of \$200 for the best original unpublished contribution to the pathology and treatment of epilepsy. Originality is the main condition. All manuscript should be submitted in English, and the prize is open to universal competition. Each essay must be accompanied by a sealed envelope, containing the name and address of the author and bearing upon the outside a motto or device, which is to be inscribed also upon the essay. All papers received will be submitted to a committee, consisting of three members of the New York Neurological Society, and the award will be made upon its recommendation at the annual meeting of the

board of managers of the Craig Colony, October 14, 1902. Manuscripts should be sent to Dr. Frederick Peterson, 4 West Fiftieth Street, New York, on or before September 30, 1902. The successful essay becomes the property of the Craig Colony and will be published in its medical reports.

Typhoid.—An epidemic of typhoid is reported from the country about Pittsburgh, Pa.

Diphtheria.—The prevalence of diphtheria at New Albany, Ky., recently, resulted in the closing of the public schools for several days.—An epidemic is also reported from Bellesville, Mich., and at Bloomfield, N. J., twenty-two cases were recently reported.—At Springfield, Mo., scarlet fever and diphtheria are said to be raging.—Michigan reports an epidemic of malignant diphtheria in Ionia county.

Small-pox.—This disease has broken out on the Kickapoo Indian Reservation, in Kansas, and nearby towns are protected by guards.—East Boston, Mass., reports an unusually large number of cases, and in Newark, Ohio, the schools were recently closed because of the presence of the contagion.—The disease is reported to be on the increase in Philadelphia.—It has also made its appearance at Zanesville, Ohio; at Ottawa, Ont., and at Kansas City, Mo.—Another test of the compulsory vaccination act as respects public school teachers is involved in the injunction suit of Mary Helen Lyndall, of the Girls' High School, Philadelphia, against the hygiene committee of the board of education and others has been postponed.

The St. Louis Medical Society of Missouri.—At the last regular meeting, on Saturday, October 26th, Dr. Joseph Grindon read a paper entitled *An Outsider's Glimpses of Neurology*.

The Panhandle Medical Association.—The second annual meeting will be held in Vernon, Texas, on Tuesday and Wednesday, November 12th and 13th, under the presidency of Dr. David R. Fly.

The Clinical Society of the District of Columbia recently elected the following officers: President, Dr. Walter A. Wells; vice-president, Dr. Monte Griffith; secretary and treasurer, Dr. J. Carlisle De Vries.

The Steuben County (N. Y.) Medical Society held its semi-annual session recently. Dr. H. P. Jack, of Canisteo, was elected a vice-president, to fill the vacancy caused by the removal of Dr. R. A. Barney to Allegany county.

A Dinner to Dr. T. Gaillard Thomas.—It is proposed by members of the medical profession to give a dinner to Dr. T. Gaillard Thomas on his seventieth birthday, November 21st, at Sherry's at 7:30 p. m. Dr. A. J. McCosh, 16 East 54th Street, is acting as secretary of the committee having the dinner in charge.

The German Medical Society of the City of New York.—At the next regular meeting on Monday evening, November 4th, the subject of Typhoid Fever will be presented (the hygiene and diagnosis by Dr. Richard Stein, the Widal test by Dr. E. Libman).

The Tri-State Medical Association of Mississippi, Arkansas and Tennessee, will meet in Memphis, Tenn., on November 19, 20 and 21. The president is I. A. McSwain, M. D., of Paris, Tenn., and the secretary Richmond McKinney, M. D., of Memphis.

The Section of Otology of the New York Academy of Medicine held a meeting on October 9th, when the following order of business was gone through: Exhibition of Specimens and New Instruments; Presentation of Cases; Symptoms pointing to the Necessity for Operative Interference in Mastoid Suppuration, by Wendell C. Phillips, M. D.; A Conservative Element in Acute Mastoid Surgery, by Edwin W. Pyle, M. D.

The New York Obstetrical Society.—At the annual meeting, on Tuesday, October 8th, the following officers were elected for the ensuing year: President, Dr. Malcolm McLean; first vice-president, Dr. J. Riddle Goffe; second vice-president, Dr. Le Roy Brown; recording secretary, Dr. George L. Brodhead; assistant secretary, Dr. George G. Ward, Jr.; corresponding secretary, Dr. E. E. Tull; treasurer, Dr. J. Lee Morrill; and pathologist, Dr. W. S. Stone.

The Associated Physicians of Long Island and Brooklyn held their eleventh annual meeting at Garden City, L. I., on October 19th. The meeting was presided over by the president of the association, Dr. William B. Gibson, of Huntington. The secretary is Dr. James Cole Hancock, of Brooklyn. Dr. Matthew D. Mann, of Buffalo, N. Y., who performed the operation on President McKinley, was the guest of honor. He was introduced by Dr. Louis N. Lanehart, of Hempstead, and in reply congratulated the association and stated that he was pleased to be at their meeting. After the meeting a dinner was given at the Garden City Hotel. Dr. Louis N. Lanehart was the toast-master, and the following responded to the toasts: Dr. G. B. Gibson, the president of the association; Dr. Matthew D. Mann, of Buffalo; Dr. Ingalls, of Brooklyn, who read an original poem; and Dr. H. A. Fairbairn. Officers were elected for the ensuing year as follows: President, Dr. William B. Gibson, of Huntington; first vice-president, Dr. Calvin F. Barber, of Brooklyn; second vice-president, Dr. James S. Cooley, of Glen Cove; third vice-president, Dr. W. H. Ross, of Brentwood; secretary, Dr. James Cole Hancock, of 43 Cambridge Place, Brooklyn; treasurer, Dr. John P. Heyen, of Northport; board of directors, Dr. James M. Winfield, Dr. William B. Gibson, Dr. Calvin F. Barber, Dr. James Cole Hancock, and Dr. John P. Heyen.

Births, Marriages, and Deaths.

Married

AUGE—WHITTEN.—In Philadelphia, on Wednesday, October 23d, Dr. Trueman Auge and Miss Emily Geary Whitten.

BABCOCK—HERGER.—In Buffalo, on Tuesday, October 22d, Dr. Stanley C. Babcock and Miss Ida Hilma Herger.

DYSON—LAUDERBACH.—In Hazleton, Pennsylvania, on Wednesday, October 16th, Dr. John R. Dyson, of Washington, and Miss Mary Lauderbach.

HELD—HUYLER.—In Larchmont, N. Y., on Wednesday, October 23d, Dr. Reuben J. Held and Miss Abigail A. Huyler.

HETRICK—SHERMAN.—In New York, on Wednesday, October 23d, Dr. S. Le Roy Hetrick, of Asbury Park, N. J., and Miss Louise Sherman.

JACKSON—SCHOEN.—In Philadelphia, on Tuesday, October 22, Dr. M. R. Jackson, of Pittsburgh, and Miss Leonore Schoen.

KOLTZ—WHITEHOUSE.—In New Brighton, N. Y., on Tuesday, October 22d, Dr. Walter C. Koltz, of New York, and Miss Gertrude Ostrander Whitehouse.

LEMON—DUVALL.—In Washington, on Wednesday, October 23d, Dr. Hanson T. A. Lemon and Miss Juliet M. Duvall.

MUNDORFF—GRAU.—In New York, on Wednesday, October 30th, Dr. George T. Mundorff and Miss Minnie Grau.

PETERMAN—MEYER.—In Baltimore, on Wednesday, October 23d, Dr. Harry E. Peterman and Miss Louise Meyer.

PORTER—RUSSELL.—In Clinton, Missouri, on Wednesday, October 16th, Dr. Allen L. Porter, of Kansas City, and Miss Maud C. Russell.

WAGAMAN—BUSSARD.—In Middletown, Maryland, on Wednesday, October 23d, Dr. Samuel M. Wagaman and Miss Anna K. Bussard.

WILLIAMS—LUTZ.—In Dedham, Massachusetts, on Tuesday, October 15th, Dr. Edward Russell Williams, of Boston, and Miss Helen Louise Lutz.

WESTNEY—BUCHANAN.—In Palmyra, Pennsylvania, on Thursday, October 17th, Dr. Alfred W. Westney, of Atlantic City, N. J., and Miss Laura Y. Buchanan.

Died.

GEDDES.—In Washington, on Monday, October 21st, Dr. William Geddes, in the fifty-second year of his age.

HERRMANN.—In New York, on Thursday, October 24th, Dr. Moritz C. Herrmann, in the eighty-eighth year of his age.

HERZOG.—In Atlanta, on Monday, October 21st, Dr. Henry Herzog, of Racine, Wisconsin, in the thirty-sixth year of his age.

LATTER.—In Monument Beach, Massachusetts, on Tuesday, October 22d, Dr. Leonard Latter, in the sixtieth year of his age.

LOEBER.—In New Orleans, on Friday, October 18th, Dr. Frederick Loeber, in the sixty-third year of his age.

LONGSHORE.—In Philadelphia, on Friday, October 18th, Dr. Hannah E. Longshore, in the eighty-second year of her age.

MOORE.—In Parnassus, Pennsylvania, on Wednesday, October 16th, Dr. John Rowland Moore, in the seventy-fifth year of his age.

SANDERS.—In Oil City, Pennsylvania, on Sunday, October 20th, Dr. Joseph Sanders, of New York, in the thirty-fourth year of his age.

RAHAUSER.—In Pittsburgh, on Tuesday, October 22d, Dr. George Gillespie Rahauser, in the fifty-eighth year of his age.

ROGERS.—In Dunkirk, N. Y., on Saturday, October 19th, Dr. Henry Raymond Rogers, in the seventy-ninth year of his age.

ROY.—In Atlanta, on Saturday, October 19th, Dr. Gustavus G. Roy.

WITHERS.—In New Orleans, on Monday, October 15th, Dr. W. A. Withers, in the twenty-ninth year of his age.

Pith of Current Literature.

Journal of the American Medical Association,
October 26, 1901.

Removal of Foreign Bodies from the Air Passages. By Dr. De Forest Willard.—(1) Coughing should be encouraged; forcible inspiration restrained. (2) Inversion in the prone position as a domestic practice is advisable. (3) Laryngoscopy is helpful if the body is lodged at the vocal cords. It may be extracted by forceps or by laryngotomy. (4) If time permits, the x ray may be brought into serviceable use for diagnosis. (5) Careful diagnostic investigation is important to determine the actual presence of an impacted body, and its location. (6) Tracheotomy under local anæsthesia should be the rule if the object is lodged at the bifurcation or in the bronchi. Tracheoscopy, suction, and forceps manipulation must be cautiously employed. Prolonged instrumentation adds greatly to the danger of pneumonia. (7) If extraction is not secured through the tracheotomy wound the chest wall should not be invaded unless an artificial respiratory apparatus, like the Fell-O'Dwyer, is at hand, and oxygen available. With the assistance of these appliances, however, the bronchus may be reached, anteriorly or posteriorly, since by their use rhythmical movements can be maintained. (8) Resultant abscess of the lung should be treated by incision and drainage.

The Treatment of Empyema. By Dr. James H. Dunn.—The author points out that prompt recognition and adequate drainage of the purulent effusion minimizes ruptures into the bronchi, systemic infection, loss of lung expansion, and pleural thickening. In any case of thoracic dullness open to doubt, so safe, certain, and easy a means of diagnosis as aseptic needling should not long be delayed. The normal procedure for acute empyema is thoracotomy with resection of a rib. This should be the rule, because it alone is adequate to the best treatment of the vast majority of cases, and because, if skilfully done, it is scarcely more dangerous or difficult *per se* than the less efficient drainage of simple intercostal incision.

The Treatment of Strabismus Other than Operative. By Dr. Edward Jackson.

The Strabismus Operation. By Dr. C. F. Clark.—The author asserts as his conviction that, in the correction of strabismus, advancement or resection, combined with a very limited tenotomy, should, as a rule, be substituted for simple tenotomy.

Artificially Prepared Foods. Their Nutritive Value and Dietetic Application. By Dr. L. Breisacher.

The Somatic Signs of Brain Syphilis. By Dr. Hugh T. Patrick.—Among other things, the author calls attention to the extreme irregularity of the voicings of syphilis and to the value of this lack of system as a diagnostic pointer. While cerebral lues may affect the cranial nerves as would any basilar disease, invading those close together and causing gradually increasing symptoms as the disease progresses, it more frequently acts in a more erratic

way. One nerve on one side and quite a different nerve on the other; one anterior and one posterior nerve on the same side; paralysis of one nerve, disappearance of this paralysis and then paralysis of another near by or at a distance; paralysis of some fibre of one nerve and then serious involvement of another without the first growing any worse; these are some characteristic vagaries.

The Psychosis in Cerebral Syphilis. By Dr. Richard Dewey.

Syphilis of the Nervous System—Its General Pathology, with Remarks on Treatment. By Dr. F. W. Langdon.—The pathological processes comprised in syphilis of the nervous system include: (1) A localized parenchymatous and interstitial neuritis at the site of the initial lesion, due to endarteritis, compression, and local toxic action; (2) a localized root neuritis, and a peripheral mono-neuritis; (3) a generalized toxæmia affecting the nerve centres directly or metabolism in general; (4) inflammatory gummatous lesions, due to disseminated or localized vascular infections; (5) degenerative nervous processes due directly to syphilitic exudations; (6) degenerative diseases of systematized type, such as locomotor ataxia and paresis. The discovery of a means of producing artificially an antitoxine which shall arrest the disease in an early stage must be conceded as a possibility.

Preventable Diseases in the Army of the United States—Cause, Effect, and Remedy. By Major Dr. W. O. Owen.

Medical News, October 26, 1901.

Giant Sacrococcygeal Tumors. An Account of One which Pursued an Atrophic Course. By Dr. Charles M. Powers.—The case which the author reports may properly be placed in the class of teratomata and embryoid growths. Its appearance at birth or a few months thereafter, its partly cystic and partly solid nature, its size and seat, all place it in line with the cases histologically examined by Stolper and others. The age, size, and strength of the child, the absence of local pain, tenderness and ulceration, the progressive shrinkage of the tumor, all lead to the hope that Nature may have cured the condition, though it is possible that further growth may take place, and that malignant degeneration may ensue as time goes by.

Four Cases of Tumors. By Dr. James E. Newcomb.—Case I. Osteosarcoma of Inferior Turbinate. Case II. True Papilloma of the Nasal Septum. Case III. Sarcoma of Branchial Cleft. Case IV. Angiofibroma of the Nose.

Biopsy—the Histological Diagnosis of Dermatoses and Tumors of the Skin of Doubtful Character. By Dr. Jean Darier.—The author answers the question, as to whether one is justified in removing a shred of skin from a patient, by comparing the advantages of the practice with its disadvantages. Its main value is its diagnostic value, for the treatment depends upon diagnosis. Its disadvantages are such as may be easily overcome; the apprehension of the patient, the pain of the operation, and the danger of infection.

Report of Two Interesting Cases of Appendicitis. By Dr. William D. Young and Dr. William M. Johnson.

The Physician in Relation to the Dispensing of Medicine. By Dr. J. Tracy Melvin.—The author enters a plea for a thoughtful recognition of the changed conditions of to-day and for a return to that accurate, well-trained, clinical observation of the actual effects of every remedy administered by the physician in each case that he treats, to the end that the vast mass of therapeutic trash which now confuses and misleads us may be wholly swept away, and that the physicians of the present and the future may be so trained as to give to this most important branch of our profession that same skilled attention, born of scientific methods, which they now give to bacteriological diagnosis or to blood examinations.

Ankylostoma Duodenale in Texas. By Dr. M. Charlotte Schaefer.—The author believes that this parasite is not very uncommon, but is generally disregarded in this part of the world. It is desirable, she believes, in cases of indefinite anæmia associated with gastro-intestinal disturbance, and perhaps œdema and irregular febrile paroxysms similar to those of malarial fever, to make careful microscopical examinations of the fecal matter, with a view to recognizing or eliminating the possible influences of this worm.

Medical Record, October 26, 1901.

The Prevention of Yellow Fever. By Dr. Walter Reed and Dr. James Carroll.—Referring to the disinfection of cargoes, the authors point out that the only possible excuse for subjecting a cargo to disinfection would be the fear of the presence of infected mosquitoes in the vessel's hold. If the voyage has consumed more than five days, however, all of the mosquitoes contained in the hold will have died. With our present knowledge of the propagation of yellow fever, personal baggage should no longer be subjected to disinfection, and with our increased ability to prevent its spread by measures easy of application, instances should be few and exceptional when a vessel coming from a yellow-fever port should be delayed longer than is necessary to remove her non-immune passengers who have not yet completed their period of five days since leaving the port of departure. A most important work will have been performed if we can persuade the sanitary authorities of Mexico and of the Central and South American States to join us in the adoption of more enlightened methods for the suppression of this widely prevalent epidemic.

On the Mode of Transmission of the Infectious Agent in Yellow Fever and Its Bearing upon Quarantine Regulations. By Dr. A. H. Doty.—The author does not believe that Dr. Reed's experiments have shown conclusively that there may not be some other means than the mosquito by which yellow fever is transmitted. Considering these experiments, however, in connection with the results of our practical experience, it is clearly evident that this disease is not contracted by personal contagion or through the medium of clothing, bedding, cargoes of vessels, etc. He believes that we are justi-

fied in changing our quarantine regulations to conform to these views, and that such a proceeding is safe and reasonable. If the future shows that there are other means of infection, it will be then time enough to add whatever restrictions are necessary for the protection of the public health.

Arteriosclerosis: Importance, Definition, Ætiology, and Symptomatology. By Dr. Charles E. Nammack.—Arteriosclerosis is a hyaline degeneration of the structural elements of the arterial wall, with connective-tissue substitution, hyperplasia, and subsequent contraction with induration, whereby the characteristic functions of the vessel wall, retention, absorption, metabolism, with the power of expansion and contraction, are weakened and lost. The author lays stress upon the importance of a thorough understanding of this disease; considers its ætiology under the headings of heredity, age, sex, alcohol, syphilis, gout, rheumatism, certain acute infections, high living, and hard work; and calls arteriosclerosis the "doctor's disease."

Cinchonism and Its Effect upon Articulation and Vocalization. By Dr. Carl Seiler.

American Medicine, October 26, 1901.

Transmission of Tuberculosis through Meat and Milk. By John J. Repp, V. M. D.—The author considers it to have been effectually proved that tuberculosis may be transmitted through the milk and food structures of tuberculous animals to the animals that consume these products or are inoculated with them. As yet, however, the evidence of the transmissibility of consumption from animal to man is only presumptive.

Symptoms, Diagnosis, and Treatment of Enlarged Prostate Gland. By Dr. Charles J. Whalen.—The author is decidedly opposed to castration. He knows of no direct pathological evidence that castration has ever caused atrophy of the hypertrophied prostate, and he asserts that the majority of cases thus far reported as cured by castration were simply cases of local depletion. Clinical evidence of this is afforded by relapses occurring after operation. The author looks with favor upon prostatectomy, and he believes that the present high death rate is not owing to fact that the operation itself is a dangerous one, but is to be attributed rather to the fact that the patients, when operated upon, were unfit subjects for any surgical procedure. Prostatectomy should not be performed as a last resort; the time to operate is before great damage has been done to the bladder and kidneys. Spinal anæsthesia should be used in place of the usual anæsthetics.

Report of a Case of Filaria Medinensis, Gut-neia-worm Disease. By Dr. Edward Francis.

An Analgesia from the Spinal Subarachnoid Injection of Cocaine. By Dr. J. Garland Sherrill.—The author is of opinion that cocaine analgesia is not likely to prove satisfactory in operations above the level of the diaphragm; that probably it will not be much used in abdominal cases which are likely to prove tedious or difficult; that its special field will be found in operations upon the lower extremities, including amputations and resections, and upon the perinæum, bladder, and rectum; also that it is use-

ful in operations on old persons, and those suffering from diseases of the heart, lungs, or kidneys, from cirrhosis of the liver, and from abdominal dropsy; and that it can be successfully employed when a patient fears general anæsthesia. If we neglect this method in the proper cases we certainly throw aside a valuable addition to our armamentarium.

The Use of Ethyl-bromide as a Primary Anæsthetic to Ether or Chloroform. By Dr. Emery Marvel.—The author gives the results of his experience in thirty-six cases. Certainly anything which promises to render anæsthetization easier for the patient should be given careful consideration by all who constantly make use of anæsthetics.

Chorea with Partial Paralysis Secondary to Rhinitis. By Dr. C. Fontaine-Maury Leidy.

The Lane Lectures on the Social Aspects of Dermatology—VII. By Malcolm Morris, F.R.C.S.

Boston Medical and Surgical Journal, October 24, 1901.

The Case of President McKinley: Surgical History, etc.—Presented in the *New York Medical Journal*, October 19,

Association of Anæmia with Chronic Enlargement of Spleen. By Dr. Arthur H. Wentworth.—From the literature the author has compiled a valuable article.

A Brief Résumé of the Life and Work of Ambroise Paré, with Biographical Notes on Men of His Time. By Dr. Charles Greene Cumston.

Tubercular Peritonitis. By Dr. Henri T. Fontaine.—In respect to the medical treatment this should be treated like an acute peritonitis. After that, no opium, but hot fomentations for pain, if necessary. Give enough calomel to turn the stools dark green. As soon as the stomach will tolerate it, give salines in divided doses to produce two or three soft or liquid stools daily. The diet should be fluid and in regulated quantities, so as to produce no intestinal gas, until the subacute symptoms have passed. Then give only such solids as will produce no residuum or gas in stomach or bowels. Salol, guaiacol, or creosote may be used. Keep the patient quiet in bed until all abdominal tenderness has disappeared and the afternoon temperature becomes normal. Let him be more quiet whenever there is a rise of temperature or indications of abdominal tenderness or pain. Tonics, stimulants, and such general remedies as may be found curative of tuberculous infection, should not be neglected. Keep the patient under systematic treatment for several months, with carefully regulated diet.

The Report of a Unique Case of Chlorosis. By Dr. William Edgar Darnall.

Philadelphia Medical Journal, October 26, 1901.

Political Assassinations in some of their Relations to Psychiatry and Legal Medicine. By Dr. Charles K. Mills.—The author bases his article on a study of fifteen historical cases, beginning with the assassination of Henry III. of France by Jacques Clément in 1589. He divides assassins into four classes: (1) Sane conspirators; (2) assassins clear-

ly recognizable as insane; (3) degenerates who are not insane; and (4), degenerates of doubtful sanity. He calls attention to the immature years of political assassins. Jacques Clément was twenty-five years old, Ravallac thirty-two, Auckarström thirty-one, Charlotte Corday twenty-five, Wilkes Booth twenty-seven, Santo twenty-one, Golli thirty-three, Lucchoni twenty-five, Bresci thirty-one and Czolgosz twenty-eight. Liberty to think, to speak, and to print, is one of our greatest boons, but this should not mean license to incite to violence the immature, the degenerate, and the insane. After all, permanent relief can only come through a study of the causes and cure of crime, through the spread of right principles, and through the elevation of the masses.

The Czolgosz Case. By Dr. Edward C. Spitzka.—The author is of the opinion that assassinations have not become more frequent in the present era. He asserts that the social disease of which these acts are but the surface indications, has been coeval with the history of civilization, and under different guises has produced corresponding results at all times. Of 277 cases of political assassination considered by the author, 155 of the victims succumbed. Among the assassins the "mortality" by legal and other retributive measures was over fifty-five per cent.

Some Respiratory Conditions Depending upon Gout and Obesity. By Dr. J. M. Anders.

Results and Advantages of Closing the Nephrorrhaphy Wound with Aseptic Adhesive Strips. By Dr. Augustin H. Goelet.—The author advises the use of aseptic adhesive strips (1) on æsthetic grounds, (2), because, by avoiding sutures that penetrate the skin in closing wounds, we avoid the danger of stitch abscesses and procure a quicker convalescence, and (3), because of the time saved. It is essential that the adhesive strips be sterile, or the margins of the wound covered by the strips will become infected and primary union will not take place.

Multiple Primary Neoplasms in One Individual (Spindle-cell Sarcoma of Forearm, Adeno-carcinoma of Pylorus, Myomata of Stomach-wall); Treatment with Coley's Mixture. By Dr. Alfred Scott Warthin.—This case is interesting chiefly because of the rarity of the occurrence of multiple primary neoplasms. As to the effects of treatment by the injection of the toxines of erysipelas and *Bacillus prodigiosus*, the author asserts that the destruction of a tumor by such means is attended by the danger of systemic intoxication and the more rapid development of cachexia. There is also the possibility that injections of large size favor metastasis by mechanically loosening the cells of the tumor into the lymph stream. In the case in question the autopsy findings suggest the occurrence of such results of the toxine treatment.

Are the Smaller Medical Colleges an Essential Factor in Medical Education? By Dr. William J. Gillette.

Lancet, October 19, 1901.

An Introductory Address. By O. Lodge. D. Sc., F. R. S.

A Clinical Lecture on Tumors of the Parotid Gland. By H. T. Butlin, F. R. C. S.—The parotid gland is liable to tumors of two kinds—innocent and malignant. The innocent tumors were formerly called enchondromata, sometimes chondro-fibromata, and sometimes chondro-adenomata. In the same way the malignant tumors were called myxo-fibro-, and chondro-sarcomata. But it was soon noted that these so-called sarcomata were surprisingly innocent, the results of operation being better than in any other part of the body. In the majority of cases the tumor was of small size, easily removed, and was attended by no involvement of the lymphatic system. In recent years pathologists have come to hold that these tumors are not sarcomata at all, but that they are endothelial tumors, and that the networks and plexures of round cells are endothelial cells derived from the lining of the lymphatics and blood vessels. So that not only are the sarcomas of the parotid much reduced in number, but many pathologists are inclined to say that there is no such thing as sarcoma of the parotid gland. And the same belief holds for carcinoma. These pseudo-sarcomata are generally encapsuled, but do not shell out easily as they are embedded in the substance of the parotid gland. The innocent tumors, of whatever size, never produce facial paralysis, but it occasionally occurs as the result of operation for such tumors.

Developmental (Myelogenetic) Localization of the Cerebral Cortex in the Human Subject. By Dr. P. Flechsig.

On the Protective Substances of Immune Sera. By Dr. E. W. A. Walker.—The author calls attention to the fact that sera from animals immune against a certain infection, when injected into another animal for the purpose of protecting it against the same infection, require the presence of another substance, which is formed within the body of the injected animal. This substance or ferment is called addiment, or addimentary substance. Antimicrobial sera have *in vitro* no bacteriolytic action; they contain immune body, but addiment is absent. The author has studied the nature and formation of this addimentary substance, and his conclusions are as follows: 1. Addiment is not extremely special to the species (of animal). 2. Addiment is a leucocytic ferment. 3. Addiment is increased during and by immunization. 4. The immune body is produced exclusively by the leucocytes. 5. Agglutinins assist the phagocytic process.

Gynæcological Cases. By Dr. H. Macnaughton-Jones.—The author reports the following cases, remarking upon the points of interest of each: 1. Primary tuberculosis of the Fallopian tube with pyosalpinx. 2. Large hernia following on cœliotomy operations. 3. Very large fibro-myoma; hysterectomy; recovery.

The Prevention of Asphyxia when the Birth of the After-coming Head is Delayed. A Historical Note. By Dr. G. F. Blacker.—The author describes two instruments which have been used to prevent asphyxia in cases of after-coming head. The first is the tube, used by Pugh, to be introduced into the child's mouth, as far as the larynx. It has a core of fine wire, which is covered with fine soft

leather, and is to be introduced along the palm of the examining hand. The second instrument described is the tube of Joos, by which he proposed to prevent compression of the cord and so avoid the danger of asphyxia in pelvic and other presentations. It consists of a tube made of steel rings covered with leather, which has a slit along the whole of one side. Through this slit the cord is inserted into the tube outside the body, and the tube is slid up along the cord to the point where compression would take place. The steel rings prevent compression of the cord, and the placental circulation is not interfered with. But, as regards these or similar plans, it can only be said that the real problem is to get the head out of the pelvis, and that as rapidly as possible.

The Treatment of Hemiplegia. By Dr. L. G. Guthrie.—The author summarizes his article as follows: 1. Neglect and want of treatment aggravate severe, and retard the recovery of mild, cases. 2. The evils to be foreseen and guarded against are articular adhesions, late rigidity, and muscular atrophy. 3. Articular adhesions should be prevented by passive movements of each joint from the very first. 4. Faulty positions of the limbs should be constantly corrected or they will become chronic. 5. Contraction of the muscles should be treated by endeavors to improve the nutrition of their weaker opponents. 6. Massage, passive movements, and, to a less extent, electricity, should be used with this object. These agents not only counteract muscular atrophy from disuse, but probably take the place of normal stimuli and invigorate the neurones. 7. The recovery of mild cases may be often hastened by re-education of movements. Want of re-education frequently prevents recovery. 8. Re-education consists of a combination of passive and active exercises. 9. Movements should be first encouraged in those parts which naturally tend to recover first. 10. Incoordination and general weakness of limbs which have yet regained power of movement should be treated by exercises and mechanical therapeutics. 11. It is important to find out what the patient can do and to make him do it.

This paper deals with the treatment of hemiplegia as a condition, without reference to its cause, for whether the cause be hæmorrhage or occlusion of cerebral vessels by embolism or thrombosis, is immaterial. The principles of treatment will be the same and need not interfere with other measures taken for the relief of the disease which gave rise to the hemiplegia.

The Treatment of Syphilis, with Special Reference to the Best Methods of Administering Mercury. By Dr. W. Ayres.

Gazette hebdomadaire de médecine et de chirurgie.
September 10, 1901.

Thyroid Treatment in Infantile Pathology.—M. E. Ausset says that the thyroid body possesses a powerful influence upon the nutrition. By exciting to action organic changes, it is especially useful in those cases in which there is organic arrest or maldevelopment. It is therefore indicated in cases in which myxœdema seems to be the basic fault, and in cases of infantilism dependent upon rachitis, tuberculosis, and hereditary syphilis. It must be given with great care to children lest they suffer

from thyreoidism. It is best administered to them in carefully prepared tablets. Its usefulness in the conditions mentioned can no longer be doubted.

September 22, 1901.

Treatment of Inversion of the Uterus.—M. Oui discusses, in turn, taxis, the use of pessaries of the various media, and tamponing. He reserves hysterectomy for cases of uncontrollable hæmorrhage. He describes in detail other operations for the relief of the condition.

Progrès médical, September 14, 1901.

Artificial Dilatation and Accouchement for Contracted Pelvis.—M. P. Crouzat and M. L. Merle report the case of a primipara with a much contracted pelvis. The fœtus presented by the breech. Agglutination and rigidity of the cervix rendered the necessary artificial dilatation very difficult. The rigidity was neither syphilitic nor due to prolonged labor, and the authors attribute it to anatomical peculiarity. The child was asphyxiated, but soon recovered. A uterine hæmorrhage followed delivery, from which recovery also followed.

Chancre of the Clitoris.—M. Maurice Druzelle reports three such cases coming under his observation at Saint-Lazare.

Progrès médical, September 21, 1901.

Extraneous Transplantation of the Testicle.—M. L. Lounget describes in detail this operation, devised by him, for the permanent cure of hydrocele and varicocele. It has the advantages of offering a vaginal sheath for the cord, the avoidance of separation of the cord, and hence the prevention of hæmorrhage. In cases of varicocele, four distinct advantages are gained in the final result, which the author designates as orchidopexy, vaginopexy, phlebopexy, and scrotopexy.

Progrès médical, September 28, 1901.

Psychical Disturbances in Paludism.—M. Jean P. Cardamatis says that one must distinguish between the psychical disturbances which occur in the height of a simple intermittent fever, those which arise during the fever and in the intermittent stages of chronic paludism, those observed in the course of a remittent fever, and the psychoses which appear in the course of malarial cachexia. These manifestations are undoubtedly due to the toxines developed during the disease, and usually in persons of a neuropathic taint. Paludism can arouse morbid predispositions to the psychoses, neurasthenia, and hysteria, and also any local or general disease which is latent. The malarial deliria do not differ in any respect from those evoked by other acute infectious diseases or endogenous or exogenous intoxications. Acute mania may also appear, as well as melancholia.

Indépendance médicale, September 18, 1901.

Eclampsia.—M. Maygrier gives an excellent description of the symptoms of eclampsia ante-partum, intra-partum, and post-partum. He says that the old theories of causation of a neurosis, uræmia, and ammoniæmia, are no longer tenable since Bou-

chard's work has shown that eclampsia is due to a self-intoxication through impairment of the liver and, secondarily, of the kidneys. The author alludes also to Fehling's theory of intoxication of the mother by the fœtus, and says that if this can be proved, a most valuable reason for terminating the pregnancy exists. Eclampsia is not a convulsive disease; it is a form of toxæmia characterized by convulsive seizures. The best treatment is prophylactic.

Alimentary Cure of Tuberculosis. By M. Bernheim. (*Continued article.*)

Presse médicale, September 14, 1901.

Gastro-enterostomy for Dilatation of the Stomach.—M. Debove records a case in which this operation was performed with excellent results. No tumor or growth could be demonstrated, but there were adhesions between the stomach and the neighboring organs, and a stenosis of the pylorus was found. After recovery, the patient was more cheerful, he suffered no pain, and was obliged to take no medicine. He could eat anything without disturbance, there was no vomiting or eructation, and he gained rapidly in weight.

Tuberculous Rheumatism. By M. Mailland.

Presse médicale, September 28, 1901.

Lecithin in Tuberculosis.—M. H. Claude and M. A. Zaky conclude that lecithin produces marked changes in the nutrition of tuberculous subjects as shown by increase of appetite, elevation of spirits, and a striking amelioration of the entire system. Locally, the lesions are slowly affected by lecithin, but the general improvement is so great that there can be no doubt of the local change for the better. Owing to its action in causing an immediate decrease in the excretion of the phosphates and its effect upon the nutritive state in general, it should be a valuable adjuvant in the treatment of tuberculosis.

Lyon médical, September 15, 1901.

Radial Paralysis by Fracture of the Humerus, Release of the Nerve; Cure. By M. Jaboulay, M. Chanoz, M. Cros, and M. Carayon.

Apparatus for Measuring the Surface of the Body. By M. H. Bordier.

Cyst of the Pancreas.—M. F. Monin records the case of a woman who was delivered of a malformed fœtus. She had at the time a tumor, independent of the uterus, which was subsequently diagnosed as a cyst of the pancreas. The cyst ruptured spontaneously into the intestine, effecting a cure and a total disappearance of all symptoms.

Berliner klinische Wochenschrift, September 16, 1901.

Soluble Silver as an Internal Antiseptic.—Dr. Crédé, after describing the manner in which he has reached his conclusions by experiment, says that the insoluble citric acid salt of silver has most splendidly met his expectations as an antiseptic. He employs it at his operations. His sutures are impregnated with the lactate of silver. The ointment

which bears his name is a soluble preparation and can be used for intravenous purposes or for inunction, thus permeating the entire system. Previous stimulation of the skin by friction is desirable in order that the ointment shall more easily permeate the cutis. The ointment is of service in cases of sepsis of any kind. The intravenous method of employment is still in the experimental stage.

Babinski's Toe-phenomenon.—Dr. H. Schneider says that the normal reflex movements of the sole of the foot on irritation are derived from two sources, which have different centres in the central nervous system. Plantar flexion alone has its centre in the cortex; dorsal flexion of the toes, with a combined movement of the leg, is a spinal reflex. Babinski's sign is that, on slight irritation of the sole, the plantar reflex does not appear alone, but the spinal reflex is at once called into action. It may be evoked in one of two ways: either through a break in the pyramidal tract, so that the cerebral reflexes are lost, or by an increase of irritability of the spinal cord, as in strychnine poisoning.

Inhalation of Oxygen. By Dr. E. Aron.

Extension of Kyphoses. By Dr. J. Joseph. (*Continued article.*)

Berliner klinische Wochenschrift, September 23, 1901.

Prophylaxis of Tuberculosis. By Professor B. Fränkel.

Ætiology of Lymphatic Leucæmia.—Dr. Wilhelm Türk compares his findings in a case with those of Löwit, who claims a parasitic origin for the disease. Löwit's body is a small oval parasite which is found with especial frequency in degenerated leucocytes. The author followed Löwit's method of staining and discovered similar bodies in disintegrated white cells in cases of chlorosis; so he has come to the conclusion that it represents a nuclear degeneration.

Stereoscopic Examination of the Retina. By Dr. W. Thorner.

Oxygen Inhalation (conclusion).—Dr. E. Aron concludes, from a result of numerous experiments and clinical observations, that the inhalation of oxygen is worthless as a therapeutic measure, except in cases of carbonic acid or aniline-oil poisoning or in diseases due to rarified air.

Centralblatt für innere Medizin, September 7, 1901.

Mechanotherapy.—Dr. H. Zeehuisen makes a plea for the wider recognition of the beneficial effects of the mechanical methods of treatment. The so-called "resistance movements" are especially useful in the convalescence of the acute and subacute diseases, as adjuvants to the rest cure, in conditions of depreciated mental and physical states, in cases of atypical gout, obesity and in neurasthenia.

Münchener medicinische Wochenschrift, September 17, 1901.

Puerperal Fever.—Professor Hegar reviews the present and former opinions on the subject in an historical manner. As to the treatment, he empha-

sizes the prophylaxis of infection, and says that, of all methods, permanent drainage and two-hourly irrigations of the uterus have proved most serviceable to him. Chlorine water is his favorite irrigating fluid. The temperature is not the only feature that decides the gravity of a case, the pulse being an important factor, as well as the general signs of sepsis, lividity, insomnia, etc. These are the signs which demand a rapid intervention.

Remedy for Seasickness.—Dr. R. Heinz recommends the taking of several deep breaths rapidly in succession, to counteract each attack of vomiting during seasickness. He says that this will effectually counteract any tendency to vomiting.

Renal Diabetes.—Dr. Hugo Luthje reports the case of a young man who developed a nephritis and cystitis from gonorrhœa. Soon afterward sugar was found in the urine, but it is not known if it was there before. The author believes that this case offers a proof that diabetes can be of renal origin. The sugar in this case was independent of the diet and the sugar in the blood was found to be diminished.

Osteoclasia and Osteoclasts. By Professor L. Hensner.

Acute Osteomyelitis of the Sternum in Typhoid Fever. By Dr. G. Jochmann.

Tamponing of the Abdominal Cavity with Air to Control Dangerous Hæmorrhage. By Dr. Georg Kelling. (*Continued article.*)

Riforma medica, August 17, 19, and 20, 1901.

Notes on Clinical Cryoscopy. By Dr. A. Cconi and Dr. F. Micheli.—This article treats of the value of cryoscopy in the diagnosis of exudates, transudates, œdemas, the cerebro-spinal fluid, and the blood in some of the acute infectious diseases. Since the introduction of cryoscopy into clinical investigations, opinions have been divided as to the origin and evolution of exudates and transudates. Some regard them merely as effects of certain physical conditions, such as changes in osmosis, and others consider them as results of specific action on the cells involved. The adoption of the first theory would mean a purely physical interpretation of biological processes. Under the heading of exudates and transudates, the author's researches included the investigation of the origin, diagnosis, course, and prognosis, of these phenomena with the aid of cryoscopy. They were unable to answer completely any of these questions. They found, for example, that the value of delta (or the so-called cryoscopic coefficient) of various exudates, transudates, etc., did not differ widely enough to make a distinction between these pathological fluids possible. This value, Δ , averaged 0.55 or 0.56, in other words was equal to the Δ of the average freezing point of blood. Nor were the authors able to distinguish by the freezing-point test the stage of the disease with which they had to deal. Hence cryoscopy in the investigation of exudates could not be of any prognostic value. As to the ætiologic question—whether exudates are secretions or effects of osmotic changes—the authors cannot state positively. They call atten-

tion to a fact, not previously noticed, namely, that the cryoscopic values (Δ) of exudates and transudates, correspond very closely indeed with those of the blood of the patient studied. Thus, for instance, the pleuritic exudate in a patient with nephritis has a Δ of 0.74, and his blood, of 0.74 also.

The fluid taken from œdematous regions was found to be iso-osmotic with the blood of the same subject. The cryoscopic value of cerebrospinal fluid diminishes markedly in tuberculous meningitis and increases considerably in nephritis. In the first instance this change is proportionate and parallel to a similar change in the blood, while in the second case it is directly opposite to the cryoscopic condition of the blood, which remains normal. In typhoid fever the cryoscopic value of the blood remained near the average, 0.56; in croupous pneumonia, on the other hand, it rose always above this average, sometimes up to 0.60.

August 20, 1901.

Epicystotomy for Stone, Followed by Immediate Suture of the Bladder. By Dr. Tito Scarrone.—The author advocates, in all cases of vesical stones, suprapubic cystotomy followed by immediate closure of the vesical wound. He reports a series of fourteen cases, in which this operation was performed. In thirteen a simple interrupted suture was used with good results, namely, a perfect and permanent union in twelve of these cases. A second row of Lembert stitches was not used, because the bladder has no serous coat on its anterior aspect. The average duration of the post-operative period in these cases was sixteen days. One patient out of the fourteen operated upon died of renal disease. One patient had previously submitted twice to litholapaxy, another had had a suprapubic cystotomy performed, but the stones recurred about two years after the first operation. At the second operation the bladder was found empty and not adherent to the abdominal wall.

Gazzetta degli Ospedali e delle Cliniche, August 18, 1901.

Considerations on some Rare Cases of Echinococcus Cysts. By Dr. Tito Scarrone.—Among 3,586 patients admitted into the surgical wards of the Civil Hospital of Massa-Carrara, during the decade from 1891 to 1901, there were only four cases of echinococcus cysts. A fifth case was observed in the same hospital at the beginning of the present year. The five patients affected with echinococcus varied between twenty-eight and forty-eight years of age. Two were men and three were women. In three cases the infection was traced to dogs which lived in the houses of the patients. In none was there any history of traumatism. The correct diagnosis was made in three of these cases before the operation. In a case of echinococcus cyst of the muscular wall of the chest the diagnosis of tuberculous abscess of a rib had been made. A diagnosis of cystadenoma had been made in a case of echinococcus cyst of the breast. A diagnosis of pulmonary tuberculosis had been repeatedly made by various physicians in two cases of echinococcus cyst

of the lungs. In both these cases there was an effusion into the pleura, but the percussion sounds were not those of ordinary pleurisy. Thus, in one case the line of dulness was higher in front of the chest than behind. In the other case the dulness was limited to the front and right lateral regions of the chest, while, behind, the percussion sound was normal. An echinococcus cavity in the liver was easily diagnosticated in the fifth case, but numerous other cavities were found, on laparotomy, in this organ, in the peritonæum and other viscera. In all these cases operative treatment was resorted to; in the pulmonary cysts the pleura and lungs were incised and the cysts excised with a bistoury and a thermocautery knife. This procedure is better than opening the cysts and injecting antiparasitic fluids, such as bichloride of mercury. Among the five patients whose cases are here recorded there were no deaths and the operations were in all instances successful.

Sodium Cacodylate in Surgical Tuberculosis.

By Dr. Ernesto Skuldecki.—Cacodylate of sodium acts in the same way as arsenic. Its action is more cytoplasmic than hæmoglobinoplastic. It is eliminated in larger quantities by the kidneys than arsenic, and its elimination lasts longer. In surgical tuberculosis it is without appreciable effect, if not hurtful. The time spent in administering sodium cacodylate in such cases may be employed with advantage for other methods of treatment.

Hypodermoclysis of Artificial Serum in Grave Cases of Syphilis. By Dr. Gravagna.

Roussky Archiv Patologiyi, Klinicheskoy Meditsiny i Bakteriologiyi, May, 1901.

Syphilis, Venereal, and Cutaneous Diseases, and their Treatment among the Russian People.

By Dr. B. Th. Demitch.—An exhaustive study of the history and statistics of these diseases among the masses of the Russian people shows that syphilis is very widely prevalent in that country. In some localities whole villages are affected with the disease, not a single inhabitant being spared. The synonyms for this disease that are commonly used among the people are very numerous, but among them "French sickness" and "scrofula" are noteworthy because widely used among other nations. The popular ideas as to the origin of diseases of this class are, for the most part, mystic or theurgic in character, bearing the traces of ancient superstitions and testifying to the low state of development of the people. As regards the popular remedies and modes of treatment for venereal diseases in Russia, it is to be noted that the people use daily a vast number of medicinal substances from the three natural kingdoms, which have been proved to be of value by empirical facts. Many of these popular remedies have been confirmed by science as worthy of trust, and are often used by physicians in the Russian country districts. Thus, the use of mercury in various forms, including smoking it in a pipe, was known in Russia long before Van Swieten's discovery in Western Europe. For scabies they use sulphur, tar, tobacco, and other substances, always in more or less crude forms. In addition, *Saponaria officinalis* and *Phytolacca decandra* are employed with success in this parasitic disease. The weak side of popular Russian medicine is found in the

abuse of these remedies, so that they do more harm than good; in the insufficient care and nursing of sick persons, and in the disregard of the principles of hygiene, which are for the most part a *terra incognita* to the common people.

The Rôle of Immunizing Substances in the Phenomenon of Phagocytosis. By Dr. Sawtschenko.—In a recent study on relapsing fever, the author showed that in the course of passive immunization the leucocytes absorbed the immunizing substance (*substance sensibilisatrice* of Bordet) and thereby acquired new positive chemiotactic properties toward the sprilla. Therefore in this case the immunizing substance provoked phagocytosis by acting upon the leucocytes. The immunizing substance may also possibly act directly upon the microbes, and render them thereby accessible to those phagocytes which are negatively chemiotactic. It is impossible to study this question upon microbes, which are so easily influenced by slight changes, physical or chemical, but the author attempts to study it upon red blood cells. He found that leucocytes could absorb an immunizing substance, and the presence of the latter in their protoplasm rendered them positively chemiotactic toward bodies for which the immunizing substance used had a specific affinity. In other words, the injection of an immunizing substance into an organism may produce phagocytosis in two ways: (1) By fixing itself upon the "object of the phagocytosis," and (2), by entering into the composition of the protoplasm of the leucocytes.

On Amœbic Enteritis in St. Petersburg. By Dr. W. Kernig and Dr. A. Oucke.—The authors report what they believe to be a case of amœbic dysentery, and cite a number of other cases of this kind reported to have been observed in St. Petersburg.

Watch, August 15 (August 27, New Style), 1901.

The History of Corporal Punishment in Russia in the Twentieth Century. By Dr. D. N. Jbankoff.—The author finds, after a thorough investigation of the subject, that corporal punishment is but very slowly getting out of use in Russia, and that, in fact, in some places some forms of corporal punishment are now used more than ever. Corporal punishment is used among the "non-elect," *i. e.*, among the lower classes of society, but occasionally the elect themselves are so punished. Corporal punishments have a great deal to do with the medical profession, for, in Russia, physicians in official positions sanction the application of such punishments, witness the punishment itself, and treat those who have been punished. Any physician who sanctions corporal punishment acts against the spirit of the Hippocratic oath. (*To be continued.*)

Chronic Inflammation of the Middle Ear and its Treatment. By Dr. P. P. Hellat.—The author calls attention to an interesting fact, namely, that in Russia purulent otitis media is not so severe, nor does it so often become chronic as in Western Europe. One type, chronic otitis of the purulent form accompanied by cholesteatoma, is never seen in Russia. Chronic effusions into the middle ear, and certain forms of perforations styled marginal, are almost unknown and caries of extensive areas of

bone is rarely seen in that country in connection with ear disease. Mastoiditis is not infrequent, but intracranial complications are rare. The majority of Russian aurists use irrigation in purulent otitis media. The author emphasizes the fact that this method of treatment produces effects that are directly opposite to those which it is intended to obtain by its use, and, in addition, produces unpleasant complications. A careful and thorough cleansing of the middle ear by the dry method is much better. The author uses small "wipes" of cotton, twisted upon the ends of thin wooden sticks. After wiping the cavity with the cotton, the end of the stick is broken off, and fresh cotton is put on. This is repeated until the cavity is dry. Powdered boric acid is next blown into the middle ear. The only exceptions to this method are cases with very thick, tenacious pus, in which careful syringing is used before the drying. Chronic cases that are not amenable to conservative treatment require removal of the granulations or polyps, if any are present, or removal of the ossicles. The best method is Stacke's operation, but it is too complicated, and the author has modified it as follows: A semi-circular incision, beginning under the auricle and ending near the tip of the mastoid and penetrating to the periosteum over the bone; separation of the periosteum up to the auditory canal; blunt dissection of the canal and drawing of the latter forward; removal of the lateral wall of the attic and the mastoid cavity with a chisel; opening of the antrum with a bent probe as a guide; removal of the remains of the drum, together with the ossicles and granulations. The stirrup is left in place, as its removal is sometimes fatal. This operation obviates the necessity of plastic work on the external ear, which is needed in Stacke's.

The Influence of Organic Compounds of Phosphorus (Lecithin) upon the Fixation of Nitrogen (Proteids) in the Human Body. By Dr. M. D. Ilyine.—The body adapts its elimination of nitrogenous compounds (proteids) to the income, but this rule holds good only within physiological limits; for the body cannot go beyond a certain physiological minimum of expenditure, and a certain maximum of income. A change from abundant income of nitrogen to a scant income, or vice versa, is accompanied by the corresponding change in the expenditure, but not in direct numerical proportion. A change from a small income to a large income of nitrogen is accompanied only by a small increase in the expenditure, at least for a few days, so that a part of the nitrogenous food is retained by the body; but in a few days parallelism is established between the income and the expenditure; in other words, a nitrogenous and phosphoric equilibrium is established. In the same manner, when the income of nitrogen is decreased suddenly, the expenditure of nitrogen is not decreased at once, but gradually, until equilibrium is established. When, however, there is an increased amount of phosphorus or of phosphorus-containing organic bodies (lecithin), the organism does not lose an excess of nitrogen, even if there be an insufficient amount of nitrogenous bodies in the food. In other words, phosphorus seems to help nitrogen to become fixed in the molecules of the body, and the organic compounds of phosphorus help to preserve the body cells from destruction.

Letters to the Editor.

TINCTURE OF IODINE IN AMYGDALITIS.

326 KEARNY STREET,
SAN FRANCISCO, October 10, 1901.

To the Editor of the *New York Medical Journal*:

SIR: In your issue of October 5th Dr. Samuel Floersheim very opportunely calls the attention of the profession to the beneficial local action of tincture of iodine in acute amygdalitis, but the doctor overlooked the French literature on that subject.

Indeed, Major Burlureaux, of the Val de Grâce, in his publication, *La Pratique de l'antiseptie dans les maladies contagieuses*, 1892, speaks very enthusiastically of tincture of iodine swabbing of the throat in *angine phlegmoneuse*.

"It is marvellous," says Burlureaux, "to see with what rapidity swabbings with pure tincture of iodine cut short the disease. They procure an immediate relief of the dysphagia, break the fever with extraordinary promptness, and constantly prevent suppuration. They are accordingly applicable in all cases of phlegmonous angina, up to the very moment when suppuration is manifest, as Coupard stated it; and even in these cases, they prevent the disease from spreading to the other side of the soft palate."

"Iodine in these cases acts like a true specific, although its effect has appeared to us nil in other kinds of microbic anginas."

I have several times availed myself of Burlureaux's suggestion and in properly selected cases verified the prompt benefit derived by a distressed patient.

GEORGE GROSS, M. D.

THE HOSPITALS OF CUBA.

HAVANA, CUBA, October 19, 1901.

To the Editor of the *New York Medical Journal*:

SIR: In your issue of October 12th you quote a letter from the *Montreal Medical Journal*, written by Dr. Francis J. Shepherd, on Hospitals of Cuba. Dr. Shepherd, in his letter, states that he did not visit the yellow fever hospital at Havana. He comments upon the very excellent system here of hospitals maintained by the various societies, and speaks of the necessity of a hospital for infectious diseases. Las Animas Hospital is the Havana hospital for infectious diseases, and is under the control of, and administered by, the Sanitary Department. I am sorry Dr. Shepherd did not see Las Animas. I believe there is no hospital better equipped for this purpose anywhere in the United States. It is generally known as the yellow fever hospital, because this is the most important disease of this class in Havana; but all contagious and infectious diseases occurring in the city are sent there.

It is beautifully situated in the outskirts of the city, on high ground, having about twenty acres of land in its enclosure, and ample building facilities for caring for and isolating the various classes of diseases liable to go there.

No expense has been spared in its equipment; and everything pertaining to patients is made thoroughly comfortable. There are a modern kitchen, a

large steam sterilizing plant, a good laundry, stable facilities, etc. The personnel is ample, under the direction of Dr. John W. Ross, surgeon, U. S. navy, who was detailed for duty with the army and assigned to the command of this hospital on account of his well-known ability and extensive experience with yellow fever in the past. He has under him a corps of ten trained female nurses from the United States, besides other employees. The hospital is connected by telephone with all parts of Havana, and has an excellent ambulance service located on the grounds, with modern ambulances and appliances, which respond to ambulance calls at a moment's notice, just as do our large hospitals in the United States.

The running expenses of the hospital are about \$2,600 a month. The results obtained have amply justified our expenditure, and the hospital has the entire confidence of the American community, nine tenths of the Americans who were taken with yellow fever last year going to this hospital by preference, rather than be treated at home or go elsewhere. The municipal regulations do not require a patient sick with yellow fever to go to a hospital unless he wishes. In 1900, approximately 170 Americans suffering from yellow fever were treated at Las Animas, with a recovery rate of 91 per cent.; the general death rate throughout the city from this disease was 24 per cent. All cases of yellow fever occurring in Havana are diagnosed by a board of medical men appointed for this purpose, so that the same standard of diagnosis applies to those cases at Las Animas as to those occurring elsewhere.

M. C. GORGAS, Major and Surgeon, U. S. army,
Chief Sanitary Officer.

THE NON-SURGICAL TREATMENT OF APPENDICULAR DISEASE.

42 WEST THIRTY-SEVENTH STREET,
NEW YORK, October 28, 1901.

To the Editor of the *New York Medical Journal*:

SIR: Apropos of the editorial, The Non-Surgical Treatment of Appendicular Disease, in the *New York Medical Journal* October 26, 1901, during many years I have been one of those practitioners who firmly believe that in this, as in very many diseases, the medical aspects of the case are given too little importance, the surgical side far too much.

No one more than I would gladly accept or have recourse to surgical interference when required. On the other hand, I claim for the purely medical man a greater value in the majority of instances. From the broadest standpoint, there is, as I believe, scarcely a single absolutely surgical disease. If the different organs of our body were merely inserted for the purpose of removal, or modification, or adornment by means of the knife, I might perhaps see the justice of such a view, but, convinced as I am that there is no organ which is without its distinct function, this I cannot admit. Because we do not know as yet what the function is, is no reason to deny its existence. Because we are ignorant or groping, let us search until we have more light. Light does not consist in the array of certain facts as they appear to the eye, when these facts are opposed by others which can, in the nature of things,

only be appreciated by other senses backed up and controlled by an intelligence which generalizes from all that is known, to reach right conclusions. To the watchful and studious observer, the operation for appendicitis is an exaggeration many times, because it eliminates far too much the immense importance of prophylaxis and judicious medical care before the surgeon's knife should be thought of. I am, indeed, one of those who believe that no surgical operation should ever be performed in any direction, upon any organ, without previous consultation with a general practitioner of prominence and wide experience. In this way we should see the bright day occur when he, the master hand, shall again assume control of all specialties, even general surgery included. In other words, the medical clinician is the man to be foremost in the public eye and properly appreciated always because it is his due and rightful heritage, and not, as now, to be assigned a relatively inferior post.

BEVERLY ROBINSON, M. D.

Book Notices.

Anæsthetics and their Administration. A Text-book for Medical and Dental Practitioners and Students. By FREDERIC W. HEWITT, M. A., M. D. Cantab., Anæsthetist and Instructor in Anæsthetics at the London Hospital, etc. With Illustrations. London and New York: The Macmillan Company, 1901. Pp. xxiv-2 to 528. [Price, \$4.]

Eight years have elapsed since the first appearance of this treatise, and in its new garb it has been amended so as to make it a work not only of more practical value, but of greater scientific character as well.

The chapter on the experimental physiology of anæsthesia has mainly received elaboration. By the use of italics and the grouping of facts, systematic data are readily found upon reference. A work of such high order, from one of the few who are in a position to speak *ex cathedra*, it is to be hoped will freely find its way into the hands of those who are in need of what constitutes the best practice in the giving and the choosing of anæsthetics.

Das Wachstum und die Verbreitungswege des Magencarcinoms vom anatomischen und klinischen Standpunkt. Von Dr. med. ROBERT BORRMANN, I. Assistenten am Pathol.-anatomischen Institut. Mit 16 Tafeln und 21 Abbildungen im Texte. Jena: Gustav Fischer, 1901. Pp. 376.

The object of this monographic study of cancer of the stomach is to present the results of the author's investigations on several disputed questions concerning the pathology and operative treatment of these growths. Thus, it has long been a moot point whether carcinomata grow by the proliferation of their own elements, gradually crowding and compressing the neighboring tissues, or whether the latter participate in the neoplastic process by analogous changes and growth. Another point which has not been thoroughly investigated is as to whether in excising gastric carcinomata the operator always re-

moves all diseased tissue, though apparently his knife passes through perfectly healthy tissues beyond the growth. For this purpose the author has examined microscopic sections from sixty-three stomachs affected with cancer.

Of the cases analyzed, in forty-three the operation was performed "through healthy tissues," and twenty-eight patients lived without recurrence. Of the remainder (fifteen), eleven died from the effects of the operation itself, while only four showed recurrence. The author calls attention to the fact that eleven patients, nearly twenty-five per cent., died of the effects of the operation, and says that this death rate should be lessened by the improvements in modern technics. He urges an operation in the so-called "inoperable" cases, because his statistics show that radical measures are often crowned with success in such instances. Lastly, he considers the question as to the influence of the primary tumor upon the growth (not the occurrence) of metastases, and expresses the view that the primary tumor so injures the organism as to prepare a favorable soil for metastatic growths. Hence, the removal of the primary tumor may have a beneficial influence upon the metastases, even though these cannot be reached by the operator. A number of cases illustrating this point are cited.

We regret that space forbids us a more detailed analysis of Borrmann's excellent work. As a model of painstaking, systematic research it stands eminent among books of this class. It exhibits a minuteness of observation and a masterful handling of the author's side of the debate on the subject of cancer in general and cancer of the stomach in particular that make it a monograph of enduring value, both from the clinical and from the pathological viewpoint.

Pathologie und Therapie der Herzneurosen und der funktionellen Kreislaufstörungen. Von Dr. AUGUST HOFFMANN in Düsseldorf. Mit 19 Textabbildungen. Wiesbaden: J. F. Bergmann, 1901. Pp. ix-367.

The functional disturbances of the heart have received in this monograph a consideration which has rarely been given them in the standard works on cardiac or nervous diseases. Since the newer discoveries of Engelmann and Gaskell in the domain of the physiology of the heart, the functional disturbances of this organ have met with renewed attention by clinicians. In this respect the present work is in the line of progress.

In its general division it deals with some anatomical and physiological considerations and with clinical methods; it then takes up the symptoms and signs of the functional cardiac disturbances and considers the auscultatory and percussional features of these disorders. The relations between functional and organic disorders of the heart are then considered, and a short *résumé* of the prognostic data in the former affections is presented, concluding with some general considerations of the therapeutics of nervous and functional cardiac disturbances.

The special division deals with the functional disturbances in which the heart muscle is involved and with acute cardiac dilatation. The following subjects are then discussed: Heart disturbances following the use of coffee and tea, tobacco, morphine, co-

caine, and alcohol; the heart and the circulation in fever; disturbances of the circulatory apparatus in constitutional diseases; disturbance of the activity of the heart in organic diseases of the nervous system; the heart in functional neuroses; the reflex disturbances of cardiac activity; impaired cardiac activity in diseases of the liver, kidneys, and lungs; the Adam-Stokes disease; paroxysmal tachycardia; and Basedow's disease. The book concludes with a consideration of vascular neuroses.

BOOKS, ETC., RECEIVED.

Modern Obstetrics. General and Operative. By W. A. Newman Dorland, A. M., M. D., Assistant Demonstrator of Obstetrics, University of Pennsylvania, etc. With 201 Illustrations. Second Edition Revised and Enlarged. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 7 to 797. (Price, \$4.)

A Text-book of Obstetrics. By Barton Cooke Hirst, M. D., Professor of Obstetrics in the University of Pennsylvania, etc. Third Edition, thoroughly Revised, with 704 Illustrations, 36 of them in colors. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 11 to 873. (Price, \$5.)

A Manual of the Practice of Medicine. By George Roe Lockwood, M. D., Attending Physician to Bellevue Hospital. Second Edition, Revised. With 103 Illustrations, many of them in Colors. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 5 to 847. (Price, \$4.)

A Text-book of the Diseases of Women. By Charles B. Penrose, M. D., Ph. D., formerly Professor of Gynecology in the University of Pennsylvania, etc. With 221 Illustrations. Fourth Edition, Revised. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 11 to 539. (Price, \$3.75.)

Pathological Technique. A Practical Manual for Workers in Pathological Histology and Bacteriology, including Directions for the Performance of Autopsies and for Clinical Diagnosis by Laboratory Methods. By Frank Burr Mallory, A. M., M. D., Assistant Professor of Pathology, Harvard University Medical School, etc., and James Homer Wright, A. M., M. D., Director of the Clinico-Pathological Laboratory of the Massachusetts General Hospital, etc. Second Edition, Revised and Enlarged. With 137 Illustrations. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 9 to 432. (Price, \$3.)

The Principles of Hygiene. A Practical Manual for Students, Physicians, and Health Officers. By D. H. Bergey, A. M., M. D., First Assistant, Laboratory of Hygiene, University of Pennsylvania. Illustrated. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 9 to 495. (Price, \$3.)

Human Physiology. Prepared with Special Reference to Students of Medicine. By Joseph Howard Raymond, A. M., M. D., Professor of Physiology and Hygiene in the Long Island College Hospital, etc. Second Edition, entirely Rewritten. 443 Illustrations, some of them in Colors, and 4 Full-page Lithographic Plates. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 9 to 668. (Price, \$3.50.)

A Text-Book of Embryology. For Students of Medicine. By John Clement Heisler, M. D., Professor of Anatomy in the Medico-Chirurgical College, Philadelphia. With 196 Illustrations, 32 of them in Colors. Second Edition, thoroughly Revised. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 9 to 405. (Price, \$2.50.)

A Laboratory Course in Bacteriology. For the Use of Medical, Agricultural, and Industrial Students. By Fredric P. Gorham, A. M., Associate Professor of Biology, Brown University, etc. With 97 Illustrations. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 1 to 192. (Price, \$1.25.)

Atlas and Epitome of Special Pathologic Histology. By Docent Dr. Hermann Durck, Assistant in the Pathologic Institute in Munich, etc. Authorized Translation from the German. Edited by Ludvig Hektoen, M. D., Professor of Pathology in Rush Medical College, Chicago. With 123

Colored Illustrations on 60 Lithographic Plates. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 5 to 192. (Price, \$3.)

Dose-book and Manual of Prescription-writing, with a list of the Official Drugs and Preparations, and many of the Newer Remedies with their Doses. By E. Q. Thornton, M. D., Ph. G., Demonstrator of Therapeutics, Jefferson Medical College of Philadelphia. Second Edition, Revised and Enlarged. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 13 to 362. (Price, \$2.)

A Handbook of Pathological Anatomy and Histology. With an Introductory Section on Post-mortem Examinations and the Methods of Preserving and Examining Diseased Tissues. By Francis Delafield, M. D., LL. D., Professor of the Practice of Medicine, College of Physicians and Surgeons, Columbia University, and T. Mitchell Prudden, M. D., LL. D., Professor of Pathology, College of Physicians and Surgeons, Columbia University. Sixth Edition. With 13 Full-page Plates and 453 Illustrations in the Text in Black and Colors. New York: William Wood & Company, 1901. Pp. xix-3 to 819.

Miscellany.

The Rocky Mountain Industrial Sanatorium.—

We have received from the board of directors a report, of which the following is the substance:

The institution has finally passed from a theoretical to a practical stage of existence. After a period of five years, devoted to the development of the plan which forms the fundamental structure of the institution, support has been secured from the ranks of the medical profession, and from social and business circles, which is most creditable and for which we are very grateful.

A desirable site has been found for the permanent location of the institution; a lease has been secured and satisfactory terms for the purchase of the property have been made. It is located five miles southwest of Denver, on the Denver, Lakewood and Golden Railroad. The property consists of a highly cultivated tract of land, with an orchard of five acres of bearing trees. Satisfactory buildings for our present needs are on the property and are now in use; there is also abundance of ground under high cultivation, supplied with a free water right for irrigation. There are two free mail deliveries each day. The institution is also supplied with a long and short distance telephone service. There is electric railway service from Denver every hour, fare five cents, and it requires but twenty-five minutes to make the trip. The site is beyond and above the dust and smoke of Denver and furnishes a view of the mountains on the west for more than a hundred miles which is unsurpassed. Looking eastward, a grand panorama of Denver is presented. The environment is beyond criticism.

The sanatorium has been in operation in its new abode since October 10th. We are now ready to receive patients properly recommended by the members of our advisory boards.

Our new prospectus has not as yet been completed. The following brief statement will give an idea of our present status: We are now caring for fifteen patients; within a few weeks we shall be able to accommodate about thirty-five. Patients are obliged to pay only for actual cost of living. On the other hand, opportunity will be given them to take part in the administration of the institution and the remunerative industries now being established.

The various departments are now being equipped by friends of the institution. Auxiliaries are being established in various parts of the country to endow cottages and furnish rooms for patients coming from their respective localities.

All letters of inquiry will be gladly and promptly answered. At present our ability to care for patients is limited. A hearty cooperation on the part of members of our advisory boards will soon enable the institution to greatly extend its usefulness.

39 South Newton Street, Denver, Col., Villa Park Station.

Professor Rudolf Virchow, whose eightieth birthday was recently widely celebrated, was born October 13, 1821, at Schivelbein, a small town in Pomerania. He was educated at the Gymnasium, in Berlin, and, in 1839, he began his medical studies. He graduated at the University of Berlin in 1843. The following year he was appointed assistant in pathological anatomy at that institution. In 1846 he was connected with the Charité Hospital, and a year later was appointed regular lecturer in the university. In 1848 he was commissioned by the German government to visit Upper Silesia to study typhus fever there. In 1849 he became professor of pathological anatomy at Würzburg, which position he held until 1856, when he was called to be director of the Pathological Institute, in Berlin. He was a member of the Prussian Chamber in 1862, and of the Reichstag from 1880 to 1893.

The name of Professor Virchow is inseparably associated with cellular pathology, which he first expounded. He is also well known as a student of archaeology, ethnology, and anthropology. The gold medal for Science, conferred by Emperor William upon Professor Virchow in connection with the celebration of his eightieth birthday, is possessed by no other member of the medical and law faculties of the University of Berlin, and by only three members of the philosophical faculty, including Dr. Mommsen, the historian.

A McKinley Memorial; a Seaside Sanatorium with a Pavilion for Every State, for the Treatment of American Children Suffering from Tuberculous and Scrofulous Diseases or Predisposed to Consumption.—Under date of October 9th, Dr. S. A. Knopf writes to us as follows:

During the past week some lay and some medical journals announced that it was intended to erect in Washington a McKinley hospital in honor of our late beloved President. Beautiful as this idea may be, I believe that a little memorial hospital, located in Washington, is not a great enough tribute to a nation's President such as was William McKinley. Furthermore, while I would not wish to say that there is no room for a hospital for the treatment of general diseases in Washington, I know that there is no urgent need of it. On the other hand, I know, and all physicians and charity-workers of our large eastern and western cities will bear me out when I say, that there is a crying and urgent need of a sanatorium, or rather several sanatoria, where the many little scrofulous and tuberculous children of poor parents could receive treatment, care, and the necessary education. France, Germany, Holland, Italy, and the Scandinavian countries all have numerous

seaside sanatoria where the little sufferers afflicted with the above-mentioned diseases are taken care of. The seacoast climates, combined with proper sanatorium treatment, seem to produce really wonderful results in scrofulous and tuberculous children. The reports of some of the European seaside sanatoria state an average of 75 per cent. of cures.

We in America have, with the exception of one or two small children's hospitals and a few floating hospitals during the summer months, no such institutions. In a little address delivered at the recent Congress on Tuberculosis in London, I said that in our eagerness to take care of the consumptive adult we should not forget the little sufferers afflicted with the same or other tuberculous diseases. To treat the scrofulous or tuberculous child (scrofulosis being only a milder form of tuberculosis), or to prevent a child with an hereditary tendency from developing consumption or any other form of tuberculous disease, means the saving of a life and the preservation of a perhaps very useful future citizen.

To realize the urgent need of seaside sanatoria for children one must have visited the crowded tenement districts of our great cities and seen the large number of scrofulous and tuberculous children there and the many who bear on their pale little faces the stamp of candidates for consumption (pulmonary tuberculosis).

There are already laws in some States prohibiting the tuberculous child from attending public school; but, as far as I know, none of these States have provided other places where children suffering, it is true, from a chronic communicable, but also curable, disease can receive the education to which they are entitled, much less where they could have a chance of being cured of their affliction. The results obtained in some of our American sanatoria for the treatment of tuberculous adults are as good as any of those obtained in European institutions. The preventive measures inaugurated by our New York Board of Health have not only served as models for other American cities, but have been imitated by many European municipalities and found to be the most practical and efficacious. We have already a number of sanatoria for the treatment of the consumptive poor adults, though by no means enough. However, in nearly every State of the Union the question of providing institutions for adult tuberculous patients with little or no means is now being agitated. Only for the countless little ones suffering from the same or other tuberculous disease there is nothing done.

Our good McKinley had two children, and then he lost. He dearly loved little children, and the creation of a sanatorium for the treatment and prevention of a disease with which so many American children are afflicted would surely be a fitting memorial to this great man and lover of children. The McKinley Sanatorium for the Treatment and Prevention of Tuberculous Diseases in Children should be the name of such an institution.

The meaning of the name William McKinley written on the portals of these houses of hope for many a suffering mother's heart, will be made clear to these little inmates by their teachers and grown-up friends.

The word McKinley will embody to these little sufferers all that is needed to make them good p

tients, obedient scholars, noble men and women, true American citizens. McKinley's fortitude during the last days of his life must teach them what all patients need: Trust in God, confidence in their physician, patience. His words of forgiveness to the very man who slew him must show these little children the sublimity and nobleness of his character. McKinley's life as a man, citizen, patriot, and President embodies all that is truly American. A better example to teach our children the meaning of true manhood and true patriotism we cannot find.

Let all American men and women who can afford it contribute through their children or through their children's friends toward the realization of this McKinley sanatorium.

In letting the children of parents of means who are happy and well bring their mites toward a movement of this kind, a lesson of charity and patriotism may be taught to them as well. There will be found in every community responsible and patriotic citizens to take this matter in hand and bring it to a successful issue. Let each State contribute enough to have its own pavilion to which to send its children. Let the Atlantic and Pacific coasts be lined with such institutions, one or two pavilions for each State, according to its needs. Let good schools be attached to each sanatorium, so that the intellectual development of the children may not suffer.

There exists in the North Sea (German Ocean) on the island called Norderney, a beautiful flourishing sanatorium for the treatment of tuberculous children. Its name is Kaiser Friedrich Hospiz, and it was erected in memory of that unfortunate Emperor Frederick the Third, whom the German people so fondly call Frederick the Noble. In the fortitude of this beloved sovereign, in his patience, in his martyrdom, in his love for his people, in his ideas and ideals of what should constitute a free and just nation there is a great similarity to our beloved McKinley.

We, too, may call our martyred ruler "the Noble," and to his memory erect a memorial of practical utility. Let us build an institution where the lives of American children can be saved to be sent forth in health and vigor to their respective communities and to help finish the work for which McKinley lived and died: to make the American nation the greatest, the noblest, the foremost of the world.

A Little Bit of Modern Polypharmacy.—The *Journal de médecine de Paris* for September 1st cites the following birdshot prescription (called Pastilles of Cachundé) for the treatment of anaphrodisia, from the *Écho médical du Lyon*: \mathcal{R} Armenian bole, 50 grammes; amber, 25 grammes; musk and ambergris, of each 3 grammes; aloes-wood, 16 grammes; magnesium carbonate, 23 grammes; yellow sandal wood, 5 grammes; red sandal wood, 100 grammes; mastich, sweet flag, galangal, cannella, aloes, rhubarb, myrobolans, absinthe, of each 3 grammes; calcined ivory, 90 grammes; Muscat wine, 50 grammes; distilled rose water, 25 grammes; sugar, 2,500 grammes; mucilage of gum ragacanth, q. s. To be made up in pastilles of 9 grains each. From six to eight daily.

The Reflexes of Deglutition and their Relation to Right Eating.—E. H. Van Sommeren (*British Medical Journal*, October 12th), in an interesting

paper entitled Was Luigi Cornaro Right? read at the last meeting of the British Medical Association, cited the history of Luigi Cornaro, a Venetian nobleman, who lived from 1467 to 1566. After a severe illness, at the age of forty, he began, under medical advice, gradually to reduce his diet. He had previously been a free liver. For some time he restricted himself to a daily allowance of twelve ounces of solid food and fourteen ounces of wine; later in life he still further reduced his bill of fare, and he found that he could support his life and strength with no more solid meat than an egg a day. So much habituated did he become to this simple diet, that when he was above seventy years of age the addition by way of experiment of two ounces a day nearly proved fatal. At the age of eighty-three he wrote his treatise on the Sure and Certain Method of Attaining a Long and Healthful Life, and this work was followed by three others on the same subject, composed at the ages of eighty-six, ninety-one, and ninety-five respectively.

Now, was Luigi Cornaro right? asks Mr. Van Sommeren. Did he make use of a physiological process unknown to us, of the value of which he was not cognizant? To live to an advanced age must we be as temperate as he, reducing the quantity of our food to a minimum required by Nature? That we all eat more than we can assimilate is unquestionable. How can we determine the right quantity? Instinct should guide us, but an abnormal appetite often leads us astray. Nature's plans are perfect if her laws are obeyed. Disease follows disobedience. Wherein do we disobey? We live not upon what we eat, but upon what we digest; then why should undigested food, recognizable as such, be deemed a normal constituent of solid egesta?

The author then describes a fact to which his attention was called by Mr. Horace Fletcher, an American living in Venice, that if all food, liquid and solid, is masticated until it becomes tasteless, not only do the fauces, after a few weeks, refuse to allow the passage of imperfectly prepared food, but such food is returned from the back to the front of the mouth by an involuntary, though eventually controllable, muscular effort taking place in the reverse direction to that occurring at the inception of deglutition.

What happens, says the author, is this: Food as it is masticated, slowly passes to the back of the mouth and collects in the glosso-epiglottidean folds, remaining there in contact with the mucous membrane containing the sensory end-organs of taste. If it is properly reduced by the saliva, it is allowed to pass the fauces, a truly involuntary act of deglutition occurring. Let the food, however, be too rapidly passed back to these folds, that is, before complete reduction has taken place, and the before-described reflex muscular movement occurs as follows: The tip of the tongue is involuntarily fixed at the backs and bases of the lower central incisor teeth by the anterior fibres of the genio-hyoglossi muscles. With this fixed point as fulcrum, the lower and middle fibres of these muscles, aided by those of the sterno-hyoid and stylo-glossi muscles raise the hyoid bone, straighten out the glosso-epiglottidean folds, passing their contents forward by the fauces, the opening of which is closed by approximation of its pillars and contraction of the superior constrictor. The tongue, arched postero-anteriorly by the genio-

hyo-glossi, palato-, and stylo-glossi muscles, laterally by its own intrinsic muscles, is approximated to the fauces, soft, and hard palates in turn, and thus the late contents of the glosso-epiglottidean folds are returned to the front of the mouth for further reduction by the saliva, preparatory to deglutition. The word reduction is used for the reason that all foods tested are found, without exception, to give an acid reaction to litmus when served at table. The reflex muscular movement occurs in the writer's case from five to ten times during the mastication of each mouthful of food according to its quantity and its degree of taste; as often as it recurs the returned food continues to give an acid reaction, while food allowed to pass the fauces is alkaline. It is found that the removal of taste from any given bolus of food coincides with complete alkaline reduction. The fibre of meat, gristle, connective tissue, the husk of coarse breads and cellulose of vegetables are carefully separated by the tongue and buccal muscles and rejected by the fauces. To swallow any of these necessitates a forced muscular effort, which is abnormal.

Adult man was not originally intended to take his nourishment in a liquid form, consequently all liquids having taste, such as soups, milk, tea, coffee, cocoa, and the various forms of alcohol, must be treated as solids with taste and insalivated by holding them in the mouth, moving the tongue gently with straight up and down masticatory movements until their taste is removed. Water, not having taste, needs no insalivation, and is readily accepted by the fauces.

In explanation of the phenomenon described, the following theory is advanced: The fauces, back of the tongue, epiglottis, in short, those mucous surfaces in which are placed the sensory end-organs of taste and "taste buds," readily becoming accustomed to an alkaline contact by excessive insalivation and consequent complete alkaline reduction of the food, afterward resent an acid contact and throw off the cause of offence by the muscles underlying them. This phenomenon must not be confused with the rumination and regurgitation. The food in these cases is not swallowed, nor does it pass any point from which it can be regurgitated.

The important point seems to be this alkaline reduction of acid food before it passes on to meet digestive processes elsewhere, which then become alternately acid and alkaline. In the first few months of infant life, when saliva is not secreted, Nature ordains that mammary secretion shall be alkaline. With the eruption of teeth comes an abundant flow of saliva and a synchronous infantile capacity for managing other foods. This flow of saliva depends on a thorough demand and use to maintain its generous supply. It is just at this time that children learn to bolt their food, the demand fails, with a consequent detriment to the salivary glands, digestive processes, and the system generally.

"Considerable importance has been attached to the normal action of bacteria in the intestines, and it has even been supposed that the presence of bacteria is essential to life. Such a view has recently been shown to be erroneous by an elaborate and painstaking research carried out by Nuttall and Thierfelder" (*Schäfer's Physiology*, p. 465, vol. i).

Now, inasmuch as bacterial digestion has no place in the animal economy, surely it can only occur at the expense of the organism? Can micro-organic action take place in the intestines without the production of toxins and the consequent absorption of these toxins into the blood? Are not even those of us who may be enjoying seemingly the best of health supplying to our tissues pabulum containing mild toxins, thus causing an increased catabolic action to occur in each individual cell of our bodies? Are not the blood elements floating in a plasma containing such toxins rendered less resistant, weaker, less capable of fulfilling their functions as carriers and combatants of disease?

When this reflex is restored to its function micro-organisms get no further than the stomach. They are destroyed there by the acid gastric juices stimulated to their full normal secretion by the presence of a sufficiently alkaline substance. Indigestible matter is eliminated and micro-organisms still existing in the lower intestines are deprived of their means of subsistence, decrease, and in time may cease to exist. The body no longer absorbs the toxins these produced, and to this fact may be ascribed the increase of mental energy, the general physical betterment, the cessation of morbid cravings for food and drink, and those of a sexual nature which are noticed and experienced. The excreta of the intestines, skin, and kidneys become almost odorless and entirely inoffensive. The solid egesta are voided thickly covered with mucus and leave the end of the bowel dry and clean. Flatus is no longer produced. The urine is inoffensive and uric acid, chlorides, and the aromatic sulphates are reduced in quantity.

Owing to deliberation in eating necessitated by this new habit satiety occurs on the ingestion of considerably less food. Although there results enhanced pleasure in the taking of all foods, rich and simple, and especially in the appreciation of good wines, the quantities of these foods and beverages that suffice fully to satisfy the appetite is much smaller than formerly, while there is a marked preference for the simpler kinds of food. The author now can imagine no more pleasureable meal than one consisting of good brown bread, eggs, butter, cheese, and cream. These, with fresh vegetables and a very little fruit, form his staple diet. Following on the ingestion of a lessened quantity of food, and on its better assimilation, there is less waste, the fæces are voided less frequently, sometimes only once in five to eight days. The lower bowel is not the reservoir it formerly was, hæmorrhoids cease from troubling and constipation cannot exist. For this same reason the body, at the beginning of the practice, commences to approximate to its normal weight, increasing or decreasing as the individual be too thin or too stout.

But the acquiring of this new reflex while pursuing daily occupations is not simple and needs more than a little patience and much serious thought. The habits of a lifetime cannot be changed in a few days or weeks. The shortest time in which the reflex has been re-established is four weeks, and this only by avoiding conversation at meal times and concentrating the attention on keeping the food in the mouth until complete alkaline reduction has taken place and taste has disappeared.

Special Articles.

THE TREATMENT OF CUTANEOUS EPITHELIOMATA.

By CHARLES W. ALLEN, M. D.,

NEW YORK,

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MEDICAL SCHOOL AND HOSPITAL.

It is not necessary to take up the question of the curability of cutaneous epitheliomata. We all know how susceptible skin cancer is to properly directed efforts, if the latter are made at a sufficiently early stage of the process. We owe it to the public, however, to proclaim its curability, and answer emphatically their oft-repeated question, *Yes, cancer can be cured*. There is altogether too much newspaper discussion of a somewhat hysterical character from time to time, with headlines announcing to the world "A cure for cancer has at last been discovered." We have long had cures for cancer and we have more to-day perhaps than ever before, but the quacks have been for years successfully, though unskilfully for the most part, applying a cure whose great value scientific physicians have been too slow in recognizing and practising. Pastes for the removal of malignant growths are almost as old as medicine itself, but for years they have been held in disrepute, largely, I believe, because so commonly employed by charlatans and in such a manner as to bring them into discredit. The quacks have not been slow to announce that cancer is a curable disease, and that, too, without the knife, and rich has been their harvest, and rich, alas! has also been the churchyard harvest. Not because pastes were bad, but because they who applied them were ignorant or knavish. Now, our duty to the public and to ourselves is to see the truth as it really is, proclaim it, and act upon it.

Since what I have to say is in the nature of a protest against the constantly reiterated dictum of the surgeon that there is nothing in the treatment of cancer but the knife, I will not mention the great utility of cutting, a utility which we all recognize when the case is suitable for such surgery. I will speak in passing of the x ray as a curative agent. I have had till now only a limited, insufficient personal experience with it, but from my own observation and reports so far received I am inclined to believe this method of treatment, as well as that devised by Finsen for the application of concentrated rays from the sun or electric light, has a promising future. Both have their drawbacks and difficulties. Many sittings are required, the x rays are not always wholly within our control, and the Finsen method is painful, often to such an extent that patients are forced to give it up.

To quote my own words from a recent publication,¹ "Wide excision is unquestionably the best of treatment for growths favorably situated for operation. Many are inoperable by reason of location, or because of repeated return after operation, or for the reason that the patient will not consent to the use of the knife. In these properly applied caustics will cure. Electrolysis has at times its advantages."

Early treatment based upon early diagnosis is the ideal. Practically, however, a skin cancer is often successfully attacked when it comes under observation for the first time anywhere from one to ten years from its incipency. Once, however, the diagnosis is established, treatment should be prompt and energetic. Faulty diagnosis before this time may in a certain proportion of cases have made the prognosis most unfavorable by permitting the period for successful effort to slip by. The hopelessly inoperable cases are those alone to which the designation *noli me tangere* should be applied. In all early stages, before deep penetration of the disease and the involvement of such organs as the eye, glandular structures, and parts beyond the reach of cautery or knife, the name should be, if used at all, *noli me tenuiter tangere*, touch me not lightly. Superficial caustics cannot be too strongly condemned. And, still, unnecessary sacrifice of healthy tissue should be avoided as much as possible. In order to escape both horns of the dilemma, we choose a caustic which possesses a certain affinity for the structure to be destroyed and which penetrates deeply, following downward the epithelial prolongations. Such a caustic I believe we possess in arsenious acid. Sherwell and others allege for the acid nitrate of mercury in fifty-per-cent. solution this same elective activity in destroying epithelial neoplasms beyond the sphere of its escharotic action. My experience with this acid in epithelioma has been limited, and so far my preference has been for the arsenic, though I have by no means confined myself to any routine method of its application.

Electrolysis has its use as an adjuvant to other means or as the sole agent employed, as shown in such a case as this: A pearly epithelioma had existed beneath the left eye in a young man for a year or more. On examination of an excised portion by a pathologist of note, it was pronounced epithelioma. This growth I removed in October, 1898, with the flat electrolytic needle which I have devised for this and similar purposes. This patient I have just seen, and a soft white scar about three quarters of an inch in length and a quarter of an inch wide marks the site of operation. It is of interest to note that the patient's father, who in early life had a similar epithelioma removed from the face, is now suffering from cancer of the intestine in

¹Practitioner's Manual, New York, 1899.

the region of the appendix, discovered in an operation for supposed appendicitis. I very frequently employ the needle to destroy dilated vessels and telangiectases in the immediate neighborhood of the scar after the application of caustic paste, or to operate upon outlying tissue which appears in any way of a suspicious nature.

The plan of treatment which I usually pursue comprises features of several methods which have at different times been advocated by others, and some of my own device. Taking, for example, the ordinary form of epithelioma upon the face, which furnishes the largest number of cases and has the distinguishing features of long existence without extensive involvement of tissue, spreading horizontally before it penetrates deeply and showing little tendency at first to involve the lymph channels and nodes, the treatment will vary somewhat according to the stage at which it comes under observation, the dimensions it has acquired, and the parts involved.

Almost always the border is first to be curetted with the smallest instrument which will do the work. The tissue is peculiarly soft and readily breaks down under the sharp spoon, so that the scraping-out process can be done quickly and with surprisingly little pain. If the patient is one who comes for this form of treatment, as many do, because they dread cutting operations, I usually say nothing about what I am doing, and they never look upon it as a surgical procedure. This curettage prepares the way for the quicker and better action of the caustic paste. If the centre is an ulcer covered with a crust, the latter is removed. If the cancerous proliferation projects above the skin level, it can be scraped out in the same manner or not, as the case may be. While the oozing of blood is being checked by pressure, the paste is made as follows: Equal parts, by weight, of arsenious acid and orthoform or, approximately, one part by bulk of white arsenic to two or three parts of orthoform are mixed with just enough water to form a paste of the consistence of butter. This I pack into the peripheral furrow made by the curette, seeing that it penetrates well beneath the skin, if, as often happens, the scraping has caused an undermining. Then, unless the area is too large, *i. e.*, much over an inch in diameter, I fill the ulcer cavity level with the skin or, if there is no cavity, place a thick layer of paste over the part to be destroyed. I now spread a thinner layer upon compressed lint, linen, or cheese-cloth large enough to extend over the surrounding skin for some distance beyond the sore. This varies with the size of the epithelioma, the surrounding induration, the presence of enlarged vessels, the altered appearance of the skin's surface, and other evidences of the penetration of the process beyond the points

at which the soft new growth appears to stop. Before applying this outer layer of paste I paint a ring half an inch wide, or wider if there is room, with methylene blue in collodion, to surround the field of operation and protect the skin from irritation. Upon this ring I fasten down the margins of the dressing with several layers of the same paint. If the cancer is one near the eye, and especially if it involves the greater canthus, I seal up the eye with several layers of the blue collodion, over which I place plenty of absorbent cotton, and again several layers of plain collodion. In this way I have been able to eat out the involved skin and deeper tissues to the ciliary border of the lid and at the canthus to the very eye itself without damage to this organ. I doubt whether knife surgery is capable of doing as much in this class of cases or with better cosmetic as well as curative results.

The reason for employing orthoform to replace the acacia of the Marsden paste is that it relieves to a large degree the pain and takes away one of the chief objections to the method. I have believed for some time that I originated this combination, which I consider one of value. I have received a letter from Dr. William Perrin Nicolson, of Atlanta, stating that he had published a similar observation in January, 1900, having used the drug in solution. I have not looked for the published report of the New York Dermatological Society meeting in which I made my observation public, but I gladly concede any credit due to Dr. Nicolson. He states in his letter that Czerny had, prior to his publication, already used orthoform in an arsenical solution for this same purpose. I find also that Griestous likewise spoke of orthoform used in solution in the *Gazette médicale de Bordeaux*, 1898, No. 15. Waiving, therefore, any claim to priority in the use of orthoform in cancer, I can still say that I have independently found that orthoform in paste form modifies the pain in a decided manner, though it occasionally produces a localized dermatitis, but more especially so when used by itself as an after-dressing. This happened twice in one case. In extensive and deeply penetrating cancer I at times apply as an after-dressing arsenic in solution varying from a half to one per cent., at times in association with three-per-cent. strength of methylene blue, which I have long regarded as an excellent dressing for strictly inoperable cases, producing a certain analgetic effect and retarding growth. Although the alcohol in the Czerny-Trunczek solution,

R	Powdered arsenous acid.....	1 part;
	Absolute alcohol,	} of each.....75 parts.
	Distilled water,	

is in itself somewhat painful, it seems to have the valuable property of dehydrating the epithelial cells

so that the arsenic can act more promptly in coagulating their protoplasm.

In certain cases of epithelioma of the tip of the nose I have employed the Czerny-Trunczek method after thoroughly curetting, using the one-in-fifty solution subsequently after a thick crust had formed. One chief objection to the method is its long duration. Formerly I employed more than now the Bougard paste, consisting of

Wheat flour.	60 parts;
Starch.	60 "
Arsenous acid.	1 part;
Cinnabar.	5 parts;
Chloride of ammonium.	5 "
Corrosive sublimate.	0.50 part;
Solution of zinc chloride, at 52°	450 parts.

The zinc chloride here present attacks healthy as well as diseased tissue, so that it is best used only where a definite area of sloughing is sought for in situations where there are no large vessels which might be eaten into and cause severe hæmorrhage. Also upon such parts as the forehead, where the periosteum and bone lie so close beneath the skin and, although not involved by the disease, might be acted upon by the zinc, the arsenic alone is better. The duration of the application must vary with circumstances, but should usually be inverse to the strength of the paste. The weaker paste I often leave on twenty-four hours. If it is desirable on account of deep involvement of parts to make the paste of double arsenical strength, the effect should be observed at the end of eight or ten hours, then continued or not up to twice this length of time.

As to the exact mode of action of the arsenic, I can say little aside from a belief in the selective affinity for epithelial overgrowth or epithelial structure out of place, which appears to attack in an antagonistic and destructive manner. A. R. Robinson believes that, besides, the action the toxins and toxalbumins from the necrosed tissue act distinctly upon the epithelia. Believing as I do in the presence of parasites at least as originators of some epitheliomata, I must believe that arsenic thus applied acts upon them when present as well as upon their products and resulting cell proliferation.

Among the reasons for using pastes in preference to the knife we have the very great danger from operative infection in cutting. No matter how much care is taken, lymph spaces or channels must be cut through, and there is always a chance that the incision may not be sufficiently wide of the growth to avoid outlying foci. It is, as is well known, in the lymph channels that the epithelial proliferation takes place to a great extent. Now, if, as is supposed, the products of inflammation set up by the arsenic are carried by way of the lymphatics to out-

lying regions, it seems a fair presumption that the treatment may be further reaching than the knife.

In many instances the anatomical situation is such that it is practically impossible to go wide of the mark with a cutting instrument, and I am forced to the conclusion that satellitic foci have a much better chance of escaping the knife than of escaping the effects of arsenic properly applied.

Conclusions.

1. Cutaneous cancer can be traced in almost all instances to preceding local irritation.
2. While other causes may be operative, it is not unreasonable to assume that infection may be one source of irritation occasioning cancer.
3. Benign epitheliomatous proliferations of infectious nature transmitted by contagion lend weight to this view.
4. Cancer is curable, but the disease may be allowed to progress until the patient no longer is.
5. No treatment short of the most radical measures should be tolerated.
6. In the application of caustic pastes and subsequent cauterizing dressings we possess a method not alone radical, but one which is in many conditions preferable to the knife.
7. The earlier treatment can be applied, the less likelihood is there of recurrence or of subsequent outbreaks in other parts due to cancerous tissue which has been left behind.
8. The x ray as a means of treatment bids fair to prove quite as effective as caustic applications.

30 EAST THIRTY-THIRD STREET.

Original Communications.

THE FUTURE OF GYNÆCOLOGY AS A SPECIAL BRANCH OF SURGERY.*

By ELY VAN DE WARKER, M. D.,

SYRACUSE, N. Y.

It is possible many of the fellows of the society will congratulate themselves that they are in no way responsible for what the president may say in his annual address. He has simply the right to express his own opinions upon matters relating to the welfare of the society or upon some theme pertaining to the science which we all alike desire to promote. I am aware that the subject of my address is one of extreme delicacy, and I am further aware that when diplomatic reserve and tact are needed I am, by temperament or some other defect, ill adapted to speak with the conservatism and caution that such a topic requires for its best treatment. I must therefore

*The president's address delivered before the American Gynecological Society, in Chicago, June 2, 1901.

appeal to your generosity, hoping that you will credit me with good intentions and a most sincere desire to contribute something to the science to which I have given the better part of my life.

I can more clearly define the practical side of my subject by relating an anecdote. Some years ago, when I had the honor to be president of the Section of Obstetrics and Gynæcology of the American Medical Association, I had a laudable ambition to induce as many prominent men as possible to attend the section. Among those to whom I addressed letters soliciting their attendance and contributions was an old army friend. We had served in the same division, and we had held through all these many years a cordial friendship for each other. He had reached distinction as an ovariologist and as a pelvic surgeon. He was the author of a treatise on *Ovariectomy*, and was identified, as far as I know, with no other department of surgery. I was surprised when I received his answer. He declined because he was not a gynæcologist; he was a general surgeon, and could claim no special knowledge of the diseases of women. I replied to his letter and asked him how he could reconcile the specialization of his work, in which he had reached a well-earned distinction, with his claim that he was not a gynæcologist. He replied that his appointment upon the staff of his hospital was that of a general surgeon, and there was no question of his right to perfect himself in a branch of general surgery; and, further, that the general surgeon, by reason of his training and experience, was better equipped to perform those operations than those who were mere specialists in the diseases peculiar to women. He predicted that the time was not far distant when the general surgeon would not only enter upon this field, but would stand equal, if not superior, in the confidence of the public, to the gynæcologist.

Regarding the state of gynæcology to-day in its relation to the general surgeon, the question is pertinent, Has not the time predicted by my friend matured? The founders and older fellows have no difficulty in recalling the time when the simplest ovariectomies were done by a few experts. No general surgeon appeared who wished to enter the field. Even as late as when Battey, with his normal ovariectomy, set the pace for an almost indiscriminate removal of the ovaries, and Tait was winning his triumphs upon nearly equivalent lines, it was a sort of general concession that a man needed some particular knowledge of woman's limitations as a subject of surgery and a specialized fitness for the diagnosis of her disabilities to equip him for the successful performance of these operations. Hysterectomy went through so lengthy a period of surgical experimentation that when perfected it was ready for the general surgeon and the surgical amateur. It is

an axiom in sociology that nothing may occur which implies a demonstrable change, be it either evolution or involution, in the social complex without an adequate cause. The extent to which the major pelvic operations of women have become general surgical property may be safely regarded as an evolution—a stepping up to a wider diffusion of knowledge, to a larger range of expertness and confidence.

To the humanitarian it must be a matter of pride and congratulation that what at one time was in possession of a few specialists is now the property of many, accruing to the relief of suffering and the prolongation of life. To the diffusion of a practical knowledge of these operations this society has contributed more than other organizations in America. Its fellows have taught thousands by their writings, by their lectures, and in the operating-room.

This is, undoubtedly, one factor in the common and practical knowledge of these operations by all surgeons; but there is another and more far-reaching cause than this. While gynæcology has been steadily broadening its scope and perfecting its methods, all branches of surgery have been undergoing the same process of evolution and equally expanding from the simple to the complex. It follows, then, that when the gynæcologists have by a consensus of opinion and practice settled a method and perfected its technique, all surgeons are fitted both to understand and to bring it to a practical test with the same degree of success as the specialists.

Gynæcology was founded to promote a knowledge of the diseases of women and their remedies, and nobly and heroically have the gynæcologists of the world fulfilled their trust. There are members of this society who are able to look back upon the days when the general surgeon regarded their operations as foolish and extra-hazardous, and opposed with all the weight of his authority the operations they proposed to perform. Whether the surgeon at large is prepared to admit the debt that he owes to the man who sowed the seed of which he garners the harvest matters little, since truth takes no heed of those who make it clear to the minds of men.

That the major operations upon the viscera of the female pelvis are regarded as a part of general surgical technique is easily proved by an examination of all recent text-books upon surgery. These descriptions are written for the man who intends to operate, not for the man who doubts. He is embarrassed by no considerations of higher criticism. The ethical question whether it is better to sacrifice organs essential to a woman's pride or to her mental integrity is out of place in a practical description that tells one what to do rather than why he is to do it.

It is not for me to assert that a man who is perfected in modern surgical methods cannot do an op-

eration so perfectly as one who confines his work and study to woman and her disabilities. There are probably few among our fellows who would contend for the opposite. We have given the matured product of our brain and hands as a splendid heritage to humanity, and we would not lessen the value of the bequest by doubting the skill or the honesty of those who shared the inheritance. The governing boards of general hospitals, so far as I have observed, have placed no restrictions upon the men on the general surgical side doing major gynæcological operations, and to this the gynæcologist enters no protest, or, at least, none that is heeded. This is not true of the ophthalmologist, or the rhinologist, who has his special limitations more sharply defined.

But, practically, we can have no cause of complaint, nor do we object to any surgeon doing major pelvic surgery. We are all surgeons and apply general surgical methods to the inner organs of the pelvis, and by so doing we are surgeons simply, and not gynæcologists. The abdominal organs of men are exploited by the surgeon, if not as commonly, at least as successfully as those of women. Some may perform these operations more frequently and with better average success than others; but they are not entitled thereby to any special designation. The fathers of ovariectomy were surgeons simply; they never dreamed that they were gynæcologists any more than that they were obstetricians.

The perfection of methods in the great pelvic operations of women has been of slow growth, the product of many minds; and the man who came to his task the better equipped on the general surgical side has contributed the most. I believe that I in no degree impair either the force or the validity of my argument when I affirm that the men who enrolled themselves among gynæcological societies and gave the best that was in them to the simplification and perfection of abdominal surgery have added more to the sum of success than any others; but they developed on the lines of the general surgeon and not as gynæcologists.

While the surgeon has specialized and broadened his work rather than become a specialist, the relations of the lay public to what I may term the surgeon at large have changed in an equal degree to meet the altered conditions of the time. Women the subjects of abdominal growths appear to be equally inclined to consult the surgeon as the gynæcologist. (I speak from a full knowledge of a city of 125,000 inhabitants and from my own experience and that of my former colleagues in the Woman's Hospital.) A comparatively few years have produced this changed attitude of the public to the gynæcologist. The causes of this are few, but effective. The public has become almost callously familiar with severe and dangerous operations, and

has learned to associate together the special and the general surgeon. The abdominal tendency of surgery of late has produced a marked effect upon the public mind, as is evident in the enormous number of appendiceal operations and cœliotomies for perforations due to typhoid fever, intestinal wounds, intestinal resections, gastric, renal, and hepatic defects. All of these life-saving operations have matured within the same period that has marked the growth and perfection of the pelvic operations of the special surgeon. It is not a matter, therefore, difficult to explain that women have learned to seek any surgeon of renown or of repute for aid, irrespective of the condition that may demand an abdominal operation. I have noted upon the part of woman a tendency to discriminate. She will leave the surgeon who has operated upon her for appendicitis, or who has possibly removed her ovaries, and seek a special surgeon to relieve her of an obtruding cystocele or to repair her perinæum. It is evident that she has learned to associate the gynæcologist with a comparatively narrow range of her sexual defects, and limits it to those which appeal to her senses rather than to her knowledge of her physiology.

I cannot see in this anything to diminish my faith in the future of gynæcology. To me it is an evolution from the simple to the complex that is marking social progress in this age of marvellous changes. Industrialism is causing more profound social revolutions than those that followed the fall of Rome or the conquests of the first Napoleon. It is the mechanical side of our art which is hurrying us along in the current of evolution and to which we must conform if we are to keep in the front of progress. It would not be in harmony with the order of events if gynæcology, both as a science and an art, were to preserve intact its old frontiers. It is itself too much a product of the period that has grown and thrived on changes which have followed with thrilling rapidity not to keep pace with all that is yet to come. But we must comply with the altered relations toward those whom our art is designed to lead to health or restore to happiness. This also is a part of the social evolution which has followed the industrialism which our art has helped to foster.

We are so near the border-line of the general practitioner and the surgeon that the field of gynæcology has never been sharply defined. In fact, the conditions included under that term are so many-sided that I have serious doubts that it ought to be called a specialty at all. We are known to the women of a community more by where we work than by what our work really is. I mean that, separated from the hospitals for women or the gynæcological side of a general hospital, the public would have difficulty in placing us, or, if we were separated

from consultation work with the physician as well, we should be merged with the surgeon in the estimation of the community. It is a delicate matter to go further than this and ask what danger may exist in this broader relation of gynæcology to the public as practised by the surgeon. It is difficult to be diplomatic and at the same time specific when what you have to say appears like an indictment. What I may say I believe will appeal to all fair-minded surgeons.

The surgeon at large comes in touch with great surgical problems only from the concrete or industrial side. The special surgeon meets these problems in the abstract, and he is always confronted by the utility and expediency of the operation which he is called upon to perform. Let me illustrate: Many eminent gynæcologists, from the almost positive certainty in their experience of the recurrence of cancer of the cervix, have practically abandoned hysterectomy as a means of relief. I cannot recall a single word of dissent or doubt as to the utility of this operation made by the general surgeon. On the contrary, given a case of cancer of the cervix, and I have never known him to fail to operate. I am drawing again upon my personal experience. If the status of hysterectomy for this condition is ever to reach a final estimate of its value, will the data come from the surgeon or the special surgeon? This is not said in any spirit hostile to the surgeon. It is simply the outgrowth of his point of view. He is trained to meet surgical conditions in a surgical way. His mental condition is not interrogative, but simply affirmative. In this sense it is a misfortune that operations that require special training in order to safely discriminate as to fitness and utility have passed into the hands of men not trained to pass judgment upon the dialectic side of the question. It is because the gynæcological surgeon is dealing with such solemn problems, the answer to which will guide others equally able to perform, but not so trained, that he must be inspired with the most solemn spirit of conservatism if he is to be equal to the burden which his specialty has imposed. If what I have stated is not true, it is equivalent to admitting that the majority of surgeons are so gifted with intellectual powers that they are capable of discriminating the finest points of utility, expediency, and fitness of all operations in the vast field of practical surgery, and that we are not so divinely endowed. The gynæcology of the future will not be so much the product of the scalpel as it will of a higher physiological and moral criticism.

It is rapidly developing in this direction. But a few years ago there was practised an indiscriminate ablation of the ovaries, which the gynæcologist abandoned because his specialized faculties placed him in this attitude of criticism and doubt. Could

the surgeon have assumed this attitude springing from such a motive toward this operation?

If the general surgeon ever takes this critical relation, it will be from the broader specialized knowledge that he will gain at the expense of surgery at large. He will have to surrender something as a compensation. The human mind can acquire but a certain measure of general knowledge; if we were to go further it would be in the direction of specialism. The entomologist is not a botanist; he has to give up something of the pleasure of roaming at large in the delightful realms of Nature that he may know some one thing well, and thus it is throughout the domain of science. Specialism is acquired at the expense of general knowledge.

This leads up to the logical inquiry, Along what lines will the gynæcology of the future develop? It is safe to predict that gynæcology, like every other department of special investigation, will never be exhausted. There will always be unexplored fields open to the student and the experimentalist, and better than new facts that may be proved is the maze of errors and false theories to be corrected and overthrown—a labor which gynæcology has always cheerfully assumed. I believe that most men will hesitate to dissent from the proposition that it will be impossible in the future to maintain a great surgical specialty upon a few major operations within which limits the highest efforts of its best men are confined, and which belong to the general and special surgeon alike. But it may be claimed on the part of our best men, and I believe justly, that they are not so limited; but if one may come to a conclusion afforded by the literature of gynæcology, they have created a standard of comparison which has identified them with certain narrow lines of pelvic surgery which only by courtesy can be classed as gynæcological. If you are proposing to ablate organs, there can be no difference, surgically speaking, between the male and the female; while if, on the contrary, you are surgically to preserve the organs, you are confronted at once by the problem of sex. I think I have already stated my position so clearly that I need not repeat the argument whereby I proved that these major pelvic operations were specially the prerogative of the gynæcologist in a higher critical sense; but what I am trying to make clear, and I do so with due deference to the judgment of my colleagues, is that what is gained in the direction of general surgery is at the cost of gynæcology as a special science, and, further, it accrues to the personal loss of the man himself who gives the best that is in him to the borderland rather than to the broad domain of the science at large.

If we review briefly the literature of gynæcology in its relation to pelvic and abdominal surgery for the past twenty years or so, we can form an opinion

as to the relative position these subjects will occupy in the literature of the future. We may divide these twenty years into periods which have been marked by the rise and decline as subjects of special and absorbing interest of some abdominal operation. In its earliest period we have had ovariectomy, and while it was a debatable subject it was a theme of absorbing interest. Great international reputations were founded upon it; but, once its technique was permanently settled by common acceptance, it dropped out of sight in current literature and became embalmed in the text-books, while it is safe to predict that great surgical reputations can never again be founded upon removal of ovarian cysts. All men do it, and one man can do it as well as another. Then came the period of removal of the ovaries, and the reports of cases and the exhibition of specimens occupied the time of society meetings and filled the pages of the journals. That declined and passed out of sight, and the operation now does less to define a surgeon than it does a state of mind. Following close upon this came the ablation of pus-tubes, the removal of pus-sacs; and the topic, with all its related subjects, proved a most prolific one. Again great surgical reputations were founded upon this operation alone, which was exploited so eagerly that some could number their operations by the thousands. At last—its limits defined, its method settled—as common property it has passed out of current literature. A gynæcologist would not exhibit such a pathological specimen at a meeting any more than a surgeon would a leg which he had amputated. At one time it was not uncommon to read such titles as "Thirty Consecutive Ovariectomies without a Death," "Twenty-five Hysterectomies without a Death." We never see such titles now by any man we know, and rarely by a novice, for the simple reason that good records are the rule, and no man can distinguish himself by claiming results that are common to all. Believe me when I say that this is not said in a spirit of captious criticism of the literature of the past or in disparagement of the well-earned and brilliant reputations of the men who worked out the problems and demonstrated these results, but simply to prove by the past literature of gynæcology what we may expect of the future. Themes that appear to us now so large, so unsettled, and so insistent will reach their final estimate of utility and technique, and, as common property, will be relegated to text-book instead of to current literature.

Judging the progress of the future by this standard, we may expect to see some marked changes both in subject and method. I am satisfied that it cannot continue to develop on purely surgical lines. It is an age of active and incessant thinking, and the mechanic will have to share his place with the surgi-

cal transcendentalist. This is simply conforming to the readjustment of scientific delineation throughout the field of deductive science. What would the astronomer of the past generation have said had one of his colleagues predicted that the Newtonian theory would fail to answer the question of stellar mechanics? that he would be confronted with the appalling task of reverifying all his measurements? that his theory of the sun's heat was all wrong, and that he had to appeal to chemistry to help him to the truth? The physicist has awakened from a scientific trance to learn that the undulatory theory of light is straining his credulity to the breaking-point. The geologist is, from a higher critical review of his facts, telling anew the history of the earth's crust. The chemist is rearranging his atoms and making progress by methods unthought of a decade ago. And, finally, in medicine, the pathologist is giving way before the man of the test-tube and the germ culturist. Would we wish to limit our advance by the old lines of the scalpel, the old and the crude surgery of ablation? Have we not already taken the first step to a higher level when we criticise one who, unable to cure a symptom, removes an organ? We must conform to this new spirit which reanimates all science. We must make the sacrifice of the old upon the altar of the new philosophy if we are to keep in step with other men in the search for truth.

Those who believe that the last word has been nearly said in gynæcology, and that the surgical method points to all that is left to be discovered, need to be told of a few things that will be transferred from the operating-room to the laboratory. Let us regard for a moment what the laboratory is doing to clear up the mystery of cancer. What has recently been announced will, if true, appear to the surgeon in a new light. If cancer is due to a germ invasion which is diffused generally in the blood of the subject, the dissection of lymphatics and the bold excision of affected organs and near parts will offer no better prospects of cure to the surgeon of the future, no matter how urgently he may seek for new and more radical measures. The question of invasion will not be referred to the pathologist, but to the bacteriologist; while the gynæcologist will none the less be the effectual adjunct of the laboratory, and his will be the opinion of last resort after the work of the serotherapist.

We need not, however, refer to so doubtful a thing as a cancer germ in order to point to something that the future gynæcologists will have to solve. The question of uterine displacement has been surrounded by doubts and ignorance from the beginning. In the early days it was regarded as a serious matter. Then came the period when pelvic peritonitis sat enthroned as the sole factor of pelvic disease. The

inevitable followed when some one, more profoundly wise than the rest of us, proclaimed that uterine position, abnormal or otherwise, produced no symptoms and caused no ill effects. That stage passed, and now we are performing Alexander operations, and any other operation of like character, for a change—vaginal fixation, ventrofixation, broad-ligament reefing, and all rank empiricism for the relief of a condition of the causes of which we know nothing. About genital ptosis we are in a like condition of ignorance, and even worse, for some gynæcologists have done hysterectomy for this, and failed to cure. Here is work for the future and ample distinction for one who, by diligence, finds the truth. The subject of pelvic dynamics remains to be studied in all its relations, and I believe that when its laws are known they will have a revolutionary effect upon all operations for the relief of uterine dislocations.

The physiology of the female pelvic organs is so little known that all its cardinal parts have yet to be studied. This belongs to the gynæcologist rather than to the physiologist, as it must be observed in the light of function and not from the direction of histology or of vivisection, for much of this function is intertwined with the psychic endowments of the most highly organized part of humanity, in whom the spiritual blends in more than equal measure with the material side of her being.

There is another aspect to the gynæcology of the future, to the advancement of which but little has been contributed. This is the great field of state medicine, which the gynæcologist is better prepared than other physicians to study and promote. This includes woman in her economic relations, her education, her fitness for marriage and maternity, her evolution, and her degeneracies as criminal, pauper, and prostitute. One question in this field of investigation is urgently seeking an answer. This is the correlation of the sexes in the so-called higher education. Heedlessly and ignorantly, educators, seemingly driven by commercialism rather than by a higher motive, have forced women into a relation with the other sex the results of which are more than doubtful in promoting her interests as man's co-worker or as an economic factor in the peculiar stress of modern life. This is as yet an American experiment, and by reason of our special fitness for the work demands our attention. As an instance of the best method of study in this phase of gynæcology, the masterly address of Dr. Engelmann last year from this chair deserves our hearty admiration and, I trust, will encourage others to efforts in the same direction.

Women are becoming a more active force in the evolution of society. We are living to-day in the

midst of conditions which, prolonged to their logical conclusion, mean reversal of woman's traditional place in the social complex. Social and industrial feminism, which is a revolt in favor of free choice and exemption from the restraints of marriage on the one side, and a demand for a wider and a more liberal field of labor on the other, have made such progress as to claim serious study by sociologists. The movement has an aggressive literature of a high class, from that of active propaganda to the dreams of Ibsen and the novels of the school of Mrs. Ward. In every civilized country women are separating themselves from men in societies, clubs, leagues, and conventions to a degree never known before. Changes such as these must profoundly affect woman's spiritual and physical life and fall within the sphere of our action. Surely we ought not to permit such a portentous change in the social fabric as may grow out of this movement to pass unnoticed.

I believe that what I have said here has been at times uppermost in the thoughts of nearly every man here. It is always the obvious and imperious questions that one tries to answer with doubt and hesitation, and especially is this true where the personal factor becomes involved in the answer. But granted certain premises, some few logical conclusions become inevitable. These are, first, that a marked change is taking place in gynæcological surgery; and, second, that a more radical change has taken place in the surgical status of the men doing these operations. These premises, I believe, cannot be denied. If this be granted, what I have said simply follows, part in explanation and part as a logical conclusion.

As to the future, I am an optimist. If I am right it is the throwing off of ignoble bonds to a great and beneficent science, that in its subversion to pure surgery it was under restraints that held back the best side of gynæcology. This evolution from the simple surgery at the beginning to the splendid and masterful surgery of the present was only a part in the building of a science. Any one who believes that it could be held down to these limits, and that these surgical triumphs—every one of which was its loyal gift to humanity—would remain within its own domain, is a dreamer. He fails to see the drift of events. Either our science was badly named when it was called gynæcology, or the science has outgrown the limits which its name imposed if the knife alone is the symbol of its achievement. Gynæcology could never have become what it is to-day without the men who developed the marvels of surgery which have placed their names imperishably upon the rolls of fame, but they were only links in the chain of events out of which gynæcology is maturing.

THE LANE LECTURES ON THE SOCIAL ASPECTS OF DERMATOLOGY.

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LECTURE IX.

Delivered at the Cooper Medical College, San Francisco, September 5, 1901.

Feigned Eruptions; Erythema; Erythema Multiforme; Dermatitis Herpetiformis; Pemphigus; Erythema Nodosum; Lupus Erythematosus; Rosacea; Lichen; Lichen Ruber Planus; Lichen Neuroticus; Skin Neuroses and Mental Disturbance; Zona; Eczema; the Unknown Pathological Factor; the Parasitic Theory; the Nervous Factor.

The hysterical conditions dealt with in the last lecture often suggest fraud, though, as has been said, it is by no means necessary to postulate this in many cases even of the most remarkable lesions of the skin. On the other hand, the morbid craving for sympathy or notoriety which constitutes so large an element in hysteria naturally tends to fraud which may be only half-conscious. This is frequently seen in young girls of neurotic temperament. Moreover, as there is a good deal of human nature in the paragon of animals, man, as well as in woman, downright imposture has also to be reckoned with.

FEIGNED ERUPTIONS.

A few words about feigned eruptions may therefore not be out of place. These may be produced not only to excite sympathy or for the mere pleasure of deception, but for the more practical purpose of escaping work, particularly military service in countries where the army is recruited by conscription, or of stimulating the relieving centre in charitable persons. They are seen therefore not only in young girls, but in healthy men in prisons and workhouses and malingerers in other spheres of life.

The lesions are produced by various irritant and blistering agents ranging from mustard and urine to nitric acid and croton oil, and some of the results of this ill-directed talent are in their way works of art. I understand that among the begging fraternity there are experts in the craft that for a consideration will produce almost any kind of eruption that may be desired. Ambroise Paré has left it on record that in the sixteenth century this was a thriving industry in Paris. Among numerous other cases, he tells of a woman whom Jehan Paré found exhibiting a counterfeit ulcer at the door of the Huguenot chapel at Vitry on a Sunday, and of another beggar at the

same place whose face was covered with leprosy—made of glue—and kept livid by means of a scarf wrapped tightly round the neck. Suspicion of fraud should be excited by the position of the lesions and by their distribution and characters. When they are the work of the patient himself, they are of course situated in parts accessible to him; they are, therefore, seen with very rare exceptions on the front of the chest, especially the left side, on the arms, and on the thighs. As to their distribution and characters, there is a tendency in all counterfeits to an exaggerated accuracy of detail; you will remember how at the masked ball in *Much Ado About Nothing* Ursula detected the gallant who said he was counterfeiting someone else: "You could never do him so ill well unless you were the very man." Hence, if a feigned eruption is symmetrical, it is too symmetrical; if the individual lesions are round, they are geometrically too perfect, and so on. As a rule they do not conform to what may be called the regular irregularity of Nature's handiwork, and they present sharply angular outlines never seen in lesions produced by disease. To the dermatologist the most convincing proof that an eruption is feigned is the fact that no trace of it is found anywhere else than in the affected parts. It is the commencing and undeveloped lesions in other parts that often reveal the true nature of an eruption which, seen in one place at a particular stage of development, might be the expression of any one of a number of different conditions.

ERYTHEMA.

Returning now to the skin affections of angioneurotic origin, a word may be said about the more important of them in relation to their influence on the patient as a member of society. The simplest expression of a local vasomotor disturbance is to be found in erythema. This term includes a series of disorders ranging from the transient flush caused by mental emotion to widespread and chronic disease like erythema multiforme and lupus erythematosus. The rashes of eruptive fevers have the character of erythema; they are probably to be looked upon as the result of irritation by toxins circulating in the blood. The same thing may be said as to the eruptions caused by certain drugs, and Dr. Prince A. Morrow has pointed out that a large proportion of the medicinal agents which produce rashes on the skin act specifically on the nervous system. Erythema produced by toxæmia or by the action of drugs is not a skin disease, but a symptom of a systematic affection. To the class of toxic eruptions belong the rashes, mostly erythematous in character, which occur after the administration of antitoxines and therapeutic serums; and in the same category may be placed the eruptions often seen in

connection with surgical wounds. Erythematous rashes often closely resembling that of scarlatina, sometimes occur epidemically, and cause much anxiety in schools. Besnier, who in the matter of skin diseases can

distinguish and divide

An inch t'wixt South and South-West side,

has described quite a number of such rashes, but he himself admits that when "abortive measles without catarrh, rubeola, and the unlimited series of modified roseolæ are eliminated, there remain very few true rubeoliform erythemata."

Erythema produced by toxins or by the irritation of nerve centres by drugs is not a skin disease, but a symptom of a systemic affection. As a substantive disease of the skin it presents itself in two chief forms, to wit, hyperæmic and inflammatory, which may be regarded as different degrees of the same process. Of the hyperæmic form nothing need be said here.

ERYTHEMA KERATODES.

Among the inflammatory forms, reference must be made to a chronic erythema of the palms and soles leading to overgrowth of the horny tissue, which has been described by Brooke under the name of "erythema keratodes"; it is accompanied by œdema and tenderness, and thus tends more or less to cripple the patient. The erythematous nature of the affection is shown by the fact that it begins in an inflammatory process. This distinguishes it from the condition of keratosis, or simple hypertrophy of the horny layer, of the palm or sole which forms a hard plate on the surface and thus, when situated on the foot, interferes with walking and, on the hand, may make manual work difficult or impossible. I have had among my patients a farmer who used to spend a couple of hours every Sunday evening whittling down the horny masses on his hands to get them into a fit state for work. His daughter had also to perform the like farrier's work on her hands. Fortunately, the erythematous affection responds readily to treatment; the other is practically incurable, but may be greatly mitigated by the persevering use of salicylic acid (a 10-per-cent. solution in ether).

ERYTHEMA MULTIFORME.

Erythema multiforme, in regard to its clinical characters, may almost be described in the words of the satirist as "everything by turns and nothing long." If a dermatologist could keep a good example of this disease at hand for demonstration, and make his pupils follow the varying stages of its development, he would be able to show them a panorama of nearly all known lesions of the skin. It may be added that no custom can stale its infinite

variety; for, as has been well said, one may pass twenty years of professional life in observing and collecting cases, and each year will bring before him forms which he has never before seen. The variety of its lesions defies all description, and there is perhaps no morbid process in regard to which more confusion has been caused by attempts to map out into neat divisions the unrestrained luxuriance of manifestations shown by this most polymorphous of skin diseases. Authors have vied with each other in embarrassing the unfortunate student with a superfluous richness of terminology, and he is bewildered with erythemas, *papulatum*, *tuberculatum*, *annulare*, *gyratum*, *marginatum*, *bullosum*, and so on to the ninth power of discrimination of small detail. It should be clearly understood that these names denote nothing more than the prevailing type of skin manifestations in a particular case at a particular time; the conditions designated by the names are phases in a process which runs through the whole range of cutaneous expression. Beginning in an eruption of small papules, it gradually develops by coalescence into patches, which in turn are transformed into rings, that again are broken into wavy lines, some of which rise into ridges that continue to extend independently. The individual lesions go through the several stages of evolution into vesicles, bullæ, crusts, and scabs. Intermingled with them are purpuric patches and discolorations left by pre-existent lesions. The skin in erythema multiforme may be compared to a volcanic region where craters in active eruption and others in a state of quiescence or extinction stand side by side. The disease gives rise to hardly any subjective symptom, but it is disfiguring and often disabling. Usually benign and ending after a number of relapses in recovery, it is sometimes accompanied by formidable visceral complications and terminates in death. There is a special form of the disease called, from the arrangement of the lesions in alternating rings of vesicles and reddened skin, *erythema iris* which may occur alone and in my experience is frequently seen in persons whose occupation exposes them to cold weather. The affection is of no consequence, however, and generally soon gets well of itself.

DERMATITIS HERPETIFORMIS.

A much more serious condition is dermatitis herpetiformis, which, like erythema multiforme, is characterized by the greatest variety of lesions. Both the lesions and the subjective symptoms, however, are more severe than in erythema multiforme, and the whole process is more acute. So intense is the itching that sleep is banished from the patient's pillow and he is kept in a state of extreme nervous excitement and mental anguish. To this may be added severe pain when a large area of skin is in-

volved. The eruption consists of every kind of cutaneous lesion, herpetic and pemphigoid forms predominating. The disease runs a protracted course, with occasional remissions followed by exacerbations. Even when it seems to get well for a time, relapse is the rule. In the great majority of cases the onset of the disease is preceded by nervous shock or long-continued depressing influences, and disturbing emotions tend to intensify the evil. It may therefore probably be regarded as a functional neurosis. The disease is disfiguring, while the great severity of the symptoms makes the patient utterly incapable of any effort, physical or intellectual. The intractability of the condition makes the patient's outlook very gloomy. All that can be done medicinally is to give sedatives, general and local, and especially to keep the patient safeguarded against nervous disturbance and changes of temperature.

PEMPHIGUS.

A disease which may be regarded as a mild form of dermatitis herpetiformis and which, like it, probably depends on some internal cause through the nervous system, is pemphigus. Micro-organisms have been found in the contents of the bullæ and in the blood, but in view of the rich and varied fauna present on the skin in normal conditions, these observations must be received with caution. Simple pemphigus in its typical form is characterized by a purely bullous eruption, but it occurs in varying degrees, gradually increasing in the multiformity of its lesions till a condition identical with or closely allied to dermatitis herpetiformis is reached. The bullæ cause great itching and the eruption may extend over the whole body; as the lesions dry up, the skin becomes covered with a coating of scabs which causes much inconvenience from stiffness, and when it cracks gives rise to pain. The bullæ may slough, giving rise to gangrene of the surrounding skin. Like other itching affections, pemphigus causes mental disturbance and exhaustion from loss of sleep which may even end in death. There is a severe form of the disease, to which the name pemphigus foliaceus has been given, in which the whole cutaneous surface may be invaded and the separation of the scabs leave large red areas of excoriation. The skin ulcerates on the slightest provocation, the face is disfigured by cicatricial ulceration, the patient cannot move or lie down without pain, and his general health becomes undermined. Death is the usual termination.

ERYTHEMA NODOSUM.

Returning to erythemas, there are two further forms to be mentioned. Erythema nodosum, which is characterized by the development of large pain-

less swellings, mostly on the legs, is a disease of youth and has a marked predilection for young women. It is frequently associated with rheumatism and is often the result of fatigue from prolonged standing. My only concern with it here is that it may interfere with a girl's earning her livelihood. In itself it is not serious, as it tends to spontaneous recovery.

LUPUS ERYTHEMATOSUS.

Lupus erythematosus must find a place here, as it is extremely disfiguring, chiefly attacking the face, on which it spreads out over both cheeks and across the nose, producing the characteristic "butterfly" or "bat's-wing" appearance. A family history of tuberculosis is found in a certain proportion of cases, and the disease is not infrequently associated with distinctly tuberculous conditions elsewhere. No tubercle bacilli have, however, been found in the affected skin, and the inoculation test has so far been invariably negative. The question of the relationship of lupus erythematosus to tuberculosis is, therefore, still undecided. As lupus erythematosus is very refractory to treatment, if it is extensive, it practically ruins the patient's life. The light treatment, however, as already said, is successful in some cases.

ROSACEA.

Another disease originating in vasomotor disturbance which not only causes disfigurement, but may give rise to unjust suspicions affecting the moral character, is rosacea. The man of whom Dickens says that if he were a total abstainer he might have brought an action against his face for libel and recovered heavy damages may well have been the subject of this affection. It is more common in women than in men, owing to their being more liable to reflex circulatory disturbance throughout the active period of their sexual life. At first the affection shows itself merely in evanescent "flushings," but it tends to become chronic, producing an area of constant redness on the face in the middle of which the nose burns with a Bardolphian warmth of color. The superficial vessels become dilated, and from retention of sebaceous matter the affected area becomes studded with inflamed pimples known to the laity as "grog blossoms." The use of the word must be condemned as implying a cruel calumny on many most temperate persons. The disfigurement caused by the disease is a constant cause of mental torture to them and may even spoil their life and banish them from society. But the sharpest part of their affliction is doubtless due to the opinion which they know is generally held of the cause of their disfigurement. I may mention here that in my experience there is no remedy for this

distressing condition equal to ichthyol, which not only relieves dyspeptic trouble, but controls the circulation. Rosacea sometimes passes into hypertrophic thickening, large red knobs being formed on the nose. This very disfiguring appearance is often seen in cabmen, and may perhaps be the combined effect of cold and spirits.

LICHEN.

Lichens of various kinds figured prominently in Brocq's formidable array of *dermatoses pruriginæuses*, of which mention was made in a previous lecture. The word "lichen" was originally intended to denote eruptions of a papular character. Now it is generally employed to designate conditions in which the papules are inflammatory, but, as Brooke says, "the employment of the word is now purely conventional, and when used alone conveys no special indication either morphological or ætiological of the nature of the disease to which it is applied." I will not here perplex you or myself with a discussion of the manifold conditions that have been included under the term "lichen." I wish to speak here only of lichen ruber planus, first described by Erasmus Wilson under the name of lichen planus, and afterward by Hebra as lichen ruber, but in reality forming one and the same disease. It is, in the words of Besnier, "the only true lichen of the present hour, or at least the type of that lichen." The papules become aggregated into patches, which in course of time may become hypertrophic and horny in hardness. Although its ætiology is very obscure, in my experience it often follows a great nervous shock, and the symptoms referable to the nervous system are often extremely severe. One of the worst cases I have seen is that of a lady whose husband died suddenly in a railway carriage while traveling in France. The natural shock of the event was aggravated by the worry she had to endure in complying with the complicated formalities required by the French law. She was able, however, to carry through the whole business successfully and to bring the body home for burial; but immediately after the funeral she broke out in a universal lichen, the irritation being so severe as nearly to drive her frantic. It was as though the pent-up nervous excitement caused by her distressing experience had at last found explosive vent on her skin. Another case followed an accident in the hunting field. Brooke mentions two cases seen by him in which in the effort to secure relief the patches had been actually gouged out of the flesh by the finger-nails. I myself have known cases of universal lichen lasting for years, making it almost impossible for the patient to follow his profession and practically driving him from the society of his fellows. So acute is the

suffering, and so incessant, that one wonders that the disease does not oftener end in insanity.

The disease is, unfortunately, not always amenable to treatment. Arsenic, which is most generally useful, not seldom fails. In my experience by far the best internal remedy is biniodide of mercury. Externally, pyrogallic-acid ointment and mercurial plasters are the most effective applications. In old atrophic patches the cautery may be required, and horny masses may require removal with the knife. The superficial application of a cautery is said to make the itching cease permanently, and, although the procedure may seem severe for the disease, the terrible suffering which it causes seems fully to justify it.

LICHEN NEUROTICUS.

Lichen neuroticus is a name given by Unna to an acute general form of lichen characterized by the presence of acuminate follicular papules with well-marked constitutional symptoms. Patches of erythema appear and quickly spread over large surfaces; upon these patches come out crops of small papules. The eruption follows nervous excitement, and with its subsidence may disappear. But later comes a fresh development of more permanent papules, which run together, forming large areas of swollen, inflamed, and deeply pigmented skin. In the worst cases the itching is incessant and the patient is reduced to a deplorable condition by the combined effects of nervous irritation and sleeplessness with constitutional disorder.

SKIN NEUROSES AND MENTAL DISTURBANCE.

The affections at which we have glanced are all characterized by a definite sensory neurosis of the skin, namely, itching. Their relation to emotional disturbance is clearly proved by the frequency with which the onset follows immediately on a burst of anger or grief or a nervous shock of some kind. This fact suggests a means by which they can, to some extent at least, be prevented. Sir Andrew Clark used to say that only a very strong man could afford to be angry, as the mental disturbance caused such a drain of nervous energy and threw such a strain on the circulatory apparatus. The same remark may be applied with appropriate modification to cutaneous neuroses. Persons on whose skin mental passion "glances itself in tempests" should be particularly careful to avoid what they have found by experience to be causes of such disturbance.

ZONA.

I have next to refer to a nervous skin affection in which the most prominent subjective symptom is not itching, but pain. This is herpes zoster, or zona. According to Dr. Henry Head, who has given much

attention to the subject, a certain number of cases of zoster bear a definite relation to some preexisting disease in either the central or the peripheral portions of the nervous system. In these cases the eruption is only a symptom of some such disease as myelitis, caries of the spine, or tabes. He classes such cases under the heading of "symptomatic zoster." But in the majority of cases it arises without any known cause, and its definite course, its tendency to occur in epidemics, and the fact that second attacks are rare point to the essentially acute and specific nature of zoster. This acute specific zoster, which arises without obvious peripheral or central cause, must, in Head's opinion, be considered as an acute specific disease of the nervous system analogous to acute anterior poliomyelitis. The eruption is the rash of the specific disease. According to Head, the reason why zoster is of commoner occurrence than anterior poliomyelitis probably lies in the fact that one who has suffered from zoster is not hampered in the struggle for existence, while anterior poliomyelitis handicaps the sufferers very seriously. Mental disease, as such, does not predispose to zoster, but the disease is fairly common among the insane. General paralysis undoubtedly predisposes to it. The lesion in the nervous system which is the direct cause of zoster, whether symptomatic or specific, is in the ganglion of the posterior root of one or more of the spinal nerves. Dr. Head and Dr. Campbell examined seventeen cases at all periods from a few days to a year and a half.¹ Their researches showed that herpes zoster was associated with hæmorrhage into the posterior root ganglion or an acute inflammation of it followed by more or less secondary degeneration in the posterior root and peripheral nerves connected with that ganglion. The affection is ushered in by febrile symptoms, and soon pain comes on in the lines of distribution of particular nerve roots. It occupies the territory not only of the anterior primary division (intercostal nerves), but also of the posterior primary division. On the trunk it thus runs more or less straight round one-half of the body. The local varieties of zoster—head, face, ophthalmic, trunk, limbs—do not concern us here. Wherever the eruption appears, its distribution follows that of particular "root areas." The eruption may appear a few hours after the onset, but most commonly on the third or fourth day. The typical lesion is an erythema upon which vesicles rapidly develop. Head says that in each area representing the distribution of a posterior root, three spots usually exist at which the branches come to the surface, and it is over these that the eruption first appears. From these points it spreads along the whole area of the distribution of the main branches, and sometimes even of the finest twigs,

until the whole area of one posterior root may be occupied by vesicles or raised erythema. The point of most severe incidence of the eruption is always in the neighborhood of the points of emergence of the branches that have been referred to, and it is over these points that in every severe cases large bullæ, sometimes containing blood-stained fluid, or small gangrenous patches appear." The bullæ sometimes break down and give rise to shallow ulcers which leave deep scars. Usually the pain, which is stabbing or aching in character, ceases as the rash subsides, but in elderly persons it may last for months and years. I have known old men in whom the pain in the scars left by a severe attack of zoster had caused a permanent condition of misanthropy and melancholia.

From affections of the skin dependent on definite nerve lesions or standing in direct ætiological relation to some disturbance of equilibrium in the nervous system, we pass to others in whose causation the nervous factor, though not supplying the "leading motive," plays a more or less prominent part.

ECZEMA.

And, first, of eczema, that complex process which in itself is a summary of all other diseases of the skin. At the very outset we are met by the question, What is eczema? This is another of the unsolved problems of dermatology, a confession which I feel is not very creditable to us, as the disease is one that we have daily under our eyes. It is the commonest of all skin diseases, and in some ways it is the most mysterious. My own conception of eczema was expressed some years ago in a definition which I give you for what it may be worth. Eczema was there defined as "a catarrhal inflammation of the skin, originating without visible external irritation and characterized in some stages of its evolution by serous exudation." That definition I have seen no cause to modify. It will be observed that by its terms all forms of artificial dermatitis, that is to say, inflammation of the skin produced by chemical substances or mechanical irritants, are excluded. This view is opposed to that generally held, particularly by German dermatologists. The lesions caused by external agents are, indeed, often eczematous in appearance, but the fact that, while on the one hand such irritants do not in many cases cause "eczema," and on the other true eczema very frequently develops in the absence of such causes, seems to point to a difference in nature between the two affections.

A vital point of difference is that artificial eczema often ceases with the removal of its causes. Idiopathic eczema, on the other hand, may go on indefinitely, now smouldering and almost dying out, then blazing out into fierce flame. It is evident, therefore, that its cause, whatever it may be, also continues in operation permanently or at least indefi-

¹Allbutt's *System of Medicine*, London, 1899, Vol. VIII., p. 635.

nitely. It is true that artificial irritation is sometimes the starting-point of true eczema; that is to say, the manifestations continue after the visible cause has ceased to be operative. But, as this is the exception rather than the rule, the interpretation of such cases is, in my opinion, to be found in a coincidence of exposure to external agents with the presence of the unknown pathological factor which causes true eczema.

There are, of course, various theories as to the nature of the factor. There is the theory which accounts for it, as for nearly everything else, by a constitutional "dyscrasia." Gout, dyspepsia, diabetes and other constitutional disorders may aggravate eczema, but there is no shadow of proof that they can cause it. In like manner, the "scrofulous" habit, as defined in a previous lecture, may be a serious complication from the tendency to unhealthy suppuration which is its distinguishing feature, but, so far from being generally associated with the low state of vitality connoted by "scrofula," eczema seems to have a predilection for persons otherwise healthy.

THE PARASITIC THEORY.

Then there is the theory which attributes eczema to the action of parasitic micro-organisms. The chief upholder of this theory is Unna, who a few years ago believed that he had discovered the actual cause of the disease in a coccus which, from the fact that it formed clusters resembling mulberries, he called "morococcus." He stated that he had succeeded in cultivating this organism, and that by inoculation of cultures he had produced acute eczema. Recently, however,² Dr. Unna, as a result of a reinvestigation of the question, has made a public recantation of that opinion. His new researches have been made on a large number of different types of coccus found in the lesions of eczema. He has concerned himself chiefly with the types which are present in many cases, with those found in cases presenting the same clinical appearances, with those found in pure culture in one or more cases, and with those which thrive best at incubator temperature and show a preference for acid media. He has inoculated these cocci on the one hand into animals, and especially dogs, and has produced, especially with two types, an eczema "histobacteriologically" characteristic, and with two others changes which he describes as eczema-like. On the other hand, he has made inoculations on the human subject with the first two types and produced typical eczema.

Neisser has recently come forward as a strong advocate of the view that micro-organisms are essential agents in the production of eczema. He has summed up his belief in the formula, "no eczema without staphylococci." Scholtz and Raab, of Bres-

lau, recently found in every case of acute and sub-acute eczema examined by them a peculiar golden-yellow staphylococcus in large numbers and in pure cultures. They were present not only in the superficial vesicles, but more abundantly in the deeper parts of the epithelium. Neisser points out that in wounds and other lesions of the skin bacteria of various kinds are always to be found, but not the staphylococcus in pure culture. His conclusion is that the golden-yellow staphylococcus, in whatever abundance it may be present, sets up no inflammation in the whole skin. In fact, the pyogenic microbes require the field of action to be prepared for them before their attack can be effective. The slightest lesion of the horny layer and, indeed, any alteration of the epithelium, as by the application of croton oil, arnica, turpentine, sulphur, or other irritant, gives the staphylococci their chance, and the result is eczema. Among irritants that make the skin vulnerable Neisser gives a prominent place to soap and water; and he emphasizes this statement by insisting on its importance from a prophylactic point of view. The way may also be prepared for the invasion of the staphylococci by mechanical agencies that produce a chronic condition of low vitality in the skin. Unna has now, I believe, accepted the staphylococcus as the parasite responsible for the production of eczema. Dr. James Galloway and Dr. J. Y. H. Eyre, in a communication presented to the Fourth International Congress of Dermatology, held in Paris in 1900, reported the results of bacteriological examinations made by them in several cases of acute papulovesicular eczema. In early and uncomplicated lesions they found cocci producing whitish cultures, all of them examples of the type *Staphylococcus pyogenes albus* and possessing to a greater or less extent the pathogenic powers of that organism. They expressed the opinion that in all probability there were many factors at work in the production of any attack of eczema, and, although they do not think that this organism is the cause of the disease, they cannot help considering that this white coccus, and other cocci, such as the *Staphylococcus pyogenes aureus* and the *Streptococcus pyogenes*, which are so often present, especially in the later stages of the disease, must have very important influences on the development of the malady. The local infectivity and chronicity of eczema, the ease with which purulent manifestations occur, should be in all probability ascribed to the presence of such bacteria. Sabourand, in a communication to the annual meeting of the British Medical Association held at Cheltenham, expressed the opinion that the staphylococcus was the cause of pustular lesions of the skin in eczema and other conditions.

On the other hand, Reibich has examined bacteriologically the two- to four-day's-old vesicles of

² *Monatshefte für praktische Dermatologie*, Bd. XXXI, No. 5.

forty-one cases of eczema and found them for the most part sterile. Later in the course of the disease he found staphylococci and streptococci, but was unable to produce eczema experimentally by inoculation with these. Veillon also (*Annales de dermatologic et de syphiligraphie*, No. 6, 1900) has examined the fresh vesicles of ordinary eczema and found them almost without exception sterile. Secondary infection with staphylococci and streptococci is common, but Veillon was unable to produce an eczematous eruption with those which he isolated. The serum of a horse immunized against the staphylococci isolated exhibited no influence on the course of the disease in the human subject.

The parasitic theory must, therefore, for the present be dismissed as "not proven," though it is impossible to believe that parasites known to possess definite pathogenic properties can be present in such numbers as they have been proved to be by competent observers without having a considerable effect on the character and severity of the disease. On the other hand, we know that such organisms are harmless to a healthy skin. The ground must, therefore, be prepared for their action. Neisser, as already said, holds that this is done by external irritants. But how is the ground prepared when there are no irritants? The distinguished professor of Breslau gets over this difficulty by giving the chief place among "irritants" to soap and water. Thus, in his view, except among the "great unwashed," the human skin is always at the mercy of this golden-yellow staphylococcus.

Galloway and Eyre include among predisposing factors: 1. Certain organic lesions, especially such as produce circulatory stasis in the skin and consequent œdema and malnutrition of both cutis and epidermis. 2. The seborrhœic state, which permits the free growth of vegetable parasites, and especially of certain bacteria. 3. Certain conditions of imperfect metabolism which predispose to the onset, or, at any rate, the recurrence of eczema; of these, the most common are those associated with improper digestion and assimilation of food. Want of exercise, the impure atmosphere in cities, etc., aggravate this condition, and increase the risk of recurrent attacks.

THE NERVOUS FACTOR.

Dr. Galloway and Dr. Eyre make no mention of a factor to which I am disposed to attach considerable importance; that is, nervous shock and prolonged mental depression. I do not think that there is any proof of the dependence of eczema on any definite lesion of the nervous system. Cases have been reported by Charcot and others in which it occurred in association with disease of the brain or spinal cord, and it is frequently seen in the insane, but in these

cases there is probably nothing more than coincidence. But I have seen so many cases in which eczema of the acutest type has apparently been the direct consequence of mental shock, strain, or worry in persons whose skin was previously quite healthy that I cannot doubt that the derangement of the nervous mechanism brought about by the influence of the mind on the body has been reflected on the skin. The association of eczema in women with menstruation, pregnancy, change of life, and uterine diseases, and in both sexes with gastro-intestinal disturbance, may, I think, fairly be interpreted as the result of reflex irritation. The fact that the most effective remedies in eczema are nerve sedatives like opium and antimony is also suggestive of a neurotic element in the pathogeny of the disease.

My view, briefly stated, is that in a large proportion of cases eczema is predisposed to by disordered innervation of the skin, and that the diminished resistance thus caused opens the way to the invasion of micro-organisms. Some regard eczema as contagious; the lesions certainly are spread on the patient's own skin by auto-inoculation, but the evidence that it can be communicated to another by contagion is very slight. Nurses sometimes have eczematous-looking eruptions on the hands when treating children suffering from the disease, but there is a source of fallacy which may easily mislead the unwary in these cases, namely, that impetigo contagiosa not infrequently assumes the appearance of eczema. The inoculation of cultures of the various micro-organisms which have been held responsible for the causation of eczema has seemed to me at most to have produced lesions of an eczematoid type, but not the disease which we call eczema.

MUSCULAR ATONY AN IMPORTANT FACTOR IN UTERINE DISPLACEMENTS.*

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The importance of the familiar subject of uterine displacements is universally recognized by teachers and writers on gynæcology, who usually devote to it a considerable portion of their lectures and textbooks. In no field of surgery has greater ingenuity been displayed in reviving and modifying long-forgotten operations and devising new ones than in the correction of malpositions of the uterus. In fact, the student and practitioner at the present day are apt to infer that the subject has become purely a surgical one, the non-surgical treatment of displacements being relegated to the past history of gynæcological medicine. The result has been that the

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present generation of medical students is inclined to look with a certain amount of contempt upon the homely pessary and the long and patient use of tampons—the proper application of which, as Dr. Emmet taught us many years ago, calls for no small amount of special training, anatomical knowledge, and good judgment. We have often forgotten also the elementary principle insisted upon by that revered teacher that deviations in the position of the uterus are *per se* practically unimportant so long as it does not sink below its normal place in the pelvis. It is interesting to note that simple retroversion is now regarded as clinically significant rather because of the accompanying complications than of the displacement itself.

Although this is generally admitted, we do not apply this principle to our operative treatment of the condition, but go on repairing the cervix and pelvic floor, shortening the round ligaments, or performing ventrofixation or vaginofixation, according to our individual theory as to the ætiology and the best way of obtaining an anatomical cure, frequently oblivious of the fact that the symptoms may persist with the uterus in its normal position. This leads me to explain why I take the liberty of introducing such a hackneyed subject. It is simply for the purpose of emphasizing briefly an important point in the ætiology of uterine displacements which has long been recognized theoretically, but has not had the practical application which it deserves. There is nothing new about the subject, but a proper appreciation of it seems to me to be the key to many failures in operations which are perfectly successful anatomically. It is only another illustration of the fact that the gynæcologist must study his patient from a broader view-point than that of the pelvis alone.

The following common enough case, such as we see daily in our offices, occurs to me as a fit one to point the moral:

Within the past week a patient was referred to me for operation, with the following history: Symptoms date from a fairly difficult labor three years before (second child), and are sufficiently familiar, viz., dragging pains in the back, pain over the appendical and ovarian regions, dyspareunia, scanty menstruation without much pain, headache, dyspepsia, leucorrhœa, etc. Exceedingly nervous. No history of any inflammatory attack, pelvic or abdominal. Various diagnoses had been made and suggestions offered as to operative treatment, according to the stress which the individual examiner placed on the condition that seemed most important to him. On examination, the patient was well nourished, but her muscles (especially the abdominal) were very flabby. The right kidney was displaced nearly as low as the anterior superior spine. Deep pressure over the appendix caused considerable pain. No enteroptosis in the ordinary

sense of the term. Tympanites moderate. There was a moderate laceration of the cervix. The pelvic floor was decidedly relaxed, without an external tear, and the uterus, though in normal ante flexion, sagged downward fully an inch below the sacropubic plane. Both ovaries were tender, the left prolapsed to the second degree. Now, here was evidently a good chance to test the value of surgical theories, either to suture the kidney and remove the appendix, to perform median laparotomy and investigate the ovaries, to be content with repair of the lacerated cervix with strengthening of the pelvic floor, or, finally, to do them all at one sitting. To my mind the case presented a picture of general muscular atony, the results of which were shown both in the pelvis and the abdomen. I stated the case to the patient, with the various alternatives before mentioned, and she naturally asked me what would be the result of all these operations if performed singly or at one séance. I was obliged to admit that it was entirely problematical, whereupon she at once, with my approval, preferred to consider hers as a purely medical case and to go to some distant sanitarium for the usual treatment by baths, massage, electricity, gymnastics, etc.

The usual explanation of the text-books that retroversion and prolapsus (excluding the rare congenital and acute cases) are due either to an over-weighting of the uterus or to a weakening of its supports, especially the pelvic floor, does not always hold true in actual practice. How commonly we meet with large fibroid uteri in women who have borne children, entirely unaccompanied by pressure symptoms! Yet here is an immense increase in the size and weight of the organ, perhaps with an extensive rectocele and cystocele. On the other hand, a flabby young woman gets up in three weeks from an easy labor, with a perfectly normal convalescence; there have been no apparent puerperal lesions, the uterus undergoes rapid involution, but it is retroverted, and that retroversion is accompanied by such dragging, bearing-down pains that the woman is practically a semi-invalid. Even when the displacement seems to be perfectly corrected by a pessary, her disability is only slightly diminished. How account for this difference? It is clearly one of general loss of tone, and is not of local origin.

The entire absence of symptoms in patients with laceration through the sphincter, associated with retrodisplacement, provided that their general muscular condition is good, is so common as to need only a passing mention.

I have never been able to subscribe to the theory that retroversion and prolapsus following an easy non-instrumental delivery are due directly to subinvolution of the uterus and its ligaments. How do we infer this? From the size of the uterus? But uteri of all sizes are found in perfectly normal position. From its mobility? But why should not its

range of mobility be increased for a long time after delivery, when we remember the physiological softening and elongation of the sacro-uterine ligaments? To my mind, the difference in these patients under similar conditions lies not so much in the size and weight of the uterus or the overstretching of its ligaments as in the difference in muscular tone—the muscles of the abdomen, of the pelvic floor, of the vagina. Of course we exclude from this category displacements due directly to local causes—the presence of neoplasms, inflammatory adhesions, extensive puerperal lesions, etc. The intimate relation of this subject to enteroptosis will at once occur to you, but we cannot discuss it here.

It is a well-known clinical fact that women with laceration of the pelvic floor and moderate prolapsus of many years' standing often have no symptoms leading them to consult a gynæcologist until after the menopause, when the uterus has become so atrophied that its weight is insignificant. Then, in consequence of loss of muscular tone (since no new pathological factor has been added), the uterus sinks lower in the pelvis or may become completely prolapsed and the patients experience the dragging, bearing-down sensations incident to that condition. It is a matter of surprise to them that they should now suffer from the effects of a childbirth which occurred twenty years before, when they were never obliged to consult a doctor before for local trouble. The benefit derived from wearing an abdominal bandage is often so marked as to warrant the inference that it not only relieves the weight of the intestines and the misdirected intra-abdominal pressure which tend to force the pelvic organs downward, but actually reinforce the weakened muscles.

Too little stress has been laid upon the supporting power of these muscles in maintaining the uterus in its normal plane. Kellogg (whose experience with the operation of shortening the round ligaments is probably unequaled) recognized their importance when he insisted that the surgical treatment of retroversion was only the first step in the cure, and that after restoring the uterus to its normal position and strengthening its natural supports, a further course of massage and electricity was necessary in order to restore the general muscular tone. Doubtless many of our symptomatic failures are due to the fact that we do not apply this important lesson.

In my own experience (which must be shared by other surgeons) I have been chagrined by the poor results obtained with combined operations for prolapsus in patients with flabby, relaxed abdominal walls. In one instance in which I amputated the cervix uteri, performed anterior and posterior colporrhaphy, and finally fixed (not suspended) the fundus uteri at a point half way between the

umbilicus and pubes, within a few months the uterus rested upon the floor of the pelvis, having actually pulled down and inverted the anterior abdominal wall at the point of fixation, in spite of the support furnished by an abdominal bandage, a narrowed vagina, and a firm pelvic floor. The symptoms were but slightly relieved.

These facts being admitted (and they can hardly be questioned, as they are matters of common observation, and not of theory), it remains to ask if we should not apply them to the treatment of every case of uterine displacement, whether surgical or non-surgical. They certainly have an important bearing on the question of prognosis, as well as on that of treatment. We cannot expect our patients to share in our enthusiasm over a successful operation if they do not experience the promised relief. To most women it is a matter of comparative indifference what position the uterus occupies if the malposition gives rise to no symptoms. And it is small satisfaction to them merely to know that the natural equilibrium of the pelvic organs has been restored if they feel just the same as they did before—or worse. It is obvious that but little benefit will accrue from replacing a retrodisplaced uterus and inserting a pessary when the pessary itself receives no support from a relaxed vagina and pelvic floor. The mere result that the organ remains in an anterior position is entirely offset by the fact that it continues to sag downward as much as before. Nor do we greatly improve the situation when by plastic operations on the uterus and vagina we diminish the size of the prolapsed organ and furnish a *point d'appui* for the pessary, provided the flabby state of the muscles leads to a speedy recurrence of former conditions. There is something lacking which cannot be restored by surgical intervention. The proper appreciation of this fact may sometimes deter us from giving a too confident prognosis.

Even when we go a step further and shorten the round ligaments, or suspend or fix the uterus (whether by the vaginal or abdominal method), in addition to the plastic work, there is a certain class of cases in which we can predict at the start that the symptomatic cure, at least, will be only temporary. If we learn to recognize these beforehand, we may be inclined to make less emphatic promises with regard to the benefit of the operation *per se*. Not that operations may not be perfectly proper even in the case of such flabby, atonic subjects as are those to whom I refer, but the results will be much better if we impress upon the patient and her physician the fact, already stated, that the treatment does not end with the operation—or *begin* with it, for that matter. Restoration of the general muscular tone by such means as are well known to you—massage, electricity, exercise, cold baths, abdominal support,

etc.—is to my mind an essential feature in the treatment of such patients, both before and after operation.

The value of out-of-door exercise alone in relieving the symptoms due to retroversion and prolapsus was impressed upon me only to-day, when I saw a patient after an interval of several months, during which she had spent much of her time out of doors, especially on the links. The mother of three children, the youngest eight months old, when I last saw her, she was thin and anæmic, her abdominal muscles were flabby, and the pelvic floor was relaxed; her heavy retroverted uterus was kept forward, but not upward, by a pessary which she had been obliged to wear at intervals for two or three years. To all intents she could never be restored to health except by operative treatment. I removed the pessary last spring as an experiment, and she had not missed it. She stated that she had never felt better in her life than during the past summer, not having had a backache. I found her uterus still retroverted, but in its normal plane. There was an evident restoration of the lost power in the pelvic and abdominal muscles that had been brought about by nature, and not by art.

The importance of a "Nachkur" following surgical operations is not generally appreciated in this driving age, when immediate results are expected and often promised, the general condition of the patient being disregarded in the anxiety to obtain local relief. If there is any truth in the saying that a good gynæcologist must be a good general practitioner, here is certainly a field in which there is ample opportunity for its application.

I know that the surgeon who tries to use some discrimination in the selection of his cases, and even declines immediate operation in a case of displacement, when the indications seem to be clear, may lay himself open to the charge of timidity or ultra-conservatism, possibly of blindness to his own interests. But, after all, what is a man's opinion worth unless it is the crystallized product of experience, it may be bitter and humiliating? He may be all wrong, but for him it is, and must be, right until further experience has proved that his position is untenable.

In conclusion, the following deductions are offered for discussion:

1. Muscular atony is an important factor in the causation of uterine displacements, either alone or associated with the usual factors, overweight of the uterus and weakening of its ligaments and the pelvic floor.

2. Mere restoration of the organ to its normal position with regard to the axes of the pelvis is not sufficient to cause permanent relief of symp-

toms, provided additional support is not afforded by firm pelvic and abdominal muscles.

3. The prognosis as to the cure of malpositions by operations is influenced by the general muscular tone of the individual.

4. Hence it should be the aim of the physician to endeavor to restore such a healthy condition of the muscles, either before or after operation, by appropriate treatment—baths, massage, electricity, gymnastic movements, out-of-door exercise, tonics, and such regulation of the patient's dress and mode of life as seem best fitted to the individual case. In short, the work of the physician often begins where that of the surgeon ends, if the result is to be complete and permanent.

DEVITALIZED-AIR-TOXÆMIA, A PRIME CAUSE OF TUBERCULOSIS.*

BY CHARLES DENISON, A. M., M. D.,

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To show the importance of recognizing *the basic law of degeneracy* which springs from rebreathing once used air, and which finds its chief and final expression in that wasting disease, tuberculosis, is the task I have set myself to perform.

It is incumbent upon us to appreciate that there is a deeper and more fundamental source of knowledge than that which the microscope, with its wonderful delineation and detail, can supply, and that the liability of being sidetracked by that instrument's findings should be recognized, in order that we may not fail to grasp the true origin and evolution of this degenerative disease.

The term *devitalized* is new only as applied to the air which has been breathed. Sir B. W. Richardson, in his work *On Certain of the Phenomena of Life*, used this word to designate the quality of oxygen in which animals died after respiring part of it, they being unable longer to live, though only one eighth of the oxygen had been consumed. To quote from the *Smithsonian Contributions to Knowledge*:¹

"Richardson, in 1860-61, found that a temperature much higher or lower than 20° C. had the effect of shortening very considerably the lives of animals confined in an unventilated jar, and that these effects were more marked when the animals were confined in an atmosphere richer than normal air in oxygen. In this case he found that by passing electrical sparks from a frictional machine through the *fatal* air (previously deprived of carbonic acid) he made it again capable of supporting life; from which he concluded that oxygen is 'devitalized' during respiration, and that the electric spark has the faculty of revitalizing it."

*Read before the Congress on Tuberculosis (Medical Section II) held in London, July, 1901.

¹Report by Dr. J. S. Billings, Dr. Weir Mitchell, and Dr. D. H. Bergey, vol. XXIX, 1895.

By the term *toxæmia* is not here meant the sudden asphyxiation from carbonic-acid poisoning, or the rapid starvation from lack of oxygen (one or the other of which had to do with all the experiments carried on under the direction of the Smithsonian Commission above referred to). Our definition refers to that lesser vitiation of the blood and living tissue (better, perhaps, called a *dyscrasia*) that gradually, through accumulation, results in degeneration, which is the basis or so-called "soil" of disease, rather than any at present recognized distinct affection.

The life of the air consists, to a greater extent than has been heretofore recognized, in the molecular mobility of its atoms, caused by the sun's influence. The diffusibility of the air, its easy and ceaseless motions, due to changes of temperature in different strata, are forms of molecular activity which, under the influence of some electrical or other force yet to be fully understood, probably impart the life-giving principle to the atmosphere.

The restraint of this molecular motion and the consequent limitation of vitality are in direct proportion to the deficiency of ventilation. Herein, I conceive, lies the great mistake of our civilization—*i. e.*, in relation to our mode of living. Here is to be seen the need of education that this cause of disease may be realized.

As to the Richardson experiment, I believe we must have further laboratory proof of this kind before the true character of devitalized-air-toxæmia will be understood and generally accepted.²

When the needed additional and check experiments shall have been made and Richardson's finding generally recognized and taught as a fundamen-

tal principle, we shall have made this important advance in knowledge—namely, the certainty that some, as yet unknown, condition in the composition of the air, or in the arrangement of its ultimate atoms or molecules, is essential for the sustenance of life, and that breathing changes that condition or arrangement—*i. e.*, *deprives it of vitalizing power*.

It is said that the atoms of the oxygen molecule go in pairs—*i. e.*, oxygen has two atoms, ozone three. Let me suggest by way of illustration that, perhaps, without the agency of atmospheric electricity (as in used or breathed air), the poles of these pairs are always parallel; but that, with that agency operative, the needed disturbance or correction occurs, throwing some of the poles of these oxygen atoms at right angles to others; and thus, to a certain extent, three atoms of oxygen will come together, making ozone, which, perhaps, may be the life-giving principle in the air.

To make this plainer, let a.a. represent the possible arrangement of the oxygen atoms in pairs; b.b. that of ozone. Then the following arrangement, c.c., may be assumed to be the possible breaking up by static electricity of the oxygen arrangement to make ozone (o, o, o).

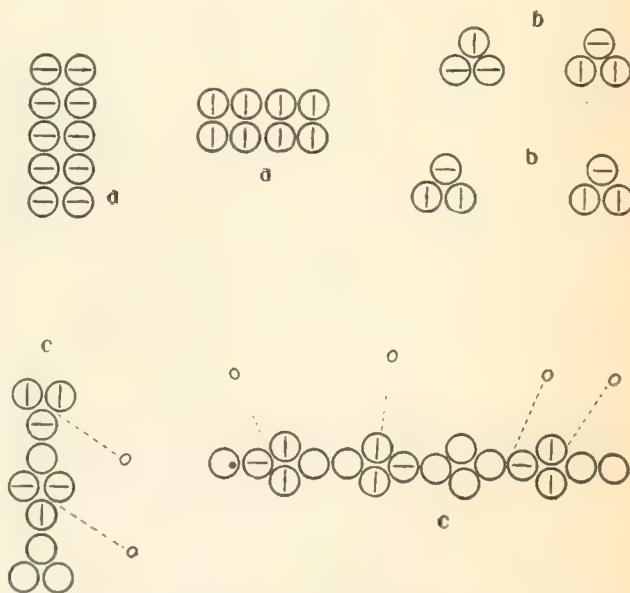


Diagram illustrating possible atomic arrangement. A. A., oxygen atoms in pairs (devitalized air?). B. B., ozone. C. C., the possible breaking up of oxygen arrangement by static electricity to make ozone (o, o, o) in vitalized air (?).

NOTE.—This diagram is not intended to have any reference to the density of the media, nor is due consideration given to the effect of lowering temperature in imparting stability to the ozone molecules.

This is put forward only as a hypothesis in order possibly to open the way for some chemist to make plainer this obscure action of the atmosphere. Even when explained, should this arrangement, presumably due to atmospheric electricity, be found to be correct, it would need to be definitely determined how much of the vivifying influence caused by elec-

²If such distinguished physicians as Billings, Weir Mitchell, and Bergey failed to recognize the importance of this inquiry, it is not surprising that we, too, have not grasped its full meaning.

The report of these men upon the Composition of Expired Air and its Effect upon Animal Life was recommended for governmental publication to the Smithsonian Institute, by a committee of distinguished physicians, Dr. H. C. Wood, Professor W. H. Welch, and Professor C. S. Minot. Yet, having acknowledged in the body of their work (as quoted) Dr. Richardson's important discovery, and having repeated his experiment, *imperfectly* in that no revitalization of the air was attempted by static electricity, they ignored his discovery in their conclusions. Why did they attempt Dr. Richardson's experiment and not make it complete? They went all round it and showed by inference the need of such a determination. This is shown by the following quotation from the report in question:

"It is, however, by no means demonstrated, that the only deleterious effect which the air of crowded barracks or tenement-house rooms, or of foul courts and narrow streets, exerts upon the persons who breathe it, is due to the greater number of pathogenic microorganisms in such localities. It is quite possible that such impure atmospheres may affect the vitality and the bactericidal powers of the cells and the fluids of the upper air-passages with which they come in contact, and may thus predispose to infections, the potential causes of which are almost everywhere present, and especially in the upper air-passages and in the alimentary canal of even the healthiest persons; but of this we have, as yet, no scientific evidence. It is very desirable that researches be made on this point." (Italics mine.—C. D.)

Their own "Richardson Experiment" showed that there was enough excess of oxygen left (from forty to sixty-one per cent.) in the sealed jars containing the dying or dead animals, to support life, and they had previously shown that death did not necessarily occur from the excess of carbonic acid remaining. Richardson asserted that death occurred, though not so soon, with that carbonic acid removed from the oxygen which had been breathed but only partly consumed.

The logical inference is that Richardson's original experiment stands *not yet disproved*. Furthermore, it is, by inference at least, greatly strengthened by Paul Bert's experiments on atmospheres containing an excess of oxygen (*Lecons sur la Physiologie Comparative de la Respiration*, Paris, 1870, p. 510) as well as by Dr. Bergey's experiments quoted by this commission.

tricity in once used and unventilated air, is due to the purifying, disinfectant ozone influence upon exhaled poisons.³

There may be a new principle or ingredient yet to be discovered in the air, which governs this arrangement of either its atoms or molecules, and thus makes it respirable. Indeed, we seem to be confronted with a most important inquiry, the answer to which would be of inestimable value—namely, what is the relation of atmospheric electricity to the respirability of the air? In other words, how does breathing the air, though its oxygen be only partly consumed, make it unfit for again sustaining life till it is re-electrified or revitalized? Or, again, what, if any, is the inhibitive state of the oxygen in the air, especially in once-used air, which renders it non-absorbable or its use nugatory in sustaining life?

As to bacteria, and their ability to change the chemical qualities of the substance upon which they live, thus causing the degeneration of lifeless forms of existence to lower states, we do not know that oxidation retards that decadence. Hueppe's book abounds in fine illustrations of these effects.⁴

The toxæmia we are considering seems to be due to stagnant unventilated air existing in the lungs themselves. It is not necessary, in this audience, to show that ventilation, though ample outside the body, may be very deficient within the lungs, because of disuse from insufficient exercise. The force of our argument increases as we go inward with the analysis of the air. The vitiated and fermenting combination of the unrenewed pulmonary air, increased by body heat, the outcoming carbonic acid, and the poisonous tissue detritus, is simply a ten-fold intensification of devitalized air outside that body in an unventilated room. The living tissue that will stand this and not deteriorate must indeed be in prime condition.

³Professor Hueppe, in discussing the action of electricity on bacteria, says: "The electric current acts upon toxic bacterial cultures in such a way as to remove their toxicity, and cultures treated in this way, with their toxic power destroyed, are able to confer immunity." It is for a biologist like Professor Ferdinand Hueppe to take up this subject and elucidate it, for he reasons that, "in principle, at least, the biologist is at no disadvantage in the matter of accurate prediction as compared with the physicist or astronomer."

⁴*The Principles of Bacteriology*. By Dr. Ferdinand Hueppe, professor of hygiene in the University of Prague. The Open Court Publishing Company, Chicago. To make a few quotations, he says, page 93:

"It is possible to pass from inert, lifeless proteid to the active living proteid, and Scholl succeeded in one case in making again active a proteid which had been rendered passive through heat."

"It now appears clear from chemical considerations that in anaerobiosis, oxygen, to speak exactly, is not taken out of the molecule. There is simply an atomic rearrangement by means of which the hydroxyl radical (O H) affects the oxidation of the carbon to carbon dioxide, and either hydrogen is liberated, or reduction-products rich in hydrogen arise, or hydrogen combines with sulphur to form the sulphuretted hydrogen. The instability of the atom-grouping is therefore the real primary reason for the breaking up, and this process is in certain cases independent of oxygen, and can therefore proceed anaerobically."

"Cholera cultures are virulent when young, first becoming impotent through access of air. For the same reason our cultures of pathogenic bacteria upon gelatin, agar, and potato, and in broth, are generally without power to produce disease, since, in consequence of the restriction of metabolic activity to the splitting of certain substances, they have so accustomed themselves to a metabolism based on oxidation, that the poisons that were formed in the first instance through decomposition are rendered harmless through the subsequent oxidation. Ultimately, therefore, the formation of these poisons comes to a standstill."

This devitalization, due to lack of ventilation, leads to the pale face, sallow skin, weak pulse, cold hands and feet, and sluggish bowels; the feeble powers of digestion, assimilation, and nerve energy—all of them proofs of flagging vitality. This lethargy is due to enfeebled and poisoned blood-corpuscles, and to a probable self-infection, but especially to deprivation of food for the blood—i. e., of oxygen from the air. In addition, the *dead air*, which marked deficiency of ventilation implies, compels inactivity and limited use of the lungs, and this, in turn, means the gradual clogging of out-of-the-way aircells with the products of combustion. In this manner, carbonic-acid poisoning and a species of self-infection, are more or less permanently established.

The destructive influence of sunlight upon the tubercle bacillus is now generally admitted. If, in addition, the contention of Frankel, that this bacillus is a facultative anaerobic germ, is sustained, then the assertion of a predisposing cause in defective ventilation is strengthened by the existence of favorable conditions furnished for such germination in the warm unventilated lung.

Why cannot the possibility of this dyscrasic state and its cause be understood, and then generally accepted, as the basis of prevention and of proper administrative control? Let us examine the prevailing belief as to the cause of tuberculosis, and find an answer.

Since the discovery of the bacillus of tubercle, a dangerous circuit of thought has become prevalent among medical men with reference to consumption. I say dangerous, because it narrows the field and limits the scope of that education which we all admit is essential to the successful issue of the present tuberculosis crusade. I object to this tendency because it leads to a circuitous and superficial way of thinking and is a hindrance to right conclusions. Three quotations will suffice to illustrate:

(1) Dr. Edward O. Shakespeare (in his paper read before the Association of American Physicians in 1890) voiced the dictum of the learned discoverer of the bacillus of tubercle when he declared, "There is no fact within the whole range of medical knowledge, for the demonstration of which a greater mass of the most exact, positive, convincing proof can be marshalled, than that the bacillus tuberculosis is the sole, active, exciting cause of tuberculosis, and that without the agency of the micro-vegetable parasite there can be no genuine tuberculosis."

(2) More recently the thought was tersely put editorially as follows, in the *Journal of the American Medical Association* for December 1, 1900, page 1413: "There can be no tuberculosis without the bacillus, and the disease is almost exclusively transmissible through matter containing the micro-or-

ganisms, and, as the lungs are so generally involved, most commonly through the expectoration. The proper care of the expectorated matter, therefore, would alone go a great way in reducing the morbidity to, and mortality from, tuberculosis."

A similar trend of reasoning is characteristic of Professor H. M. Biggs's fine address on The Registration of Tuberculosis, delivered before the Philadelphia Medical Society in November, 1900, and of an excellent statistical article read before the Michigan State Medical Society last July⁶ by Dr. Collins H. Johnson. To summarize: The great, almost universal, prevalence of active or latent tuberculosis in adults being instanced, as shown by post-mortem evidence of tuberculous lesions found in over 4,000 autopsies, in Breslau, of 33 2/3 per cent.; by Biggs, in New York, 60 per cent.; by Brouardel, in Paris, 75 per cent.; and by Otto Naegeli, in the Pathological Institute of Zurich, from less than 30 to 99 per cent., according to the age; therefore the infectious character of the disease is paramount. This germ-limited vision of the subject pervades scores of medical papers written all over the world, which, like the rehearsal of a creed, announce belief in the germ (the existence of which nobody questions), and, starting with it, work out from it and back to it, so that, ætiologically, the germ is the beginning and end of it all.

Following such authority, everybody seems compelled to look at this disease through the colored glasses of a dogmatic bacteriology, which fails to recognize that long formation period when stunted growth and false building of tissue are characteristic of the affection. Thus the pretuberculous stage is slighted, however admittedly explainable are the infiltration, softening, and excavation stages on the germ theory. No bacillus, no tuberculosis; all consumption as well as scrofula is of course tuberculous, therefore none of these without the bacillus; ergo, the destruction of the bacillus is demanded. Since the bacillus is found chiefly in the sputum, laws against or governing expectoration are to be placarded everywhere; and the reason is therefore presumably warranted for the registration of all (?) tuberculous persons, for the instruction of State and other boards of health!

We must not alarm the people! Rather, they must be "educated" against this terrible bacillus, how to destroy it when it has been born and grown up, and how to clean up *after* their friends or relatives have died from its ravages.

Hueppe says "Education to a state of panic is not a wholly new discovery and the earliest products of the scare system are certainly just as ridiculous and disgraceful as the newest."

As to the quotations from Dr. Shakespeare and

the medical journals:-(1) It never has been, and never can be, shown that the *bacillus* is the "sole" cause of all the conditions classed as tuberculous, for *other* causes which produce susceptibility are entitled to quite as much consideration.

It is wholly presumptive to say because "the lungs are so generally involved" that the disease is almost exclusively transmissible through the expectoration. The function of the bronchial glands, the part played by the delicate unventilated lung tissues, and the retention of other poisons than the supposedly inhaled bacilli, all these facts need to be considered.

(3) The statistics of Biggs and Johnson cited a large portion of humanity as having been at some time, or in some degree, infected with tuberculosis, and that, too, increasingly with the advanced age of the individual, an increase which, taken with the evidence of H. Schreiber, that new-born infants do not react to the tuberculin test, shows that the human race probably starts out free from the disease. This ought to prove, or at least to suggest, that there must have been a condition precedent to this disease acquired during life from peculiar environment. Such a fault of our civilization, if we can only find and acknowledge it, will explain the frequent occurrence of this disease. Then, to the reflective mind, this most fatal scourge of the human race is as clearly due to *non-conformity to healthful environment* as, according to our belief, was the extinction of the mammoth megatherians and kindred animals due to geological changes in their environment.

CRIES OF THE SPINE; AN ANALYSIS OF A THOUSAND CASES.*

By J. HILTON WATERMAN, M. D., AND
CHARLES H. JAEGER, M. D.,

NEW YORK.

In general, those who have collected statistical data in reference to spondylitis have analyzed special symptoms and conditions as they occur in a certain number of cases. It has been our aim to add to the value of those already formulated by collecting a large number of cases and presenting several features of each case.

In this analysis we have taken a thousand consecutive cases from the record books of the Hospital for the Relief of the Ruptured and Crippled, and for the purpose of convenience and comparison we have arranged the cases into six groups, according to age:

The first group, from birth to the age of five.

The second group, from the age of five to the age of ten.

*Read by invitation at the annual meeting of the American Orthopædic Association, held at Niagara Falls in June, 1901.

⁶Philadelphia Medical Journal, January 12, 1901.

The third group, from the age of ten to the age of fifteen.

The fourth group, from the age of fifteen to the age of twenty.

The fifth group, from the age of twenty to the age of thirty.

The sixth group, all those over thirty.

We then consider the frequency with which spondylitis is present in male or female, the first symptom or symptoms which called the attention of the family to the existence of the disease, and the deformity with reference to its degree, the cause where it could be ascertained, as well as the family antecedents, the occurrence of abscesses during the course of the disease, and the presence of paraplegia and of tuberculous complications.

In all the statistics available to date, it is noted that the age is given at which the patient first applied for treatment. In this analysis we have endeavored to ascertain the age when the disease began and we have therefore noted the duration of the symptoms before the patient applied for treatment.

SEX.

In the first five years of life, of 600 patients, 310 were males and 290 were females.

The disproportion between the sexes was found to be greater in the second five years of life; there were 147 males and 113 females.

From ten to fifteen, however, the disease was present in twenty-six females and in twelve males.

From fifteen to twenty years, but little difference is noted, there being fifteen males to thirteen females affected.

From twenty to thirty years of age, twenty-nine males and thirteen females had the disease.

Over thirty years of age, there were twenty-two males and ten females.

This gives a total of 535 males and 465 females.

It may be difficult to explain the preponderance of females over males in the ages between ten and fifteen, for it is evident that, taken as a whole, the tendency is greater in the male than in the female.

In Vulpius's statistics, collected from fifteen authors, a total of 6,586 cases, he found 53.25 per cent. occurred among males, and 46.75 per cent. among females.

Our youngest patient was six months old, and the oldest sixty-nine years old.

SITUATION OF THE DISEASE.

	Birth to					Over	
	5	5-10	10-15	15-20	20-30	30	Total.
Cervical, 1..		1					1
2..	2						2
3..	6	8					14

	Birth to					Over	
	5	5-10	10-15	15-20	20-30	30	Total.
4..	8	2	2				12
5..	5	3	1				9
6..	11	4	1				16
7..	7	5					12
Dorsal, 1..	17	3		1			21
2..	10	4					14
3..	27	12		1			40
4..	26	10		1	1		38
5..	21	11	1	2	1	2	38
6..	49	18		1	1	1	70
7..	38	14	2	3	4	1	62
8..	49	23	2	1	3	3	81
9..	50	17	7	5	5	2	86
10..	60	17	2	6	7	8	106
11..	41	15	1	1	4	3	65
12..	50	23	4	1	8	2	88
Lumbar, 1..	32	19	55	1	3	3	63
2..	33	17	4	2	2	2	60
3..	26	19	2	1	1	3	52
4..	20	11		1	1	3	36
5..	4	3	3				10
Sacral, 1..	2	1	1				4

Taking the percentage of the occurrence of the disease in each region, we compare the result with Vulpius's figures.

	Our Observations.	Vulpius's.
Cervical, 1	00.1	3.2
2	00.2	4.7
3	01.4	3.3
4	01.2	2.2
5	00.9	2.1
6	01.6	2.5
7	01.2	2.8
Dorsal, 1	0.2	2.7
2	1.4	2.9
3	4.	3.6
4	3.8	3.9
5	3.8	5.2
6	7.0	5.2
7	6.2	5.4
8	8.1	5.5
9	8.6	5.
10	10.6	5.2
11	6.5	5.
12	8.8	6.2
Lumbar, 1	0.3	5.
2	6.0	4.5
3	5.2	4.4
4	3.6	4.2
5	1.0	3.9
Sacral, 1	0.4	

The foregoing table gives the vertebral regions and the number of times each one was affected. We

find that the dorsal region is most frequently diseased, and that some of the dorsal vertebræ seem to be particularly vulnerable.

If we study the subjoined table we shall see which vertebral regions are affected most at different periods of life:

Age.	LOCALITY.			Total.
	Cervical.	Dorsal.	Lumbar.	
1-5... 39	444	117	600	
5-10.. 23	167	70	260	
10-15.. 4	19	15	38	
15-20.. 0	23	5	28	
20-30.. 0	34	8	42	
Over 30 0	22	10	32	
—	—	—	—	—
	66	709	225	1,000

The older the patient at the time of the beginning of the disease, the lower in the spine the seat of the disease was found to be. The disease occurred only once in the first cervical vertebræ and, that was in a child six years old. During the ages ten to fifteen, the highest vertebra found to be affected was the fourth cervical. After the fifteenth year no case was seen in which the disease occurred in the cervical vertebræ; the highest vertebra affected was the first dorsal, and that was only once. After the twentieth year, we found the highest one affected to be the fourth dorsal, and over thirty years the fifth dorsal. In the 600 cases which occurred during the first five years of life, we find that every vertebra down to the first sacral was affected, with the exception of the first cervical. After the fifteenth year, no case was noted lower than in the fourth lumbar. Thus in our cases the disease was limited to twelve vertebræ during the adult year, whereas it affected twenty-five during the first ten years of life.

It is interesting to compare the percentages of our cases with those which Vulpius collected. The different regions were affected as follows:

	Our 1,000 Cases.	Vulpius's 1,559 Cases.
Cervical.	6.6 per cent.	10.9 per cent.
Dorsal	70.9 " "	52.2 " "
Lumbar.	22.5 " "	36.9 " "

Or, if we divide the spinal column into segments of eight vertebræ each—

	Our 1,000 Cases.	Vulpius's 1,559 Cases.
Upper third..	8.7 per cent.	14.6 per cent.
Middle " ..	42.9 " "	35.4 " "
Lower " ..	48.4 " "	50. " "

In Vulpius's cases the cervical region was affected in a much larger percentage of cases than in ours;

the lumbar region also seems to be diseased more frequently. It is only when we compare the percentage of the lower third of the spine that we see any similarity. In our record the dorsal segment was effected in a very high percentage of cases, fully eighteen per cent. more frequently than in the German statistics.

The question of family history is important. How many children with tuberculous parents get Pott's disease? We find that the fathers of fifty patients and the mothers of forty-six had tuberculosis; both parents had the disease in twelve cases, while thirty-one other patients had aunts, uncles, etc., afflicted with tuberculosis. We thus see that in over ten per cent. of the cases the patients had tuberculous parents.

The interesting observation has been made that in Colorado the children of "Lungers" are very rarely affected with tuberculous diseases of bones and joints, and that in the rare cases in which the children have hip or spinal disease it has a very mild course, hardly ever coming to the formation of abscesses and progressing favorably without any apparatus.

There have been many observations made to prove that infection easily takes place from inmates of the same house. We have seen children admitted to the wards of one of the orthopædic hospitals for some non-tuberculous condition leave the hospital after some months with hip or spinal disease.

Symptoms.—An endeavor was made to ascertain the first symptom in each case. This was not difficult, as the first symptom is always recorded in taking the history of each case.

In the cases occurring from birth to five years of age there were symptoms 568 times; in 32 cases the child was brought to the hospital for some trouble not directly referable to the spinal disease.

In the cases from birth to the age of five, the first symptom noted was the unnatural attitude of the child. Of the 600 cases occurring within these years, 189 held this unnatural position, while pain was the prominent feature of 139 cases. In 63 cases the kyphosis was the first manifestation of the disease. In 126 cases the trouble was called to the attention of the surgeon by night cries, gastralgia, and progressive weakness, while grunting respiration, inability to walk, and abdominal protrusion were present in but a very small number. At the time of the first examination of these 600 cases, the record shows that there was no evidence of deformity in 157 patients.

From close inspection of the tracing of those cases in which deformity occurred, we find that it was marked in 99 cases, moderate in 140, and slight in 204.

In the years from five to ten, we find that pain in

the back was the symptom complained of most frequently. This goes naturally with the fact of the increased age of the child enabling it to give information as to subjective symptoms. In the cases from birth to five, the objective symptoms, attitude, deformity, and night cries occurred in the larger proportion of cases.

In reference to the deformity, it may be stated that 95 of the 260 cases presented marked deformity at the time of the first examination.

Recognizing as we do the hopeless irresponsibility of the parents of the children we see in hospital practice, it is not surprising to find that the disease had greatly progressed before the child was brought for treatment.

In the ages from ten to fifteen and from fifteen to twenty, pain was found to be the first symptom in the majority of cases, while the deformity was scarcely noticeable at the time that the patient first came under observation, although it was more noticeable in those cases occurring in from ten to fifteen years, in which the deformity was of a moderate type at the time these cases were first seen.

From twenty to thirty years, we found that pain in the back was in the greatest number of cases the symptom, while in patients over thirty years old pain and progressive weakness were the first symptoms. The deformity was marked in almost all these cases.

In the 1,000 cases, abscesses were recorded 158 times, or over 15 per cent. during the first ten years of life, one hundred and thirty-nine patients had abscesses, the greater number being psoas, fewer iliac and pelvic. Vulpius, in 1,945 cases, finds abscesses clinically observed 476 times, almost 25 per cent.

While but little reliance can be placed on the statements of the parents regarding the cause, still we give the following data, having admitted to our statistics only those cases in which the cause as given seemed to bear some relation to the beginning of the disease. Traumatism was responsible for 298 cases, and infectious diseases for 42.

Paraplegia appeared in 41 cases during the course of the disease, and 50 patients had tuberculous complications, a focus of tuberculous disease in some other joint or bone.

The duration of the disease before treatment was begun has some bearing on the prognosis. One patient continued to have symptoms twenty-nine years after the onset of the disease; another, twenty-five years; several others had active disease for fourteen, thirteen, eleven, and ten years. In only one case was a child brought for treatment within twenty-four hours after the child uttered the first complaint or attention was called to the presence of the disease.

Therapeutical Notes.

Iodoform Packing for Bone Cavities.—Nikolaus Hackmann (*Wiener klinische Wochenschrift*, 1901, No. 22; *Caducée*, September 21st) employs the following mixture, carefully sterilized, to fill up the cavity formed by the removal of bone:

R Spermaceti. 40 parts;
Sesame oil. 20 "
Iodoform. from 30 to 60 "

M.

This mixture, liquefied by means of heat with a special apparatus, is poured into the cavity to be obliterated, where it solidifies, and the soft parts are then sutured. It is well borne and in no way hinders union by first intention. It becomes absorbed, but very slowly. The author reports twenty-two cases, all successful.

The Treatment of Grave Scarlatina.—M. Arviragnet (*Presse médicale; Revue médicale*, October 9th) prefers hydrotherapy to antithermic remedies and gives baths at from 64° to 68° F. in the adult, or at 77° F. in children. In the latter case, if the applications are to be long continued, cold envelopments are better borne. The cold bath is indicated in the ataxic forms; but, if the disturbance does not coincide with elevation of temperature, hot baths act better. Hydrate of chloral is of service in persistent cases. For adynamia and in the algid forms, M. Arviragnet recommends injections of artificial serum, camphorated oil, or ether. In the cardiobulbar forms, with irregular heart action and respiration, and a tendency to syncope, the best results are obtained by injections of caffeine, from 3 to 7½ grains ["0.20 à 0.50 centigr." This dose seems very large and we urge caution], sparteine, three quarters of a grain ["0.05 centigr." This also seems large for one injection], and strychnine, one sixty-fifth of a grain.

In the *hæmorrhagic* forms, in addition to the preceding measures as called for, ergotin, iron perchloride, rhatany, and hamamelis are recommended. M. Comby prescribes:

R Gallic acid. 15 grains;
Syrup of orange flowers. . . . 450 minims;
Distilled water. 1,200 "

M. A coffeespoonful every hour.

M. H. Roger is well pleased with the result of chloride of calcium in hæmorrhagic scarlatina. His prescription for an adult is:

R Crystallized calcium chloride,
from 60 to 90 grains;
Syrup of bitter orange peel. . . 10 drachms;
Old brandy (or rum). 1 ounce;
Tincture of cinnamon. 75 minims;
Distilled water. to 4 ounces.

M.

To be taken in divided doses in the twenty-four hours.

Solutions of gelatin have their indications in epistaxis and uterine hæmorrhages. Intestinal hæmorrhages may be combated with large enemata of boiled saline solution containing either tannic acid or rhatany.

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GYNÆCOLOGY AND GENERAL SURGERY.

We may probably take it for granted that Dr. Ephraim McDowell, the father of ovariectomy, would have been puzzled if anybody had called him a gynæcologist, that Sir Spencer Wells, Dr. Atlee, and Mr. Keith would have felt amused had that appellation been applied to them, and that Dr. Peaslee would have detected in the epithet, addressed to him, a tendency to exalt his minor above his major work. Nevertheless, it is not to be wondered at that Dr. Van de Warker, whose admirable address as president of the American Gynæcological Society we print in this issue, should have been surprised when, some years back, he invited an old friend who had written a treatise on *Ovariectomy* to prepare a paper for the Section in Obstetrics and Gynæcology of the American Medical Association, of which he was the chairman, and received from his friend the reply that he was not a gynæcologist, but a general surgeon, for in those days, in the State of New York, ovariectomy was for the most part in the hands of the gynæcologists. Not long afterward the operation again became one of the recognized functions of the general surgeon, and, if we are not mistaken, the general surgeon soon surpassed the gynæcologist as a life-saver by ovariectomy.

It seems to be plain that the general surgeon is displacing the gynæcologist in the matter of major operations on the reproductive organs, but with a true sportsmanlike grasp of the situation Dr. Van de Warker does not repine, and he need not. The operations that involve abdominal section, save perhaps the Cæsarean, are not so predominantly required by woman that sex should figure in any spe-

cialization of abdominal work, and the gynæcologist will in all probability still reign undisputed in a very broad field. That that field is not yet ready to be laid fallow is abundantly shown in Dr. Coe's article, also published in this issue of the *Journal*. It must not be inferred from this remark that we regard pelvic mechanics as the sum total of gynæcology; our impression is that gynæcology is to become more of a medical and less of a surgical specialty, but it will always have its surgical aspect, one, too, that the general surgeon will respect.

MEDICAL EXAMINATION FOR LIFE INSURANCE.

Physicians who have had much to do with the life insurance business are, we think, very generally impressed with the faultiness of the medical examination from one or another point of view. Some of the questions that have to be answered on the blank relate to matters that are comparatively unimportant, but to answer them consumes the examiner's time, vexes the applicant, and sometimes has an appreciable effect upon his nervous condition for the time being, perhaps to the extent of endangering the acceptance of the risk. On the other hand, signs of considerable value that might be elicited quickly and readily are ignored. But probably the gravest error is that of hasty and inadequate physical examination, a fault for which the examiner himself is not always to be blamed, since in some way he often gets the impression that little more than a perfunctory examination is expected by the company.

These and other defects in the system now largely followed were vividly set forth at the last meeting of the American Association of Life Insurance Examining Surgeons by Dr. Charles Lyman Greene, of St. Paul, the medical director of the Minnesota Mutual Life Insurance Company, in a paper entitled *The Diagnosis of Heart Disease considered in its relation to Life Insurance Examinations*, which was published in the June number of the *Medical Examiner-Practitioner* and has now been reprinted in pamphlet form. Impressed as we have long been with the shortcomings of the examination system, we are surprised to learn of the frequency with which persons affected with grave heart disease are insured. From his own personal observation Dr. Greene furnishes the essential particulars of eleven cases in which the disease must have been present and readily recognizable at the time of the exami-

nation. He adds that he has learned by inquiries of other physicians that their conviction is that a large proportion—some say a majority—of persons seeking for life insurance while they are affected with incipient tuberculous disease or with valvular cardiac lesions only partially if at all compensated for have little difficulty in obtaining insurance; and this, he says, does not apply to any one city or section. Aneurysm, too, is almost invariably overlooked, and it is “astonishing how little attention is paid to arteriosclerosis.”

With every justification Dr. Greene sees the chief cause of inadequacy of the examination in the failure to prepare the applicant properly by divesting him of such articles of clothing as obstruct or wholly vitiate the procedure. “The soft murmur of certain mitral insufficiencies or the crepitation of incipient tuberculosis,” he says, “cannot be elicited through a starched shirt, nor can any chest be examined with accuracy unless the starched shirt is removed.” Yet very few companies at the present day “cover this matter specifically and definitely in their instructions to examiners or in the questions upon their medical blank.” Dr. Greene mentions an experienced examiner who seems to have plumed himself on the fact that in his chest examinations he always insisted on the removal of the applicant’s waistcoat.

We all know that the companies are prosperous under the existing state of things, that they are saddled with many a poor risk, and yet make money; but it is fair to their good risks? How many a man with every prospect of longevity is paying a heavy premium, and has gone on paying it for years and years, in order that the company may still make money in spite of insuring those who are manifestly doomed to an early death! This, too, Dr. Greene points out very forcibly. “It may be time to consider,” he says, “whether or not the greater liberality of which we hear so much nowadays should not be directed to the reduction of premium rates for preferred lives by more rigid selection and careful examination, associated with broader and fairer classification of risks. One thing is certain; the mortality tables upon which present premium rates are based and by which the results of medical selection are judged do not more than approximate the results that should be obtained if the simplest of modern scientific methods were evoked to create a class of low-premium-paying preferred lives.”

THE PROLAPSED ARM AND CENTRAL RUPTURE OF THE PERINÆUM.

Cases of central rupture of the perinæum are exceedingly rare, occurring but once in about 2,000 labors. Still more infrequent is central rupture with the emergence of the head through the vulva, the rupture giving exit to the prolapsed arm, but such instances have been recorded by Joffrion, Charpentier, Kroner, and Breiter, and now another is reported by Pujebet and Stérin (*Journal des sciences médicales de Lille*, October 12th). In their case the patient was a primipara twenty-six years old. When she was admitted into the Sainte-Anne Maternity, while there were no remnants of the hymen, it was found that the vulva was somewhat narrow and the orifice of the vagina situated somewhat farther forward than usual, the distance between the anus and the posterior commissure being about two inches. Labor pains began to be felt at eight o’clock in the morning, and toward four in the afternoon the head appeared at the vulva, highly distending the perinæum. The foetal envelopes had not yet broken. The hand which was protecting the perinæum was suddenly moistened with liquor amnii, which escaped in great abundance and did not come from the vulva, because that orifice was hermetically sealed by the child’s head, but from a little fissure situated about half an inch in front of the anus, and this fissure gradually grew larger as the head progressed. Very precipitately the suboccipitofrontal circumference cleared the vulvar orifice. In a moment an elbow appeared through the laceration, and shortly the whole upper limb. Extrapelvic rotation was effected gradually while an assistant replaced the arm in the vagina, the shoulders were slowly disengaged, and the child was wholly expelled by way of the vulva. It was a boy weighing nearly ten pounds. The principal diameters of its head were as follows: Biparietal, three inches and a half; occipitofrontal, four inches and a third; occipitomenal, five inches and a quarter.

The authors think that the mechanism of the production of the central rupture was the following: When the coccyx had been forced back, the perinæum was greatly distended and then indented by the point of the elbow, which, lying close to the chin, served virtually to augment the occipitomenal diameter. To prevent a more extensive laceration, the advance of the head was checked as much as

possible, while an effort was made to extend it. This movement of extension separated the chin from the elbow, and the latter was forced down with so much the greater violence upon the perinæum and penetrated it at the moment when a tremendous effort on the part of the mother caused the suboccipitofrontal circumference to emerge from the vulva, for the perinæum, which had been carried downward and forward, found an obstacle to its customary retreat in the presence of the elbow. The central perforation was closed with stitches and gave no special trouble, although a fistula persisted for a short time. Nevertheless, the authors coincide in the teaching that ordinarily it is well to divide the bridge between the rupture and the vulva, so as to prevent an irregular, bruised, and extensive tear. In the case reported there was apparently no other predisposing cause for the laceration than the narrowness of the vulva and the unusual length of the perinæum.

A NEW JOURNAL OF MILITARY MEDICINE.

We have received several numbers of a new French semi-monthly journal entitled *Le Caducée*, which is described in its subtitle as devoted to medical and surgical affairs in armies, navies, and colonies. The issue for September 7th, which is No. 5 of the first volume, contains an important article on the diagnosis and prophylaxis of the Oriental plague, by Dr. A. Calmette, one on poisoning by the retention of leaden bullets, by Professor Nimier and Dr. E. Laval, and a number of interesting articles on other subjects.

MENTHOL AS A PALLIATIVE OF COUGH.

It is certainly safer to allay cough by means of a non-poisonous local anæsthetic than by morphine or any other narcotic. Such an agent, according to Saenger, of Magdeburg (*Therapeutische Monatshefte* 1901, No. 7; *Wiener klinische Wochenschrift*, September 12th), is menthol. A few crystals may be vaporized in a spoon over a flame and inhaled, or a few drops of a forty- or fifty-per-cent. alcoholic solution may be rubbed between the hands and the hands then held before the nose. At first the cough is intensified, but it soon subsides. This result can be produced, however, only if the mucous membrane is free from accumulated secretion. The remedy acts well in whooping-cough, but it should not be used in cases of acute inflammatory disease of the lung or pleura or if there is a tendency to hæmoptysis.

ANTIDIPHThERIC-SERUM TETANUS IN ST. LOUIS.

The unfortunate occurrence of a number of deaths from tetanus in St. Louis recently seems directly traceable to the use of antidiphtheritic serum furnished by the St. Louis Health Department, but the outbreak is in some respects mysterious. The serum that has proved so disastrous was taken from the horse on August 24th, but it was not until October 1st that the animal showed symptoms of tetanus; it is difficult to believe, therefore, with our present ideas of the duration of the period of incubation, that the tetanus germ was in the horse's blood when the serum was taken. Until the facts are more fully known, it would be mere guess-work to suggest any explanation of the sad accident. It is announced that a thorough investigation is to be made.

As will be seen by reference to the official communication from the health commissioner of the city of St. Louis, published in our news columns, twenty cases of tetanus have occurred so far, and there seems to be no probability that any further cases will occur, since the last injection in which the apparently contaminated lot of serum was used was made on October 24th.

ELECTRICITY IN THE TREATMENT OF ANAL AND VULVAR PRURITUS.

So rebellious and so distressing an affection as chronic pruritus of the anus or vulva should call forth unremitting efforts at relief. One means seems to have been hit upon by Leredde, who at a recent meeting of the Paris Therapeutical Society (*Indépendance médicale*, October 16th) related his experience with electrical currents of high frequency. In four cases that had resisted all other known remedies he had succeeded with this current. The duration of the trouble ranged from three to twelve years. In each case from six to thirteen applications had been required, two or three in a week, the duration of each sitting being gradually prolonged to fifteen minutes. "Lichenification" seems to be an obstacle to the efficiency of the treatment.

The Health of Havana.—According to the report of Major W. C. Gorgas, chief sanitary officer of Havana, for the month of September, the health conditions for that month were decidedly the best in the history of that city, the death rate being 15.64 per thousand, a rate lower than that of London (16.57) and Hull (25.56), during the four weeks ending September 14th. There were two deaths only from yellow fever, as against an average of seventy deaths, from this cause during the corresponding month during the preceding ten years.

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general, during the week ending November 1, 1901:

Smallpox—United States.

California....	San Francisco, Oct. 13-20.....	2 cases.	
Indiana.....	Evansville, Oct. 19-26.....	7 cases.	
Kentucky....	Lexington, Oct. 19-26.....	1 case.	
Massachusetts	Cambridge, Oct. 19-26.....	1 case.	
Minnesota....	Minneapolis, Oct. 19-26.....	1 case.	
New Jersey....	Newark, Oct. 21-28.....	15 cases.	1 death.
New York.....	New York, Oct. 19-26.....	8 cases.	3 deaths.
N. Dakota....	Bottineau Co. Sept. 15-Oct. 15.	10 cases.	
"	Cass Co. Sept. 15-Oct. 15.	1 case.	
"	Edmond Co. Sept. 15-Oct. 15.	6 cases.	
"	Mayville, Oct. 18-25.....	1 case.	
Pennsylvania.	Norristown, Oct. 19-26.....	5 cases.	
Rhode Island.	Newport, Oct. 19-26.....	7 cases.	
Wisconsin....	Green Bay, Oct. 19-27.....	4 cases.	

Smallpox—Foreign.

Belgium.....	Antwerp, Sept. 28-Oct. 5.....	3 cases.	2 deaths.
"	Ghent, Oct. 5-12.....	2 deaths.	
Brazil.....	Rio de Janeiro Sept. 1-15.....	109 deaths.	
Canada.....	Halifax, Oct. 5-12.....	7 cases.	1 death.
"	St. John, Oct. 19-26.....	6 cases.	
Colombia....	Cartagena, Sept. 29-Oct. 6.....		2 deaths.
"	Panama, Oct. 14-21.....	125 cases.	
France.....	Paris, Oct. 5-12.....		3 deaths.
Gt. Britain....	London, Oct. 5-12.....	175 cases.	6 deaths.
India.....	Bombay, Sept. 17-Oct. 1.....		2 deaths.
"	Calcutta, Sept. 14-28.....		2 deaths.
"	Madras, Sept. 14-27.....		
Italy.....	Naples, Oct. 5-12.....	54 cases.	5 deaths.
Mexico.....	City of Mexico Oct. 6-13.....		1 death.
Russia.....	Moscow, Sept. 28-Oct. 5.....	5 cases.	1 death.
"	Odessa, Oct. 5-12.....	2 cases.	
"	St. Petersburg Sept. 28-Oct. 12.	5 cases.	

Plague—United States.

California....	San Francisco, Oct. 13-20.....	1 case.	1 death.
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Plague—Insular.

Philippines... Manila, Aug. 21-Sept. 7.....	6 cases.	3 deaths.
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Plague—Foreign.

Brazil.....	Rio de Janeiro Sept. 1-15.....		13 deaths.
China.....	Hong Kong, Sept. 7-14.....	11 cases.	11 deaths.
India.....	Bombay, Sept. 18-Oct. 1.....		454 deaths.
"	Calcutta, Sept. 18-21.....		27 deaths.
"	Karachi, Sept. 15-22.....	15 cases.	8 deaths.
Italy.....	Naples, Oct. 5-12.....	2 cases.	2 deaths.
Turkey.....	Smyrna, Sept. 28.....	1 case.	

Yellow Fever.

Brazil.....	Rio de Janeiro Sept. 1-15.....		9 deaths.
Colombia.....	Bocas del Toro Oct. 28.....	1 case.	
Cuba.....	Havana, Oct. 5-12.....	1 case.	
"	Trinidad, Sept. 30.....	1 case.	
Mexico.....	Progreso, Sept. 28-Oct. 5.....		1 death.
"	Vera Cruz, Oct. 12-19.....	20 cases.	7 deaths.
West Indies..	Curacao, Sept. 28-Oct. 6.....	2 cases.	1 death.

Cholera.

India.....	Bombay, Sept. 17-Oct. 1.....		7 deaths.
"	Calcutta, Sept. 15-28.....		19 deaths.
"	Madras, Sept. 14-27.....		99 deaths.
Japan.....	Yokohama, Sept. 23-30.....	1 case.	1 death.
Java.....	Soerabaya, Aug. 1-31.....	1800 cases.	1400 deaths.
"	Samarang, Aug. 1-31.....	1050 cases.	600 deaths.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending November 2, 1901:

DISEASES.	Week end'g Oct. 26		Week end'g Nov. 2	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	77	25	57	20
Scarlet fever.....	117	7	153	6
Cerebro-spinal meningitis..	0	2	0	4
Measles.....	130	4	152	4
Diphtheria and croup...	213	37	226	29
Small-pox.....	8	3	5	4
Tuberculosis.....	235	151	245	134

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending November 2, 1901:

ANGENY, G. L., Passed Assistant Surgeon. Commissioned passed assistant surgeon from September 16, 1901.

LEWIS, D. O., Surgeon. Detached from the *Philadelphia*, ordered home, and granted leave of absence for three months on account of sickness.

ORVIS, R. T., Assistant Surgeon. Detached from the *Pensacola* and ordered home to await orders.

ROGERS, F., Medical Inspector, having been found incapacitated for active service on account of disability incident thereto, is retired from active service, October 28, 1901, under the provisions of Section 1453, Revised Statutes.

WEBB, U. R., Assistant Surgeon. Ordered to the *Pensacola* as relief of R. T. Orvis, Assistant Surgeon.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending November 2, 1901:

CHURCH, JAMES R., First Lieutenant and Assistant Surgeon, is relieved from further duty in the Department of Cuba, and upon expiration of his present sick leave, will report in person to the surgeon-general of the Army, Washington.

CLARK, JOSEPH T., Captain and Assistant Surgeon, will proceed to Philadelphia and assume the duties of attending surgeon and examiner of recruits in that city.

FLETCHER, RICHARD M., Contract Surgeon, is detailed as a member of the examining board appointed to meet at Fort Meade, South Dakota, vice SAMUEL M. WATERHOUSE, First Lieutenant and Assistant Surgeon, relieved.

HART, JAMES W., Contract Surgeon, will proceed to Fort Trumbull and report for temporary duty.

MARROW, CHARLES E., First Lieutenant and Assistant Surgeon, will proceed to Fort Morgan, Alabama, and report for duty.

SMITH, HERBERT M., First Lieutenant and Assistant Surgeon, is detailed as a member of the examining board convened at Fort Monroe, Virginia.

WILLIAMS, ABRAHAM D., Captain and Assistant Surgeon. The leave of absence granted him is extended fifteen days.

WOODRUFF, CHARLES E., Major and Surgeon, will proceed to New York and report for duty as transport surgeon on the transport *Crook*, to sail for the Philippine Islands, where, upon arrival, he will report to the commanding general for duty.

Society Meetings for the Coming Week:

MONDAY, November 11th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private); New York Ophthalmological Society (private); Lenox Medical and Surgical Society, New York (private); Harlem Medical Association of the City of New York; Gynecological Society of Boston; Burlington, Vermont, Medical and Surgical Club (annual); Norwalk, Connecticut, Medical Society (private).

TUESDAY, November 12th.—New York Academy of Medicine (Section in Genito-urinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark (private) and Trenton, N. J., Medical Associations; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioner's Club, Richmond, Kentucky; Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, November 13th.—New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Massachusetts, Medical Association (private); Philadelphia County Medical Society.

THURSDAY, November 14th.—Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Massachusetts, Medical Club (private); Pathological Society of Philadelphia.

FRIDAY, November 15th.—New York Academy of Medicine (Section in Orthopaedic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynaecological Society.

Yellow Fever is Epidemic at Yucatan, according to advices received by the U. S. Marine-Hospital Service through the Alabama Board of Health.

An Office Building for Physicians, such as is found in Minneapolis, Chicago, and other western cities, is to be erected on Sutter Street, near Taylor Street, San Francisco.

A City Sanatorium for Consumptives Proposed in Philadelphia.—Dr. John V. Shoemaker has inaugurated a movement looking toward the erection by the city of Philadelphia of a sanatorium for the free treatment of tuberculosis.

Accused of Smuggling Surgical Instruments.—Dr. T. Schwenkenstein, of Marion, Wis., is charged by the customs officials of this port with having smuggled in a number of surgical instruments, the total value of which is about \$1,660. Dr. J. M. Sattler, of the same town, is also implicated.

A Medal for Admiral Van Reypen.—Rear Admiral Van Reypen, Chief of the Bureau of Medicine and Surgery of the United States navy, has received one of the medals issued by the State of New Jersey to those who responded to the first call for volunteers during the civil war. He enlisted in the Second New Jersey Regiment on May 1, 1861.

Amputation May Possibly Constitute Mayhem.—A Chicago physician has advertised that he will pay \$300 each for two human ears, which he proposes to amputate and endeavor to transplant. It is reported that he has found two persons who will permit their ears to be removed, but that a justice holds that in removing an ear, even with the consent of the person operated on, he would be guilty of mayhem.

A Site for the Tuberculosis Hospital.—A tract of 160 acres of land at Forestport, Oneida county, has been tendered as a gift for the location of the New York State Hospital for Incipient Tuberculosis by Congressman Littauer. The tract originally cost \$20,000, and is said to be admirably adapted to the purpose. It has been inspected by the State commission appointed for the purpose, but their report has not yet been made public.

Bubonic Plague in Liverpool.—Six persons have died in Liverpool since September 3d with symptoms of bubonic plague. There are now several suspected cases in the hospitals under investigation; all possible precautions are being taken to prevent the spread of the disease. Precautions against the introduction of bubonic plague are being taken at all the Atlantic and Gulf ports. Since the reappearance of the plague in Glasgow all vessels arriving from that port and from Liverpool are subjected to the closest possible scrutiny.

Anti-vaccination Argument Before Vaccinated Judges.—A school teacher having been suspended from the Philadelphia Girls' High School because she refused to be vaccinated, the matter was taken into court. When the case came up for trial, the attorney began an attack on the practice of vaccination, when he was stopped, all three of the judges sitting in the case having quite recently been vaccinated. The attorney was directed to confine his argument to the right of the authorities to dismiss or suspend a teacher for such a cause. The case has not yet been decided.

Tetanus Follows Injections of Antitoxine Serum.—Some fourteen cases of tetanus are said to have followed the injection of diphtheria antitoxine furnished by the board of health of the city of St. Louis, the majority of the cases terminating fatally. The origin of the infection is under investigation. The particular horse from which the serum was drawn has been used as a source of antitoxine serum by the board for the past three years.

The Outbreak of Tetanus in St. Louis.—The following dispatch to the *New York Medical Journal*, signed by the Health Commissioner of St. Louis and dated November 7th, reaches us as we go to press:

Up to the present date, so far as I have ascertained, there have been twenty cases of tetanus reported, following the use of our diphtheria antitoxine serum, with ten deaths. I feel confident that no further cases will occur, since the lot of diphtheria antitoxine labeled August 24th ran out on October 23d, and the last dose of it was injected on October 24th. An investigation is now being made by the coroner and also by a commission of expert pathologists, appointed to make autopsies and to examine the serum. Their report has not yet been presented.

Medical Association of the Greater City of New York.—At the stated meeting, to be held at the New York Academy of Medicine, November 11th, at 8.30 p. m., the following will be the order of exercises: 1. On the General Aspects of Corneal Astigmatism, by H. Davison Saril, M. D. 2. Discussion by Dr. N. J. Hepburn, Dr. William Oliver Moore, and others. 3. Encysted Empyema, with a Report of Four Cases, Resulting in Perforation of the Lung, Successfully Operated Upon, by J. Blake White, M. D. 4. Discussion, opened by James K. Crook, M. D., with Remarks on the Early Recognition of Serous and Suppurative Pleurisy. Discus-

sion continued by Dr. Carl Beck, Dr. Egbert Le Fevre, Dr. Samuel Lloyd, Dr. T. E. Satterthwaite, and others.

The New York Academy of Medicine.—At the last stated meeting, on Thursday evening, the 7th inst., Dr. M. Allen Starr read a paper entitled *The Causation of Multiple Neuritis*.

At the next meeting of the Section in Surgery, on Monday evening, the 11th inst., Dr. B. T. Tilton will read a paper on the *Ætiology of Unusual Forms of Peritonitis*.

At the next meeting of the Section in Otolaryngology, on Wednesday evening, the 13th inst., Dr. Arnold Knapp will read a paper on *Meningitis from the Extension of Acute Purulent Otitis Media through the Aqueduct of the Vestibule*. Cases will be presented and specimens and new instruments will be exhibited.

At the next meeting of the Section in Pædiatrics, on Thursday evening, the 14th inst., the following papers will be read: *The Value of the Widal Reaction in Children*, by Dr. Milton A. Gershel; and *Primary Intestinal Tuberculosis in Children*, by Dr. David Bovaird, Jr. Dr. Henry L. Coit will exhibit an automatic syphon for separating cream or top-milk of any desired fat percentage.

At the next meeting of the Section in Orthopædic Surgery, on Friday evening, the 15th inst., the following papers will be read: *Orthopædic Operations for Intractable Cerebro-spinal Cord Lesions*, by Dr. Homer W. Gibney; and *The Effect of Osteitis of the Knee on the Growth of the Limb*, by Dr. Henry Ling Taylor.

The New York State Association of Railway Surgeons.—The eleventh annual meeting will be held in New York on Thursday and Friday, November 14th and 15th, under the presidency of Dr. Wisner R. Townsend. The programme includes the following titles: *Car Sanitation*, by Dr. G. P. Conn, of Concord, N. H.; *Transportation of Passengers Sick with Contagious Diseases*, by Dr. J. N. Hurty, of Indianapolis; *The Necessity of Disinfection*, by Dr. M. J. Rosenau, of Washington; *Methods of Disinfecting Cars*, by Dr. William H. Park; *Medico-legal Features*, by Mr. L. L. Gilbert, of Pittsburgh; *The Account and Results of a Wreck*, by Dr. Henry Flood, of Elmira, N. Y.; *Railway Accidents, their Cause and Prevention from a Psychological Standpoint*, by Dr. R. S. Harnden, of Waverly, N. Y.; *Contusions of the Abdomen*, by Dr. Walter Lathrop, of Hazleton, Pa.; *Injuries of the Abdomen*, by Dr. Frederick H. Wiggin; *Contusions of the Abdomen, with Injuries of the Viscera*, by Dr. L. W. Hotchkiss; and *When to Amputate*, by Dr. H. P. Jack, of Canisteo, N. Y. On Friday, the 15th inst., the following clinics will be held:

Clinic on Hernia.—Dr. William T. Bull. Hospital for Ruptured and Crippled, Lexington Avenue and Forty-third Street, at 9 a. m.

Clinic on the Use of Cocaine for Surgical Operations.—Dr. John A. Wyeth. New York Polyclinic Medical School and Hospital, 214 East Twentieth Street, New York, at 11 a. m.

Clinic on General Surgical Operations.—Dr. A. J. McCosh. Presbyterian Hospital, Madison Avenue and Seventieth Street, New York, at 2.30 p. m.

The Army Medical School.—The sixth annual session of the Army Medical School, at Washington, D. C., began November 4th, with nineteen student officers in attendance. The sessions of the school are held at the Army Medical Museum and Library, Washington, D. C., and the course lasts five months. The school is for the purpose of instructing recently appointed medical officers in military hygiene, medicine, surgery, and other matters pertaining to military medicine and surgery which are not taught in the regular medical schools.

The school was established in 1893 upon the recommendation of Surgeon-General Sternberg, and yearly sessions were held until the occurrence of the Spanish-American war. The conditions which have obtained since that time have prevented a resumption of the school until this year. The school has been of the greatest value in instructing approved candidates, fresh from civil life, in the ways of the service and the methods peculiar to military medicine and surgery.

The training of the recently appointed medical officers at the school is on a line with that given in the English military service at Netley, and in the French military service at Val de Grâce. The professors and instructors are Colonel Charles Smart, assistant surgeon-general, military hygiene; Colonel Calvin De Witt, assistant surgeon-general, military medicine; Major John Van R. Hoff, surgeon, duties of medical officers; Major Walter Reed, surgeon, clinical microscopy; Major Louis A. LaGarde, surgeon, results of gunshot injuries; Major W. C. Borden, surgeon, military surgery; Captain F. P. Reynolds, assistant surgeon, hospital corps drill.

In addition to the lectures and laboratory instruction given at the medical museum and library, instruction in hospital corps drill, practical demonstrations in first aid, the establishment of field hospitals, and equitation, are given at the General Hospital, Washington Barracks, D. C.

Births, Marriages, and Deaths.

Born.

SWARTZLANDER.—In Doylestown, Pennsylvania, on Sunday, October 27th, to Dr. and Mrs. F. Swartzlander, a daughter.

Married.

CALHOUN—CREAR.—In New York, on Wednesday, October 30th, Dr. William C. Calhoun and Miss Christine Ross Crear.

CLAYBROOK—LIGHTFOOT.—In Richmond, Virginia, on Tuesday, October 20th, Dr. Edwin Brown Claybrook, of Cumberland, Maryland, and Miss Harriet Field Lightfoot.

GUNN—HARDING.—In New York, on Thursday, October 31st, Dr. Neil D. Gunn, of Ontario, Canada, and Miss Clara Y. Harding.

Died.

COLLINS.—In South Charleston, Ohio, on Wednesday, October 23d., Dr. E. T. Collins, in the ninetieth year of his age.

CRAWE.—In Watertown, N. Y., on Tuesday, October 20th, Dr. J. Mortimer Crowe, Sr., in the seventy-first year of his age.

DUNNING.—In Webster, N. Y., on Sunday, October 27th, Dr. John D. Dunning, in the seventh-sixth year of his age.

Pith of Current Literature.

Medical News, November 2, 1901.

Some Observations on Southern California. By Dr. Samuel A. Fiske.—The author writes of a climate of sunshine, mild temperatures, and dry soil.

Examination of the Mouth in Infancy and Childhood. By Dr. Jacob Sobel.—The author has found that many physicians, certainly beginners, when examining the mouth see nothing but the tonsils and pharynx. A systematic examination of the mouth should be conducted as follows: The depressor is inserted at the left angle of the mouth, the cheek and lips everted, then at the right angle and the cheek and lips everted. The spatula then catches the frænum and the under surface of the tongue, and the frænum and the floor of the mouth are observed; the spatula being removed, the upper surface of the tongue is viewed; the latter is then firmly depressed and the hard and soft palates, fauces, tonsils, pharynx, and, in the vast majority of cases, the epiglottis, are observed.

A Case of Concussion of the Brain and Hystero-epilepsy. By Dr. William B. Noyes.—The author asks: Why are not these complicated symptoms, which we call hysteria, so closely associated with definite epileptic attacks, to be explained as fatigue symptoms in a man who was originally suffering from concussion of the brain, and secondarily from epilepsy? One condition common to all these traumatic cases is that the patients have almost lost the power of working continuously at any operation, and fatigue promptly follows any exertion.

On Experimental Tuberculosis of the Suprarenal Capsule in Relation to Addison's Disease. Preliminary Report of a Pathological Study. By Dr. Binde De Vecchi.—Noting that the most frequent anatomical lesion in Addison's disease is tuberculosis of the suprarenals, the author has developed experimental tuberculosis in the suprarenals of rabbits with a view to studying its effects on the general organism. By this means a serious poisoning is produced, causing pathologic changes in the heart, liver, and kidneys, and particularly in the cells of the central nervous system—these latter changes explaining the nervous symptoms of those suffering from Addison's disease. The cause of the diseased condition lies in the gradual destruction of the suprarenal substance, and in the tuberculous intoxication. The author, however, has been unable to reproduce the characteristic bronzed skin.

The Physician as a Social Factor. By Dr. Alexander Rovinsky.—The author insists that, by taking a more active part in the social and political affairs of the community, we shall succeed eventually in rooting out that erroneous idea, firmly implanted in the public mind, that the medical profession is always actuated by purely egoistic motives in its dealings with the community.

An Interesting Accident of Staining. By Dr. J. O. Cobb.—The author refers to the appearance of an apparent rod-bacillus, three times the size of the

tubercle bacillus, which was seen by him whenever methyl blue instead of methylene blue was used as a contact stain in the examination of sputum. Subsequently, the "bacillus" proved to be a crystal, appearing only in the presence of an albuminoid substance.

Medical Record, November 2, 1901.

Carbonate of Cresote as a Remedy for Pneumonia, with a Report of Nine Cases in Which the Administration of it Has Been Followed by Remarkably Uniform and Good Results. By Dr. Leonard Weber.—The author explains the good results from the use of carbonate of creasote in these cases on the hypothesis that its action is antidotal to the pneumonic toxins.

On the Use of A. C. E. Mixture and Ethyl Bromide in Operations for Adenoid Vegetations. By Dr. J. W. Gleitsmann.

Notes on Vienna Hospitals. By Dr. John E. Somers.—The author asserts that, for universal and complete organization in all lines, for teaching purposes, no city can equal Vienna. Competition in the practice of medicine is very keen in Vienna, and so the men connected with the University have found it to their financial advantage to organize courses in every department of medicine and surgery, to promote the work in every way feasible, and to encourage the advent of as many students to their city as possible. The fee for attendance at a private course is from eight to twenty-five dollars. Speaking of hospitals:—Gloves are not used in operating; retractors are not used in abdominal work; aseptic silk is the almost universally accepted ligature in abdominal operations; the treatment in retrodeviations of the uterus with moderate adhesions, when there is no contraindication, is by putting the patient under an anæsthetic, tearing up the adhesions, bringing the uterus forward, and inserting a pessary; when this fails a vaginal operation is more often done than a ventrofixation. There is a tendency on the part of the Vienna surgeon to do more and more of the adnexal work *per vaginam*.

The Pathology of Bright's Disease. By Dr. George E. Davis.

A Report of Some Cases Presenting Gross Lesions of the Basal Ganglia.—By Dr. M. L. Perry.—From a study of some cases the author concludes that: (1) The corpus striatum has no intimate relation with either the motor or the psychical spheres. (2) There may be a very extensive lesion involving both the caudate and the lenticular nuclei without giving rise to any symptoms. (3) There is, in the posterior portion of the lateral nucleus of the optic thalamus, an area, irritation of which will produce immediate loss of consciousness with convulsive movements on the opposite side, and destruction of which will produce immediate death. (4) There may be a tumor of considerable size involving the pineal gland without giving any pressure symptoms. (5) The pineal gland may be entirely destroyed by disease without producing symptoms. (6) There is no tract of nerve fibres originating in the pineal gland and connecting it with the remainder of the brain.

Boston Medical and Surgical Journal, October 31, 1901.

The Mechanics of Lateral Curvature as Applied to the Treatment of Severe Cases. (Second Paper). By Dr. Robert W. Lovett.—When the result of rotations of the spine, in their effect on lateral deviations, is better understood, it will probably be possible to add the element of rotation to the corrective force applied in the treatment of scoliosis with regard to forcible corrections, one of two things may be done: (1) Force, carefully antagonized, may be applied to the spine itself, with a view to improving the curved portion of the spine; (2) the curved region may be twisted as a whole, or displaced sideways as a whole in its relation to the rest of the spine, as occurs when unopposed force is applied to the curve. The former is, of course, the more desirable when it is possible, but the latter may be of much use in improving the general outline of the body. The separation of the two is important for the application of intelligent therapeutic measures. It is relatively easy to displace the thorax in relation to the rest of the column, but relatively hard to change the curve itself. Forcible correction seems to have its place only as preliminary to gymnastic treatment, and the author advocates the use of corrective plaster jackets, only as a temporary means to secure a better foundation for better gymnastic, or, if necessary, mechanical treatment.

Intermittent Hydrops. By Dr. E. G. Brackett, and Dr. F. J. Cotton.—In intermittent hydrops we have an affection without discoverable anatomical basis, without proof of infection, giving a simple non-inflammatory serous effusion in the joints, occurring at regular inexplicable periods, interrupted without rule, or in accordance with what we may term physical stimuli, associated in some instances with what are usually classed as functional nervous disorders. Operation would seem to have its effect simply as one way of interrupting a vicious cycle. From the data at hand it seems fair to infer that quinine and arsenic and electricity should be tried, and if no result is achieved, then, and after time allowed for the chance of spontaneous remission, puncture and injections or open drainage may be resorted to. A list of sixty-eight cases from the literature on the subject is appended.

Association of Anæmia with Chronic Enlargement of the Spleen. By Dr. Arthur H. Wentworth (*concluded*).—The blood changes in cases of so-called anæmia splenica are those of a secondary anæmia. It is not improbable that the cachexia and other symptoms, described in these cases, are produced by a chronic intoxication similar to that produced by cancer, tuberculosis, etc., and that the splenic and blood changes are merely two of the results which are thus produced. If it is possible for fibrous tissue in the spleen to produce toxic substances, it is difficult to account for the absence of such substances in connection with chronic hyperplasia of the spleen when associated with a variety of well-known causes. The lesions found in the spleen in cases of so-called splenic anæmia do not warrant the

statement made by Banti and others, that this condition is related in any way to pseudoleucæmia. The evidence is conclusive that anæmia infantum pseudoleucæmia is a secondary anæmia, and that it and anæmia splenica infectiva are identical conditions. There is no apparent connection between the character of the blood and the splenic changes in infancy.

A Case of Anomia and Paraphasia. By Dr. George H. Thomas.

On the Passing of the Trephine. By Dr. Thomas H. Manley.

American Medicine, November 2, 1901.

The Influence of Mental Depression on the Development of Malignant Disease. By Dr. Joseph D. Bryant.—From statistics given by the author it appears: (1) That the various forms of mental perturbation are common causes of melancholia, and that the male suffers from melancholia from these causes quite as frequently as the female; (2) that in the female, cancer is associated with melancholia ($\frac{3}{4}$ + of 1 per cent.) about twice as often as in the male ($\frac{1}{4}$ + of 1 per cent.), also nearly twice as frequently as with other forms of insanity, in either sex ($\frac{1}{4}$ + of 1 per cent. to each); (3) that cancer in the male is not practically fatally associated with melancholia oftener ($\frac{1}{4}$ — of 1 per cent.) than with other forms of insanity ($\frac{1}{4}$ + of 1 per cent.). It is consequently evident that for some reason the death rate from cancer in melancholia in female cases ($\frac{3}{4}$ + of 1 per cent.) is much greater than in the opposite sex ($\frac{1}{4}$ — of 1 per cent.). There is nothing to warrant the assumption that mental depression exercises any influence in the causation of cancer, except through the blood impoverishment that almost invariably exists in melancholia, a change which appears not materially to influence the outcome in the male, as the percentage of affliction is substantially alike in this sex in all forms of insanity. Hence it appears that the preponderance of malignant manifestations in the female should be attributed rather to the broader field of attack than to any form of special vulnerability.

Transmission of Tuberculosis Through Meat and Milk. By John J. Repp, V. M. D.—The author believes that the meat of all food animals, especially cattle, is unfit for food when the animal is highly tuberculous; but is safe for food when the animal is only slightly or moderately tuberculous, especially so if the meat is well cooked, provided the tuberculous tissues are eliminated. The milk of a cow with a tuberculous udder is always dangerous for food unless it is well sterilized. The milk of tuberculous cows with healthy udders is sometimes dangerous for food unless well sterilized. We cannot tell, except by experiment, which is impracticable as a routine matter, when such milk is dangerous and when it is not. Hence the milk of tuberculous cows without disease of the udder should always be looked upon with suspicion, and either not be used or be used only after sterilization. Tuberculous cows may be kept for breeding purposes, provided they are isolated, even from their own offspring, and their products sterilized before

use; or, they may be slaughtered for food under the conditions already mentioned.

Clinical Points in Diabetes and Bright's Disease. By Dr. A. J. Hodgson.—The author lays stress upon the importance of keeping the urine bland. To this end one must use, judiciously, a potable water which acts freely as a diuretic. Keeping the urine bland allows the kidney the least possible action and preserves its tissue from further destruction. From six to twelve glasses each day should be ordered, only a glass at a time. Fluids taken at meals should not be counted.

Convulsive Tics. By Dr. Otto Lerch.—The author presents a typical case. He thinks convulsive tic is frequently mistaken for other diseases, particularly chorea, which has a favorable prognosis and is amenable to treatment.

The Relative Infrequency of Tuberculosis Among Jews. By Dr. Maurice Fishberg.—The author ascribes the relative immunity of the Jews to tuberculosis to their habits of life formed in accordance with the Mosaic injunctions.

Should We Burn Our Dead. By Dr. Henry D. Fulton.

The Lane Lectures on the Social Aspects of Dermatology. VIII. By Malcolm Morris, F. R. C. S., Ed.—Reported in the *New York Medical Journal*.

Journal of the American Medical Association,
November 2, 1901.

Prostatectomy, the Method of Choice in the Management of Prostatic Obstruction. By Dr. Eugene Fuller.—The author believes that the cry of mortality, now being loudly raised against prostatectomy, has originated from one of the three following sources: From those who know nothing about the operation; from those who do only the Bottini operation; and from those who have tried the operation and failed. For the author's part, he asserts that, in case an individual is otherwise sound in body, is not over sixty-five years of age, or thereabouts, and has not marked urinary infection, the mortality from prostatectomy is not greater than from five to eight per cent. From that low level the mortality rises, proportionately to the combination of adverse conditions that may be present. One should never hesitate to operate on the most desperate surgical risks through fear of injuring one's statistics, for in the bad cases death accompanied by great suffering surely occurs if nothing is done, while, if prostatectomy associated with thorough vesical drainage is performed, death, if not averted, is peaceful, the patient thanking the surgeon for the comfort he has afforded, or—and this happens in a large majority of the worst cases—the patient completely recovers. The operation should be performed with great rapidity. The author points out that, though difficult, there is no reason why anyone naturally apt as a surgeon, who familiarizes himself with the theory of the subject and then practises it, should not master the operation and attain good results.

Perineal Prostatectomy. By Dr. Parker Syme.—The author feels that prostatectomy will be proved in the future to be a thoroughly sound and proper procedure. He believes that the death rate will be no more than is compatible with a condition that is in itself so grave and menacing. Prostatectomy, however, should not be left as a last resort; it should be performed before the patient is in a dying condition, or not at all. Any man who is not physiologically very old, whose arteries are in fair condition, and who is not suffering from marked kidney lesion, may be expected to undergo this operation with comparative safety, provided it has not been left till his bladder is badly inflamed and he is suffering from sepsis.

Prostatectomy versus Prostatotomy in the Radical Treatment of Senile Hypertrophy of the Prostate. By Dr. Ramon Guit  ras.—From a careful consideration it would appear that the mortality in prostatectomy is three times as great as it is in prostatotomy, but the recoveries are better. It is difficult to say what constitutes a cure in these cases, but it seems to the author that if a patient can empty his bladder of all the urine, excepting perhaps half an ounce of residual, the result obtained is first class, especially if he is relieved of his symptoms. In those who recover, the results from prostatectomy are much better and more permanent than in prostatotomy. In prostatectomy the operation is performed but once, in prostatotomy we must often repeat it.

Autoplastic Suture in Hernia and Other Diastases—Preliminary Report. By Dr. L. L. McArthur.

The Cosmetic and Visual Results in Squint. By Dr. J. Morrison Ray.

Strabismus; Its Treatment. By Dr. A. Edward Davis.

The Requirements of Modern Surgery. By Dr. J. H. Carstens.—According to the author, the requirements are: (1) A patient brought to the highest state of resistance to microbic infection and made as clean as possible. (2) An operating table, preferably in a hospital, where everything has been made thoroughly sterile. This includes an  sthetist, assistants, and nurses. (3) A surgeon who has a mechanical hand and has received a long, thorough training.

A Report of Four Cases of Fat Necrosis in Connection with Gallstones. By Dr. W. A. Evans.

Fat Necrosis from a Surgical Standpoint. By Dr. Carl Beck.

The Treatment of Typhoid Fever in Children. By Dr. Henry E. Tuley.—The author sums up the treatment in the following injunctions: Feed carefully; medicate cautiously; nurse vigilantly; bathe frequently; and give plenty of water internally.

Philadelphia Medical Journal, November 2, 1901.

Observations on the Treatment of Croupous Pneumonia. By Dr. James C. Wilson.—According to the author, the young practitioner should bear in mind that patients are more often damaged than

helped by the promiscuous drugging which is still only too prevalent. In the author's practice the diet consists chiefly of milk and light broths. Junket, custard, ice-cream, sometimes raw or stewed fruits, may be given of the patient cares for them. Water is given in abundance, not more than two ounces at any one time. The patient is sponged night and morning; if the temperature exceeds 104° F., cold sponging may be repeated at intervals of two or three hours. Ice-bags relieve pain and make the patient feel more comfortable. Calomel should be given, with a subsequent saline if necessary. The use of Dover's powder is recommended to produce a slight continuous drowsiness; to diminish suffering; to control cough; to allay excitement and apprehension; expectorants, aconite never, and veratrum viride rarely, digitalis only in response to particular indications. Strychnine is given as a cardiac stimulant; nitroglycerin for the relief of the laboring right ventricle. Blisters are not used save in the case of delayed resolution.

Appendiceal Fistula. By Dr. John B. Deaver.—The author lays special emphasis on the importance and necessity for an early recognition of acute appendicular inflammation and its natural corollary, the prompt institution of surgical intervention. If the appendix is removed before any circumappendicular involvement has occurred, then it is well nigh impossible for abscess to supervene, except as a result of contamination through a defect in the asepis of the operative technics.

The Ætiological Potency of Heredity in Mental Disease. By Dr. Carlos F. MacDonald.—It is the author's belief that hereditary predisposition may be regarded as an ætiological factor common to all insanities, no matter what the immediate or the exciting causes may be; that is, it may act independently as a causative factor, or it may act in conjunction with what are denominated exciting causes.

Acute Alcoholic Multiple Neuritis, with Peculiar Changes in the Gasserian Ganglia. By Dr. Charles W. Burr, and Dr. Daniel J. McCarthy.

The Influence of Secondary Infections in Chronic Pulmonary Phthisis. By Alexander G. R. Foulerton, F. R. C. S., Lond.

British Medical Journal, October 19, 1901.

Sixty-ninth Annual Meeting of the British Medical Association.

Section of Surgery.

A Discussion on Renal Tension and its Treatment by Surgical Means. By R. Harrison, F. R. C. S., and others. The first speaker holds that increased renal tension may be, among other causes, the starting point for some of those pathological changes in the kidney which are included under the head of Bright's disease, or nephritis. In acute nephritis the renal tension is very high, yet it never proceeds to suppuration or gangrene, these extremes being preceded by death. There is a striking analogy between such renal over tension and glaucoma, and just as the latter condition is relieved by iridectomy, so the speaker has found that incision of the kidney relieves the abnormal tension. He reports four cases of nephritis with increased tension and albumin in the urine, in which incision of the kidney

was followed by rapid disappearance of the albuminuria, and recovery. In ordinary cases incision is not required, but it is called for where convalescence is delayed and the albuminuria does not disappear. In acute malignant nephritis with suppression of urine and uræmia, incision of the kidney is often found to double the amount of urine excreted. A third indication for relieving renal tension surgically is where marked disturbance of the heart and circulatory apparatus arises in the course of inflammatory renal disorders. The operation of exposing and incising a kidney is one attended with but a small degree of risk, and should be entertained where there is a fair prospect of saving a person from imminent death, or from the invalid life which is inseparable from chronic albuminuria. The capsule of the kidney should be incised along the convex border; punctures may be made almost anywhere where the engorgement seems greatest, but the pelvis of the organ should be avoided. It is not important which kidney is incised, unless pain or some other unilateral symptom should be present. In bilateral nephritis incision of one kidney benefits the other.

On Certain Points in the Operative Treatment of Renal Calculus. By J. Hutchinson, Jr., F. R. C. S. The author's conclusions are as follows: 1. The x rays (except, perhaps, in stout subjects or in the case of very small stones), enable an exact diagnosis as to size, position, and number of renal calculi, to be made. 2. They enable the surgeon in performing the operation of nephrolithotomy to do so with the least possible injury to the kidney, and to dispense with bringing that organ on to the surface of the wound. 3. Limited incisions made directly over the calculi in the renal pelvis are to be preferred when practicable. Such wounds of the pelvis heal well. 4. Before the operation, it is most important to get the urine into a healthy condition. The administration of urotropine before and afterward is of much value. 5. Renal calculi, however, small, should be operated on so soon as they are positively diagnosed. Their danger to the kidney structure and to the patient's life bears no relation to their size.

A Case of Movable Kidney Producing Pyloric Stenosis and Constriction of the Duodenum by Peritoneal Bands. By Dr. H. Bramwell.—The features of this case, clinical and *post mortem*, tend to show that: 1. Recurrent intermittent spasm of the pylorus may proceed to such an extent as to lead to a mechanical stenosis causing the most aggravated form of gastric dilatation. 2. That such a pyloric stenosis may be the direct result of intermittent traction of a movable kidney. 3. That an acquired movable kidney does not move up and down in a space under the peritonæum, but carries its peritoneal covering with it, stretching the inferior reflection of the peritonæum to some extent and gliding over the angle of this reflection, while at the same time, it stretches and drags upon its superior and internal reflections, drawing these into distinct bands which directly drag upon the pylorus. And the only true remedy for such a condition is to fix the kidney in its normal situation by means of stitching.

Radical Cure of Femoral Hernia. By R. H. Parry, F. R. C. S.

The Prevention of Shock During Prolonged Operations. By W. H. Brown, F. R. C. S. I.—The author recommends that, in cases of prolonged operation, or of operation to remove the causes of repeated bleeding, transfusion should be begun so soon as the major operation is well under way. A competent surgeon, not connected with the major operation, should open a selected vein, and begin transfusion, the amount of saline solution injected being governed by the state of the pulse and the loss of blood from the major operation.

A Discussion on Gastro-jejunoscopy in Ulcer of the Stomach and Duodenum and in Pyloric Stenosis. By G. Barling, F. R. C. S., and others.

An Operation for Perforated Gastric Ulcer; With Some Account of Three Similar Cases in Gloucestershire. By Dr. G. B. Ferguson.

The Treatment of Cancer of the Breast by Oophorectomy and Thyreoid Extract. By Dr. G. T. Beatson.—The author reports the case of a woman, aged forty-four years, suffering from carcinoma of the breast, in which the performance of oophorectomy and the administration of thyreoid extract were followed by atrophy of the affected breast, disappearance of the glandular involvement of the axilla, and apparent recovery. Where secondary deposits of cancerous growth have taken place, oophorectomy will be of no avail, and the author thinks the time has come to perform this operation early in the disease, and not to wait until the cases become inoperable, as has hitherto been the custom. Should it prove successful, the extensive eradictory operations now in vogue, would be no longer necessary.

Amputation of the Leg for Senile Gangrene. By J. Rankin, L. F. P. S. Glasg.—The salient points in the case here reported are as follows: 1. Successful result. Senile gangrene is usually fatal. 2. The age. The patient was seventy-two years of age. 3. The result. An excellent stump. 4. The value of antiseptic treatment. Hardly a drop of pus was present throughout.

Notes on the After History of a Series of Cases of Pyloroplasty for Pyloric Stricture and Ulcer. By R. Morison, F. R. C. S.

Oophorectomy in Mammary Cancer. By G. E. Herman, M. B.

A Discussion on Injuries to Joints, with Special Reference to Their Immediate and Remote Treatment by Massage and Movement. By H. Marsh, F. R. C. S., and others.

The Treatment (Non-operative and Operative) of Congenital Dislocation of the Hip. By F. F. Burghard, M. S.

Reduction of Long-standing Dislocations. By Dr. E. W. Dunbar.

Case of Hydatid Cyst in the Right Pleura Treated Successfully by Operation. By R. H. A. Whitelocke, M. B.

A Case of Suprapubic Lithotomy for a Vesical Calculus Weighing Two Hundred Grains, in a Boy Aged Eleven Years. By Dr. E. M. Symphon.

A Case of Partial Excision of the Pancreas for Multilocular Cystic Tumor. By G. Heaton, M.B.

Section of Ophthalmology.

Discussion on the Diagnosis, Prognosis, and Treatment of Pernicious Myopia. By P. Smith, M. R. C. S.

A New Refractometer. By C. S. Blair, F. R. C. S.

Superficial Punctate Keratitis in Bombay. By H. Herbert, F. R. C. S.

A Case of Symmetrical Bullous Keratitis. By S. T. Thompson, M. B.

An Unusual Form of Keratitis Associated with a General Skin Eruption. By C. S. Blair, F. R. C. S.

British Medical Journal, October 26, 1901.

The Harveian Oration. By Dr. N. Moore.

The Communicability of Human Tuberculosis to Cattle. By S. Delépine.—In order to test the statement of Koch, that human tuberculosis differs from bovine and cannot be transmitted to cattle, the author inoculated four calves with a mixture of several tuberculous sputa, representing several types of human tuberculous sputa:

First calf.—Inoculated in the lung with 5 c.c. of mixed sputum. Died on sixth day from generalized tuberculosis, not due to inoculation, but probably contracted *in utero*.

Second calf.—Inoculated under skin of the leg. Death on sixth day. Marked enlargement of a gland five inches from seat of inoculation; the gland contained living and virulent tubercle bacilli.

Third calf.—Given 50 c.c. of mixed sputa in its food. Death twenty-six days later. Virulent tubercle bacilli found in œsophageal glands.

Fourth calf.—Inoculated in the peritonæum with 5 c.c. sputum. Definite tuberculin reaction sixty-eight days later. Post-mortem examination on the seventieth day showed marked tuberculosis of peritonæum, pleura, and pericardium.

Therefore, of the four calves experimented upon, only two survived long enough to allow definite results to be obtained, and these two calves had contracted tuberculosis as the result of ingestion of, or peritoneal infection with, human tuberculous sputa.

Note on the Results Obtained by Antityphoid Inoculation in the Case of an Epidemic of Typhoid Fever. By Dr. A. E. Wright. (See abstract of *Lancet* for October 26, 1901, in this number of the *Journal*.)

Primary Chancre of the Tonsil. By Dr. W. H. Kelson.—The author reports a case of primary chancre of the tonsil, following amygdalotomy. The stump did not heal, enlarged glands appeared at the angle of the jaw, and in due course all the symptoms of secondary syphilis appeared. Infection was undoubtedly due to the use of a dirty and infected amygdalotome.

Sixty-ninth Annual Meeting of the British Medical Association.

Section of Psychological Medicine.

Introductory Remarks by the President on Asylum Administration and Nursing. By Dr. J. B. Spence.

A Discussion on the Rôle of Toxic Action in the Pathogenesis of Insanity. By Dr. W. F. Robertson and others.—The first speaker is convinced that by far the most important factor in the pathogenesis of insanity is toxic action. The large majority of cases of insanity are not primarily diseases of the brain at all, but are dependent upon the action of toxins derived from elsewhere, which affect the functional activity of the cortical nerve cells by disordering their metabolism, and often permanently damaging or even destroying them. The common view that "mental" disease is the primary condition, and that any accompanying "bodily" disease is secondary, is in general founded upon an erroneous conception of what is taking place.

Some Conditions of Success in the Treatment of Neurasthenia. By Dr. A. T. Schofield.—The author discusses his subject under the heads of: (1) The physician; (2) the patient; (3) methods of treatment; and (4) various details. The physician must have full and entire sympathy with his patient. Allied to patience are the qualities of perseverance and firmness. Lastly, success depends upon a power of attention to details that is not always found in minds broad enough to grasp the case as a whole.

As regards the patient, it is all-essential to determine whether mind or body plays the chief part in the disease. Cases of true neurasthenia, nerve exhaustion dependent upon external causes or upon physical lesions within, are clearly physical. On the other hand, all cases of hysteria or neuromimesis contain a distinct mental element. Not only is the treatment of these two classes of cases necessarily different, but cases of nerve exhaustion call for entirely different remedies than those of nerve irritation. The patient *must* have confidence in the doctor and nurse. As regards methods of cure, the selection of a proper nurse is of the first importance. The treatment of all neurasthenic cases is necessarily far more expensive than that of any other class of disease. Neurasthenics cannot, as a rule, be cured in their own homes, for what they all need is rest. But the physician should not run a sanitarium himself. As regards the Weir Mitchell "cure," it is largely overdone. In neurasthenia proper the whole mental system is sound, the brain being worn out physically, so that isolation is not often needed and over-feeding and massage can often be dispensed with. Hysterical cases, on the other hand, nearly always demand some form of "rest-cure." Where there is entire rest in bed, massage is always needed. Other details, important enough to effect success, are the management of dyspepsia, circulation, sleeplessness, constipation, restlessness, and depression. Finally, in most nerve cases, the patient should not return to his former surroundings. In cycling and golf we have two favorite and powerful therapeutic agencies.

Remarks upon the Anthropological Examination of Asylum Patients, with a Scheme for the Same, and the Average Results of the Examination of Twenty-eight Control Cases. By Dr. E. Goodall.

The Physical Basis of Melancholia. By J. Turner, M. B.

The Modern Treatment of the Insane. By J. S. Tuke, M. B.

A Discussion on Feeble-minded Children: Diagnosis and Treatment. By Dr. F. Warner, and others.

Colitis or Asylum Dysentery? By Dr. T. C. Shaw.

On Modern Asylum Plans. By Dr. R. H. Steen.

Section of Ophthalmology (continued).

Periscopic Lenses. By A. S. Percival, M. B.

A Plea for the Occasional Performance of the Operation of Depression in Cases of Cataract. By H. Power, F. R. C. S.

The Essentials of a Test for Color Blindness. By Dr. F. W. Edridge-Green.

Notes on Ophthalmic Conditions Resulting from Modern Gunshot Wounds. By L. V. Cargill, F. R. C. S.

Treatment of Hypopyon Ulcers of the Cornea. By R. J. Hamilton, F. R. C. S.

Remarks on the Treatment of Ulcer of the Cornea with Hypopyon. By R. Williams, M. R. C. S.

Lancet, October 26, 1901.

The Harveian Oration. By Dr. N. Moore.

Examinations and the Education of the Special Senses. By T. Bryant, F. R. C. S.

The Decline in the Art of Prescribing. By Dr. A. P. Luff.

Note on the Results Obtained by Antityphoid Inoculation in the Case of an Epidemic of Typhoid Fever Which Occurred in the Richmond Asylum, Dublin. By A. E. Wright.—In the epidemic of typhoid fever here discussed, 54 cases of the disease occurred during a period of five months. During that time 655 persons were exposed to infection; of these 511 received antityphoid inoculations and 5 contracted the disease. Among the 144 uninoculated persons, 29 cases of typhoid fever occurred. The author has estimated the comparative incidence of typhoid fever in inoculated and uninoculated, calculated upon the average strength of the respective groups during the period intervening between the commencement of the inoculations and the termination of the epidemic; this is shown in the following table:

	Average Strength.	Num-ber of Cases.	Num-ber of Deaths.	Percent-ages of Cases.	Percent-ages of Deaths.
Uninoculated	298	30	4	10.1	1.3
Inoculated	339	5	1	1.5	0.3

The result is in conformity with all the statistical returns of antityphoid inoculation.

The Effects of Lead Upon Lead-workers in the Staffordshire Potteries. By F. Shufflebottom, M. B.—The author has made systematic examinations of all the lead-workers employed in thirteen factories in Staffordshire, to determine to what

extent their health is affected by their employment. His conclusions are as follows: 1. That of the 527 lead-workers he only met with one case of lead-poisoning. 2. That individual symptoms, which at first sight might have been attributed to lead-poisoning, were found upon closer examination to be due to other causes. 3. That the health record of the lead-workers was excellent (the complaints mentioned being for the most part only minor ailments). Of 348 men 196 have not lost a single day's work from any cause whatever since they began to work in lead, and the same may be said of 90 out of 124 single women; 26 out of 55 married women have only been absent through confinements. 4. That the general condition of the work-people was good and would compare favorably with that of a like number of workers in any average healthy trade. 5. That the 91 operatives who had worked in lead for over twenty years were not suffering any ill-effects from their employment, although they had worked for years under practically no regulations. 6. That it must always be remembered that lead-workers are subject to the common ailments of life in the same way as other people.

Acute Dilatation of the Stomach, with Illustrative Cases. By Dr. H. C. Thomson.—The author reports four fatal cases of acute dilatation of the stomach, occurring in patients between the ages of twenty-four and forty-eight years. Two were men and two women. The condition may arise without any apparent cause whatever, and is characterized by sudden onset, by the vomiting of enormous quantities of fluid, and severe general symptoms, which in the recorded cases, have always ended fatally in a few days. In many cases some other morbid condition is found in addition to the dilated stomach, or the dilatation follows immediately upon some surgical operation, which may or may not be connected with the abdomen; in another group of cases the ingestion of a large quantity of badly masticated food. Acute dilatation of the stomach, though of course very much more rare, is probably closely allied in its causation and nature to the paralytic distension of the intestines which frequently occurs after severe abdominal operations, and also in inflammatory conditions of the peritonæum. Treatment of the recorded cases seems to have been of no avail in checking the course of the disease. The most obvious indication is to relieve the distention of the stomach by means of a tube. All nutrition should be administered by the rectum, and the tendency to collapse met by hypodermic injections of strychnine.

The Acute Retro-pharyngeal Abscess of Infants. By S. V. Pearson, M. B.—Acute retro-pharyngeal abscess of infants is not a common complaint, but its diagnosis is most important, as the cases usually end fatally if unrecognized. The common complaint made by the mother is that the child's voice has become gradually muffled, that there has been difficulty in sucking or apparent pain on swallowing, and that the child has been constitutionally ill. A purulent nasal discharge is very often present, and the obstruction to respiration may be so great that the case may be taken for one of laryngeal diphtheria; but croupy cough is absent. One side of the neck looks fuller than the other, and one tonsil and the corresponding posterior pharyngeal wall are

pushed forward. But digital palpation of the post-pharyngeal region offers the surest and easiest method of diagnosis. It may be difficult to detect fluctuation, but a swelling of any considerable size always contains pus. The cause of the abscess is generally admitted to be acute postpharyngeal suppurative adenitis. In mild cases, immediate operation is not necessary; the abscess may disappear under palliative treatment. The author strongly advocates opening the abscess from behind the sterno-mastoid by Hilton's method. The position of the incision should be immediately behind, and parallel to, the sterno-mastoid; its centre should be on the same level as the centre of the swelling behind the pharynx. Toward the bottom of the wound the spinal accessory nerve must be avoided. The landmarks are the transverse processes and the plane of the anterior surface of the vertebrae bodies. Anæsthesia should not be profound. The author reports seventeen cases of this affection; of the nine cases coming under his personal observation, all recovered. Of the remaining eight cases, one died of meningitis.

A Case of Compound Fracture of Both Jaws. By H. Weighton, M. B.

Lyon médical, September 22, 1901.

Eosinophilia in the Dermatitis of Duhring. By M. Carle and M. Montagard.

Inguinal Glands in the Diagnosis of Visceral Cancer.—M. C. Viannay says that enlargement of the inguinal glands has been noted in cancer of the pelvic, abdominal, and thoracic organs. The involvement can take place in one of three ways: 1. By an inflammatory, precancerous adenopathy, in which there is a fibrous degeneration of the gland, and which has been known under the name of precancerous cirrhosis. 2. By a cancerous adenopathy, in which the cells of the primary growth can be detected in the gland. 3. By an inflammatory adenopathy due to secondary infection. The diagnosis of cancerous adenopathy is sometimes difficult to make, but it is of great importance and occasionally precedes all other symptoms.

Centralblatt für Gynäkologie, September 28, 1901.

Retro-uterine Hæmatocele Independent of Extra-uterine Pregnancy.—Dr. K. Kober reports two such cases, in neither of which could any histological elements indicating pregnancy be microscopically demonstrated. In the first case, an unusually active coitus is believed to have been the inciting cause; in the second, a severe strain in a woman who for a long time had had inflammatory disease about both uterine appendages.

Case of Sacral Teratoma. By Dr. Modest Popescul.

Alcohol Treatment of the Umbilical Stump.—Dr. von Budberg recommends this method. It causes a speedy absorption of the watery elements of the cord and thus fosters its rapid drying. Through the disinfecting properties of the alcohol the stump of the cord does not become infected. The method is painless and has proved very successful in the author's hands.

Facial Paresis in Spontaneous Births.—Dr. Edwin Kehrer says that this condition is most often found in cases of narrow pelvis and where there is a decided lack of relation between the pelvic space and the head of the child. It is especially likely to be seen when the mother has one of the forms of flat pelvis that usually result in the anterior portion of the parietal bone first entering the pelvis. The prognosis is generally good, recovery taking place in from four to six weeks.

October 12, 1901.

Abdominal Extirpation of Recurrent Carcinoma.—Dr. G. Klein reports a case in which he removed recurrent cacinatous deposits in the parametrium, omentum, and vesical wall, one year and three quarters after the primary operation (vaginal hysterectomy).

Hydorrhœa of the Gravid Uterus. By Dr. K. Reifferscheid.

Atresia of the Vagina.—Dr. S. Mönsiorski reports a case, in which, owing to atresia of the vagina, coitus had been practised—with pain to the patient, through the urethra.

Riforma medica, August 22, 23, and 24, 1901.

Surgical Intervention in Hepatic Cirrhosis, with Special Reference to Ligature of the Portal and Inferior Vena Cava. By Dr. Pascale.—Experimental operations, performed upon a series of dogs showed that, by affixing the omentum to the anterior abdominal wall, adhesions formed within seven or eight days, with complete vascular anastomoses. The author found, however, that the vessels were narrower in the dense portion of the cicatrix, because there the epiploon underwent fibrous cicatrization; that but few vessels developed within the line of the central aponeurosis (linea alba), and that the vessels were widest and most completely developed in the intermuscular septa. In operating for cirrhosis with the idea of establishing a collateral route for the portal vein, by the methods devised by Talma, one must therefore seek to create as little cicatricial tissue as possible in the area of adherence of the omentum. The usual method of fixing the omentum under the skin across the wound, is not adapted for the best development of collateral veins, and the author advises the following modification: The creation of omental adhesions to the parietes, which shall be as extensive as possible, and not be placed too near the wound; if possible, to obtain a direct connection between the omentum and the subperitoneal and intermuscular connective tissue; all causes of suppuration should be avoided, as otherwise the adhesions will cicatrize. The author proceeds thus: An incision is made in the median line, rather generous in length and involving the umbilical region. Any liquid that flows out spontaneously is allowed to escape, while the rest is left in the cavity. The diagnosis is confirmed by the hand, and then the peritonæum is separated from the abdominal muscles for several centimetres all round the wound. The omentum is now spread out, and fixed to the muscles two or three centimetres un-

der the navel, as well as at the sides, as far as possible from the wound. The sutures are of silk and pass through the whole thickness of the abdominal wall, and the peritonæum is previously scraped with a sharp spoon. The omentum is thus fixed to the abdominal wall over the entire region that has been denuded of peritonæum. The results of this operation, according to the author, are most satisfactory.

Vratch, September 22 (October 4, New Style), 1901.

The History of Corporal Punishment in Russia in the Twentieth Century. By Dr. D. N. Jbankoff.—An account of the present status of corporal punishment in Russia, showing the prevalence of these measures in Russian justice, and their employment in the settlement of private wrongs and differences between persons of different ranks of life. The article concludes with an account of a recent attempt to legalize corporal punishment for certain forms of immorality and for persons who live from the proceeds of vice in Germany.

A Case of Hypertrophic Sclerosis of the Brain in Epilepsy. By Dr. A. S. Manuiloff.—Only nine cases of hypertrophic sclerosis of the brain have been thus far reported in literature. In the author's case there was nothing in the clinical history to indicate a sclerotic process in the brain, as there were simply the symptoms of epilepsy. At the autopsy, however, the true nature of the disease was disclosed.

The Prevention of Typhoid Fever. By Dr. P. Enjko.—The author gives some interesting statistics regarding the effect of the substitution of boiled water for ordinary tap water in preventing typhoid fever. St. Petersburg is a city in which, on account of its topography and insufficient drainage, typhoid fever is prevalent to a marked degree every fall. The author's statistics are derived from the Imperial Alexander Institute for Young Ladies, a boarding school of national importance, in which the daughters of noblemen, officers, etc., are educated free of charge by the Crown. In this institution there have been a number of cases of typhoid fever annually until 1892, when the apparatus of Jagn was introduced, and the water was boiled before being drunk by the pupils. The percentage of typhoid cases was reduced thereby from six per cent. to three tenths of one per cent. In 1894-95 there came an epidemic of typhoid fever, in which thirty cases developed in the institution. The author attributes this outbreak to improper attendance upon the apparatus, and states that the number of cases diminished when the apparatus was properly managed with all the necessary precautions. Since 1896 the percentage of typhoid cases in the institution has been 1.4 per cent.—i. e., less than one quarter of that obtaining previously to the introduction of the sterilizing apparatus. The author concludes that the value of Jagn's apparatus as a preventive of infection through drinking water has been sufficiently demonstrated by these facts.

Proceedings of Societies.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

Fourteenth Annual Meeting, held in Cleveland, Ohio, Tuesday, Wednesday, and Thursday, September 17, 18, and 19, 1901.

The President, Dr. W. E. B. DAVIS, of Birmingham, Alabama, in the Chair.

The association met in the banquet hall of the Hotel Hollenden. An address of welcome was delivered by Dr. C. H. HOOVER, of Cleveland, to which a fitting response was made by the president.

Tubo-abdominal Pregnancy.—Dr. WILLIAM H. HUMISTON, of Cleveland, reported this case. The principal points of interest were extreme loss of blood and shock; the pulse, 180, being barely perceptible in the radials, and the temperature 95° F.; and the prompt result of submammary injections of normal sterile saline solution at the time of beginning the anæsthesia. These injections were recommended in desperate cases. No attempt was made to remove the large amount of blood filling the abdomen close to the pelvic brim. It gave no trouble, and was taken care of and absorbed by the peritonæum rapidly.

Cornual Pregnancy; Rupture in the Fourth Month; Operation; Recovery.—Dr. MILES F. PORTER, of Fort Wayne, Indiana, followed with a paper thus entitled. He saw the patient sixteen hours after she had been taken with severe abdominal pain accompanied by the usual signs of severe hæmorrhage. She had had one living child and one miscarriage, and was near the middle of her third pregnancy. Hasty examination revealed nothing abnormal in the vagina save a slight bloody discharge. Abdominal section was immediately done and a ruptured cornual gestation sac of about four and a half months with a bicornate uterus found. The belly was filled with blood. The ruptured cornu was amputated and the stump sutured, leaving the ovary and tube attached to the stump. There was profound depression, which was treated by saline rectal injections and the hypodermic administration of digitalin and strychnine. Recovery was uneventful. A large quantity of warm sterile water was left in the abdomen. The intact cornu was much enlarged and attached to the ruptured cornu with a rather long pedicle. The gestation sac was thick save at the point of rupture and composed of uterine tissue. There was no communication between either the sac and the vagina or the tube and the sac. These communications became occluded subsequent to the impregnation. A decidual membrane was present. The presence of this membrane marked the case as one of rupture in an ill-developed cornu of a bicornate uterus. In tubal and intestinal pregnancy there was no decidual membrane in the sac. An abnormally low implantation of the tube and round ligament accounted for the fact that in this case they were attached to the outer side of the stump left after removal of the sac, and not to the sac itself, as was usual. As a rule, pregnancy in a bicornate

uterus terminated normally. In three of the cases referred to in the author's paper, including his own, normal pregnancies had preceded the rupture. He had been able to find reports of but eighteen cases of ruptured cornual gestation sac, which, with his own, made nineteen cases reported to date. The symptoms were those of ectopic pregnancy, save that the rupture occurred later in cornual pregnancy and the hæmorrhage was usually more profuse. A previous history of sterility or of tubal infection pointed to tubal rather than cornual pregnancy.

These two papers were discussed jointly. The discussion was opened by Dr. EDWARD J. ILL, of Newark, N. J., who endorsed the treatment employed by Dr. Humiston in his case, and said the quicker an operation was done in such cases, and the sooner the abdominal cavity was walled off, the better the chances for recovery of the patient. *He agreed with Dr. Humiston as to the quantity of normal salt solution that these patients would receive and absorb. Massage assisted materially in the absorption of the fluid.

Dr. EDWIN WALKER, of Evansville, Ind., referred to the indications for the use of normal salt solution in the abdominal cavity. He could not see what benefit was derived from the use of normal salt solution in the case of Dr. Humiston, for the reason that there were well organized clots, and these could not have been affected by it. Such clots, when organized, became drier and were absorbed, and the salt solution only aided in the absorption of any septic material that might be present. He believed it was a mistake in all cases to wash out the abdominal cavity with salt solution. By wiping out the cavity with dry gauze it could be made clean, if it was not infected.

Dr. M. ROSENWASSER, of Cleveland, commended the use of subcutaneous saline solution in the case of Dr. Humiston, but expressed doubt as to the value of salt solution in the abdominal cavity. He had not seen any special beneficial change, either in the pulse or in the condition of the patient, consequent on leaving saline solution in the abdominal cavity. In packing the extraperitoneal cavity that was left, he used sterile gauze instead of iodoform gauze.

Dr. HERMAN E. HAYD, of Buffalo, dissented from Dr. Rosenwasser's statement that the saline fluid was not absorbed. He had filled the peritoneal cavity with normal salt solution, leaving two stitches open, and in an hour and a half had found that the fluid had been absorbed, as had subsequently been verified by post-mortem examination.

Dr. ROSENWASSER did not wish to be understood as saying that the fluid was not absorbed, but that it was not readily absorbed when the peritonæum was in a pathological state.

Dr. J. HENRY CARSTENS, of Detroit, stated that the use of normal saline solution in the abdominal cavity prevented to a large extent agglutination of the intestines and omentum. This cavity could be cleansed just as effectively with sponges as by washing it out with salt solution. The drier the cavity was kept, the better the chances for agglutination. He preferred the use of sterile rather than iodoform gauze.

Dr. JAMES F. BALDWIN, of Columbus, Ohio, said he had been disappointed in the use of normal salt solution, whether injected into the subcutaneous

tissue or poured into the abdominal cavity and left there to be absorbed. He had used salt solution again and again, and it seemed to him absolutely inert. He had never seen it produce a particle of benefit.

Dr. CHARLES GREENE CUMSTON, of Boston, stated that, given the condition a patient was in when an operation was undertaken for ruptured tubal gestation sac, he did not think the peritoneal cavity or the subcutaneous cellular tissue had a sufficient degree of vitality to be able to absorb the salt solution in the majority of cases. Furthermore, in cases where the surgeon injected salt solution into a cavity whose walls were the result of a pathological change, he did not believe that the walls of that cavity would absorb the liquid. The only value that he could see in the normal salt solution was after a prolonged intra-abdominal operation, where the intestines had been exposed, the loss of heat had been great, and the surgeon desired to introduce a certain amount of heat into the abdominal cavity. On the other hand, the use of gauze sponges in wiping out the débris should be extremely limited, because gauze would remove the epithelial covering of the peritonæum of the intestine and of the parietal peritonæum, and this, he believed, was a fertile cause of adhesions after operation.

Dr. EDWIN RICKETTS, of Cincinnati, reported great disappointment in the use of normal salt solution. He believed the results of its subcutaneous use had been overestimated. As to wiping out the abdominal cavity vigorously with a sponge, this was disastrous to the patient. Gauze should be pressed in and out without any marked friction of the peritonæum. No remedy had as yet been found equal to the judicious use of strychnine to overcome shock.

Dr. HUMISTON said the abdominal cavity in his case was almost completely filled up to the lower border of the liver with blood, and if he had attempted to handle the intestines and delay operation for the length of time it would take to cleanse the abdominal cavity of blood, he believed he would have lost his patient. He did not believe in irritating the peritoneal surface with dry gauze, as it injured it, and would often prove disastrous to the patient. He used iodoform gauze wrung out of hot sterile saline solution, thus washing the excess of iodoform out of it.

Transverse Incisions in Coeliotomy.—Dr. CHARLES GREENE CUMSTON, of Boston, read a paper with this title. For the last eighteen months he had been opening the abdomen in many of his gynecological cases by a transverse incision, with a view to securing a more solid cicatrix than he believed could be obtained by a through-and-through incision. The first incision, which he had now made forty-five times, was made at the upper limit of the pubic hair transversely, following a line parallel to the upper limits of the pubic hair, about a centimetre below the base of the hairy triangle. The skin and cellular tissue were cut through until the fascia was reached; the upper lip of the wound was then rapidly dissected off the fascia by a few snips of the scissors and held up with a retractor. The lower lip of the wound was also dissected off and drawn down with a retractor, so that the incision became elongated, and if proper traction was made on the

retractors by the assistant, a rectangular wound could be made sufficiently large to incise the fascia vertically to the extent of five or six centimetres. When incising the fascia, he thought it better to do so over the inner border of one or the other rectus, and when the belly of the muscle had been freely exposed, its inner border was found and the whole muscular mass pushed aside, thus exposing the thin fascia underneath without wounding the fibres of the muscle in the slightest. After the peritonæum had been opened, the retractors holding the skin flaps back could be removed and ordinary abdominal retractors employed. Through this transverse incision he had performed total hysterectomy with ease, and had done most of the ordinary work on the tubes and ovaries through an incision in the fascia not exceeding six centimetres in length. He had enucleated an intraligamentous fibroid of the size of a fist through this incision without experiencing any difficulty whatsoever. He also described another incision which he had employed during the past two months nine times with great satisfaction.

Dr. EDWIN RICKETTS could not agree with the essayist that the incision recommended by him was more advantageous than a median incision, or, in a case of single pus-tube, even an opening on one side. In fact, some operators now did not select a median incision, but made an incision either to the right or to the left.

Dr. J. HENRY CARSTENS had seen a general surgeon make a transverse incision in performing an operation for the removal of the gall-bladder, but he had great difficulty in bringing the muscles and fascia together, on account of the tendency to retraction. He thought the incision described by the essayist might prove advantageous for the removal of small tumors where an extensive operation was not needed.

Sarcoma of the Breast.—A paper on this subject was read by Dr. EDWIN RICKETTS, of Cincinnati, in which he reported two cases. The first patient, aged sixty-four, was married and the mother of three children. Thirty years before, at the age of thirty-four years, she had first noticed a hard, round, small lump in her right breast. Eight years after this she called the attention of her family physician to it, exacting a promise from him that he would tell no one. This was twenty-two years before its removal. He advised non-interference. The author was called to see the patient in May, 1897; in January before, she had had an attack of influenza, and was greatly prostrated from its effects, and from this time the tumor had grown rapidly, being near the size of a child's head. On his visit he found her with a tumor of the right breast that was about as ugly and vicious-looking a growth as he had ever beheld. The cancer was as large as a navel orange, and from it a dark, sanious fluid was discharging. It was so large that the right arm had to be held well out from the body. The temperature and pulse were normal. After drying out the cavity, it was packed full with five-per-cent carbolic-acid gauze. The surrounding skin was washed with soap and water, after which pure alcohol was freely applied. No enlarged axillary glands could be felt after the growth was removed. The growth weighed twelve pounds. Although the patient was a large woman, he experienced some

difficulty in bringing together the edges of the flaps. The axilla was not disturbed. There followed two points of suppuration, but barring this her recovery was entirely satisfactory. It was now four years and a half since the operation, and there was no evidence of recurrence *in loco* or by metastasis. The growth proved to be spindle-celled sarcoma. The author then reported his second case.

Dr. CUMSTON stated that every neoplasm of the breast should be removed as soon as it was palpable. The limit of three years for malignant disease of the breast as a sign that it would not recur was erroneous. He cited a case in point. He called attention to chronic interstitial mastitis, saying that this affection was more frequent in unmarried than in married women. Its pathology was not clear.

Dr. CARSTENS urged the early removal of any kind of tumor of the mammary gland. He narrated cases in which apparently benign tumors had undergone pathological changes and had developed into sarcomata.

Dr. HUMISTON held that a great many myomata of the uterus took on sarcomatous degeneration when it was least expected, and detailed an illustrative case.

Dr. THOMAS B. EASTMAN, of Indianapolis, discussed two points, saying that surgeons were disposed to search for enlarged axillary glands. Recent investigations had shown that a small gland might be full of carcinoma cells, while the larger glands might be free from them. Both small and large glands should be examined.

Dr. JOSEPH PRICE, of Philadelphia, stated that for many, many years he had removed the axillary glands in cases of cancer of the breast. He had seen Mr. Knowsley Thornton, of London, do the complete operation for carcinoma of the breast long before it was done at the Johns Hopkins Hospital, and Mr. Thornton had stated at that time that it was invariably his rule in removing tumors of the breast to clean out the axilla, no matter what the suspicion might be.

Dr. JOHN C. SEXTON, of Rushville, Indiana, was constrained to believe that sarcoma of the breast was not very rare. He had seen two cases, in one of which there was a rapid recurrence, with metastasis to the ovary of the same side. This was a round-celled sarcoma. The other case was one of ordinary spindle-celled sarcoma, in which recurrence took place promptly.

Dr. MILES F. PORTER desired to place himself on record as saying that every tumor of the breast was suspicious and required operation, and in his judgment any operation which stopped short of complete removal of the breast and cleaning out the axillary glands was not good surgery, and time would prove it.

Dr. HUMISTON said the statement made by the last speaker was too radical. Small benign tumors of the breast in young women could be readily removed by cocainization. Sections could be submitted to a microscopist, and if the tumor was found to be malignant a complete operation should be done.

Dr. CUMSTON believed that chronic interstitial mastitis in the majority of cases was the starting-point of malignant neoplasms of the breast. He urged early radical and complete operation.

Dr. E. GUSTAV ZINKE, of Cincinnati, said it was

very difficult to say before a tumor was in one's hands or under the microscope what was the actual nature of it. The physician, therefore, was placed in a very embarrassing position. He illustrated this point by narrating an interesting case.

Dr. BALDWIN asked whether it was proper to speak of cases in which secondary growths occurred many years afterward as recurrences; also, whether it was proper to speak of growths occurring elsewhere in the body as metastases. He mentioned a case in which he had removed a sarcoma of the ovary with a long pedicle, but there were no adhesions. A few years afterward the woman had a sarcoma of the kidney. He did not consider this a metastasis or a recurrence, but a brand-new sarcoma of the kidney. He narrated other cases.

Dr. CARSTENS made an eloquent plea against the removal of the breast in cases of small benign tumors in young girls of eighteen or twenty. He vigorously contended that it was bad practice to do it, as it blighted their prospects for matrimony, and it was absolutely unnecessary.

Dr. RICKETTS endorsed the position taken by Dr. Carstens. In this case, if he had the operation to do over again, he should have removed only the tumor, and not a part of the breast with it.

(To be Continued.)

Book Notices.

BOOKS, ETC., RECEIVED.

A Text-book of Medicine for Students and Practitioners. By Dr. Adolf Strumpell, Professor and Director of the Medical Clinique at the University of Erlangen. Third American Edition translated by permission from the Thirteenth German Edition, by Herman F. Vickery, A. B., M. D., Instructor in Clinical Medicine, Harvard University, etc., and Philip Coombs Knapp, A. M., M. D., Clinical Instructor in Diseases of the Nervous System, Harvard University, etc. With Editorial Notes by Frederick E. Shattuck, A. M., M. D., Jackson Professor of Clinical Medicine, Harvard University, etc. With One Hundred and Eighty-five Illustrations in the Text, and One Plate. New York: D. Appleton & Company, 1901. Pp. xxii-1242.

A Treatise on Medical Jurisprudence based on Lectures delivered at University College, London. By George Vivian Poore, M. D. (Lond.), F. R. C. P., Professor of the Principles and Practice of Medicine, University College, London. With Illustrations. New York: Longmans, Green & Company, 1901. Pp. xxiv-533.

Diseases of the Upper Respiratory Tract, the Nose, Pharynx, and Larynx. By P. Watson Williams, M. D., Lond., Physician in charge of the Throat Department at the British Royal Infirmary, etc. Fourth Edition. Illustrated. New York, London, and Bombay: Longmans, Green & Company, 1901. Pp. xxiv-436.

Pædiatrics. The Hygienic and Medical Treatment of Children. By Thomas Morgan Rotch, M. D., Professor of the Diseases of Children, Harvard University. Third Edition, rearranged and rewritten. Illustrated by Numerous Engravings in the Text, and by Colored Plates. Philadelphia and London: J. B. Lippincott Company, 1901. Pp. xxi-17 to 1021.

Text-book of Nervous Diseases. Being a Compendium for the Use of Students and Practitioners of Medicine. By Charles L. Dana, A. M., M. D., Professor of Nervous Diseases in Cornell University Medical College, etc. Fifth Edition. With Two Hundred and Forty-four Illustrations. New York: William Wood & Company, 1901. Pp. xiii-633.

The Diagnosis and Treatment of Diseases of the Rectum. Being a Practical Treatise on Fistula, Piles, Fissure and Painful Ulcer, Procidentia, Polypus, Stricture, Cancer, etc. By William Allingham, F. R. C. S., Eng., Late Senior Surgeon to St. Mark's Hospital, etc., and Herbert W. Alling-

ham, F. R. C. S., Eng., Surgeon to the Household of his Majesty, the King, etc. Seventh Edition. New York: William Wood & Company, 1901. Pp. xi-471.

A Civilian War Hospital. Being an Account of the Work of the Portland Hospital, and of Experience of Wounds and Sickness in South Africa, 1900. With a Description of the Equipment, Cost, and Management of a Civilian Base Hospital in Time of War. By the Professional Staff. With Numerous Illustrations. New York: Longmans, Green & Company, 1901. Pp. xii-343.

Essentials of Obstetrics. By Charles Jewett, A. M., M. D., Sc. D., Professor of Obstetrics and Gynecology in the Long Island College Hospital, etc. Assisted by Harold F. Jewett, M. D. Illustrated by 80 Woodcuts and 5 Colored Plates. New York and Philadelphia: Lea Brothers & Company, 1901. Pp. viii-18 to 386.

Lessons on Massage. By Margaret D. Palmer, Manager of the Massage Department of the London Hospital, etc. New York: William Wood & Company, 1901. Pp. xiv-234.

Syphilis and other Venereal Diseases. By H. De Méric, Surgeon to the French Hospital, London, etc. New York: William Wood & Company, 1901. Pp. vi-132.

Materia Medica, Pharmacy, Pharmacology, and Therapeutics. By W. Hale White, M. D., F. R. C. P., Physician to and Lecturer on Medicine at Guy's Hospital, London, etc. Edited by Reynold W. Wilcox, M. A., M. D., LL.D., Professor of Medicine and Therapeutics at the New York Post-graduate Medical School, etc. Fifth American Edition, thoroughly revised. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. 5 to 744.

The Cost of Food: A Study in Dietaries. By Ellen H. Richards, Instructor in Sanitary Chemistry, Massachusetts Institute of Technology. First Edition. First Thousand. New York: John Wiley & Sons, 1901. Pp. 161.

The Physiological Action of Drugs. An Introduction to Practical Pharmacology. By M. S. Pembrey, M. A., M. D., Joint-Lecturer on Physiology in Guy's Hospital Medical School, and C. D. F. Phillips, M. D., LL.D., Examiner in Materia Medica and Therapeutics in the University of Aberdeen, etc. London: Edward Arnold, 1901. Pp. viii-99.

Handbook on Sanitation. A Manual of Theoretical and Practical Sanitation. For Students and Physicians; for Health, Sanitary, Tenement-house, Plumbing, Factory, Food, and other Inspectors; as well as for Candidates for all Municipal Sanitary Positions. By George M. Price, M. D., Medical Sanitary Inspector, Department of Health, New York City, etc. First Edition. First Thousand. New York: John Wiley & Sons, 1901. Pp. xii-317.

A Handbook of Diseases of the Nose and Pharynx. By James B. Ball, M. D. (Lond.), Physician to the Department for Diseases of the Throat, Nose, and Ear, West London Hospital, etc. Fourth Edition. With Sixty-one Illustrations. New York: William Wood & Company, 1901. Pp. xii-439.

Diseases of the Digestive Organs in Infancy and Childhood. With Chapters on the Diet and General Management of Children, and Massage in Pædiatrics. By Louis Starr, M. D., Consulting Pædiatrist to the Maternity Hospital, Philadelphia, etc. Third Edition, rewritten and enlarged. Illustrated. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. ix-17 to 448.

International Directory of Laryngologists and Otologists, containing Names and Addresses of Practitioners engaged in the Study and Practice of Laryngology and Otology. Compiled by Richard Lake, F. R. C. S. Eng. Second Edition, revised and enlarged. London: Rebman Company, Limited, 1901. Pp. 124.

Physician's Pocket Account Book. By J. J. Taylor, M. D. The Medical Council, 1901. Philadelphia: Pp. 200.

Report of the Commissioner of Education. For the Year 1899 to 1900. Volume. I.

Miscellany.

Methylene Blue in Malarial Disease, and the Substitution of Methyl Blue for Methylene Blue.

—Dr. Achilles Rose (*Post-Graduate*, September) reports the case of a girl, fifteen years of age, suffering from malarial affection, the principal manifestations of which were daily headaches and right supraorbital neuralgia. Percussion over the right eyebrow caused pain even during the interval between malarial attacks, while such percussion on the left side caused no pain. Quinine, ten grains at night and five grains in the morning, gave no relief, but the administration of methylene blue caused the disappearance of the symptoms. Dr. Rose explains this fact as follows:

In the year 1891 Ehrlich and Guttman recommended methylene blue in the treatment of malaria, because they had found that the malarial parasites took up this dye; that they had an election for it. And, indeed, Guttman observed that the parasites disappeared from the blood gradually while methylene blue was given; that the patients were cured by the destruction of the plasmodia. The reports of all observers confirmed the fact of disappearance of the parasites under methylene blue treatment. It was found that the protoplasm of the parasites shrank, became compressed and were colored blue, but that the methylene blue did not act on the nuclei of the plasmodia, and, finally, that there existed an antagonism between the action of methylene blue and quinine—namely, that quinine destroyed the nucleus of the parasite, its chromatin, and methylene blue the plasma.

Now we know that methylene blue will have a curative effect in those forms of malaria in which the plasma is most developed and quinine in those in which the nuclei are the most developed and the plasma more or less wanting. The form which is most decidedly affected by methylene blue is that of the crescents, which consist almost entirely of plasma, while on the other hand juvenile forms of plasmodia which have very little plasma remain unaffected by methylene blue, but are very sensitive to quinine. The full-grown parasites, the principal part of which consists almost entirely of plasma, are indifferent to quinine, but most sensitive to methylene blue; they are completely destroyed by it.

The author then comments on the occasional substitution by druggists of methyl blue for methylene blue, and warns physicians to be careful in specifying the drug and especially to avoid abbreviating the name. He has had several unsatisfactory experiences in such substitution, even with high-class firms, and gives the following test by which the two can be distinguished: A dilute aqueous solution of methyl blue becomes decolorized on the addition of ammonia water, while a solution of methylene blue, even when very dilute and light colored, is not so decolorized.

The *American Druggist* for October 28th comments on the pharmaceutical aspects of Dr. Rose's article as follows:

"Chemically, methyl blue is the sodium salt of triphenyl-pararosaniline-sulphonic acid. It is also known as methyl blue, M. B. I. for cotton. It is a dark blue powder, soluble in water and yielding a blue solution.

Supernumerary Lungs.—Herxheimer (*Centralblatt für innere Medizin; Medical Standard*, October), when performing an autopsy on a three-weeks' infant, found a third lung which communicated with the trachea by a third bronchus. This is the fourth case on record of supernumerary lungs, but none of the other three had any separate and distinct connection with the trachea.

"Methylene blue is the hydrochlorate salt of tetramethylthionine. But there are two distinct kinds on the market, a commercial dye (not medicinal), which is a double chloride of zinc and tetramethylthionine, and the hydrochlorate salt first named. In addition to the test given by Dr. Rose, the two substances (methyl blue and methylene blue) may be distinguished by their individual behavior with sodium hydrate test solution, which colors methyl blue a reddish brown and methylene blue a violet color."

Some Excellent Advice to Nurses—and Others.

Dr. Samuel B. Ward (*Albany Medical Annals*, September), in an address to the graduating class of the Albany Hospital Training School for Nurses, says:

"I told you a moment ago that one patient would object to a nurse because 'she talked her to death.' The very fact that she told me this showed, of course, that the statement was a gross exaggeration. But you will have to get used to exaggerated statements on the part of patients, sick or well. If you ask me how much a nurse ought to talk I am utterly unable to give a categorical answer. There is not—there cannot be—a numerical answer of so many words a minute, or so many words an hour. Everything depends upon circumstances. You must learn to feel for yourselves, *instinctively*, when your conversation is diverting your patient from thoughts about herself or any other gloomy subject, and when you are boring her and tiring her out. Be on the lookout for these indications and if you err at all let it be on the side of reticence rather than loquacity. I say, be on the lookout for these indications, for I know that you do not desire to do your patients an injury, and you are apt to get so interested in some subject yourself as not to notice how tired your patient is becoming. And sick people sometimes dread offending a nurse by hinting even that they are tired. * * *

"I told you also that another patient objected to a certain nurse because she told her a lot of details about other cases. Now here is a fault, and a very grievous one, which you easily can, and always should, avoid. When you are called into a household professionally you always and necessarily come into possession of a host of facts which should be as sacred as those revealed to the priest in the confessional, in one sense. You have absolutely no right to disclose them to others as mere matters of conversation or gossip. Whatever comes to your knowledge that you think may have a bearing on determining the exact condition of the patient, or the cause of such condition, or on the treatment or prognosis of the case, you should promptly report to the physician in attendance. He can be trusted to make no improper use of the information you may give, and his responsibility as to maintaining a discreet silence is just as great as yours. You are with the patient night and day and will often become cognizant of important facts which he cannot possibly observe during his comparatively short visits. But I beg of you to avoid talking to one patient about the case of another. * * *

"If your suspicion that the physician has made a mistake as to the patient's condition as to the dose of medicine which he has given, or as to any other de-

tail of the case, becomes a firm conviction, it is entirely proper for you to call his attention to the point in a respectful manner in order that he may correct a possible error. But remember that you are not expected to make a diagnosis or to institute or regulate treatment; your province is to carry out the directions of the attending physician. It is a well-known fact that remedies given in apparently identical conditions, for the relief of precisely the same symptoms and in the same doses, do not have precisely the same effects. Patients have individual peculiarities, idiosyncrasies they are called; the unexpected, instead of the expected, happens. One of your great uses in the sick-room is to note these, as no layman could, and report them promptly. Sometimes it will answer the purpose perfectly to do so at the physician's next visit. At other times it is essential that the physician should know the condition at once, and it is precisely in such cases as these that your education and experience are of incalculable value. Both the family and the physician rely on your discretion and good judgment."

Medical Onomatology.—It has been said "Of the making of books there is no end," but bookmaking is a positively sterile art when compared with the fecundity of medical nomenclature. Surely, at least one half of the new terms that are being brought forth with bacterium-like rapidity are entirely unnecessary; and as for the genius of their construction, it is little short of woful. The medical lexicographer, however, has no option but to catalogue the terms that are employed, good, bad or indifferent; and he is not to blame for their currency. That admission made, our heart beats in sympathy with the following editorial plaint in the *British Medical Journal* for October 12, 1901 (but why, oh, why "terminology"?):

"Recent Medical Terminology. There is an old saying—perhaps a rather childish one, but containing its modicum of truth none the less—to the effect that 'while sticks and stones may break our bones, names will never hurt us'; but, assuredly, when we glance over Dr. Newman Dorland's list (*International Clinics*, Eleventh Series, vol. ii, p. 286, 1901) of some of the newer medical words, we begin to have our suspicions that names may not be so thoroughly innocuous as we had thought and had been encouraged to think. Not that the list is a bad list; far from it. It is a very good list and very complete, and the definitions are carefully done and reliable; but, with all that, it is a list which, coming into the hands of the practitioner, might well give him pause, and might deter the young student from following so hard a calling as scientific medicine seems to us. Many of us no doubt can readily enough guess what is meant by 'pseudo-jaundice,' 'pseudo-ileus,' 'vasculitis,' 'intimitis,' 'meso-neuritis,' and 'bacillemia'; and such words as 'cerebellipetal,' 'cardiopsis,' and 'gonococcide' yield up their secret when properly struggled with; but there are other names which are not so benign. There may be a suspicion that 'toxoid' means 'a transformation product of a toxin no longer toxic,' but what is to be made of 'protoxoid,' 'syntoxoid,' and 'epitoxoid'? Then there is 'urethremphraxis' (obstruction of the urethra!), 'atticotomy' (the surgical opening of the attic of the labyrinth) 'brenz-

katechinuria' (the presence of breznkatechin or alkapton in the urine), 'erythrocytorrhaxis' (a morphological change in red blood corpuscles, consisting in the escape of round, shining granules, and the splitting off of particles), and 'hydroparasalpinx' (watery fluid in the accessory tubes of the oviduct). There are, also, other words which seem to be both difficult and unnecessary; surely it is a work of supererogation to coin 'metopantralgia,' when frontal headache is all that it means; and 'epicondylalgia' seems to be equally unrequired. 'Gastralgokenosis' and stomach-ache are surely nearly synonymous! New discoveries—or, rather new theories—regarding the action of bacteria on the body cells and fluids are responsible for many of these long names. There are 'alexocytes,' 'ectasin,' 'anectasin,' 'antiabrin,' 'antibodies,' 'glabrificins,' 'antilyssins,' 'bacteriolysis,' 'lysin,' 'toxicomucin,' and 'toxolexin.' Recent work on the fine anatomy of the nervous system has also added not a few, as is seen in 'arkyochrome,' 'axon,' 'axodendrite,' 'axospongium,' 'inaxon,' 'karyochrome,' 'polyaxon,' 'stichochrome,' and 'telodendron.' Cumbersome although many of these names are, they have nevertheless an important part to play; for, while they are neither English nor French nor German, they are yet intelligible to all well-educated Englishmen, Frenchmen, and Germans, being derived from Greek and Latin roots, albeit not always quite correctly put together. Sometimes the absence of some such international name has deprived a writer of the credit of a new mode of treatment. For instance, 'cleidotomy,' or the division of the foetal clavicle in cases of difficult labor, was performed in England and described by an English writer, but no name was given to it, and later on it was given back to us from Germany with the term 'cleidotomie' appended to it in successful fashion. So there is something in a name after all. Let writers, then, take heart of grace and coin new words if they have any new thing which is by any chance worth remembering; but let them be less polysyllabic than some in Dr. Newman Dorland's list. It is a somewhat curious fact that in this list there are two names specially associated with one part of the British Isles; they are 'emol,' an 'emollient soapy mineral from Perthshire,' and 'avenolith,' an 'intestinal calculus or enterolith formed around a grain of oats, said to be common in Scotland.' Shade of Dr. Johnson!

The X Ray in Legal Medicine.—In a paper on this subject, read by Dr. Mihran K. Kassabian, of the Medico-Chirurgical College Hospital, Philadelphia, before the Medico-Legal Society, on October 16th, he remarked that the Röntgen-ray diagnosis in forensic medicine was of inestimable importance and value to the physician, the patient, and the jurymen.

This method, the most recent and scientific in revealing the truth, had been added to many others, such as microscopy, chemical tests, etc. The unreliability, the prejudice, and the fallacies that had arisen in regard to these other methods of diagnosis, had frequently been due to the defective technics of incompetent or non-professional men. But the accuracy and reliability of the Röntgen-ray method had been carefully demonstrated, and the diagnosis

was admissible when made by a competent physician or surgeon.

There was an increasing tendency, the author thought, to malpractice suits, and they were most injurious to the reputation of a professional medical man, hence the necessity for an accurate and trustworthy diagnosis in forensic medicine. Some of the causes which led to these suits might be summed up as follows: 1. Failure to make an early and correct diagnosis of the case. 2. Improper treatment due to an incorrect diagnosis. 3. Wrong prognosis due to the lack of a correct diagnosis. Accordingly a patient might afterward advance the following claims: (a) Wrong diagnosis; (b) delayed treatment due to unrecognized fracture or dislocation; (c) unnecessary confinement to bed and loss of salary; (d) deformities which might have been avoided if the diagnosis had been correct.

At the present time, however, the author said, with the aid of the Röntgen-ray method, an early and correct diagnosis could be made, thus enabling the physician to apply the proper treatment and to obtain such results as to preclude any idea of a malpractice suit.

Are Tub Baths Best for Cleansing Women in Labor?—W. Stroganoff (*Centralblatt für Gynäkologie*, 1901, No. 6; *American Journal of Obstetrics*, August) answers this question negatively. He shows that the dirt and bacteria from previous bathers in the tub and from the woman's own body and from excrement removed from the anal region are transferred to the nipples in diluted form and may enter the vagina. Furthermore, staphylococci or streptococci may be carried in the same way if the person has ulcers upon any part of the body. He advises washing with soap while the woman stands under a stream of running water. Since he has employed this method in his maternity service the morbidity has been reduced nearly seven and one half per cent.

Use of Cocaine in Obstetrics.—In a paper which is practically a review of the literature, L. Demelin (*L'Obstétrique*, March; *American Journal of Obstetrics*, August) refers to the use of cocaine as an analgetic in labor by application to the cervix with a tampon, by injection into the labia majora near the posterior commissure, and by subarachnoid injection. His views of the last procedure are optimistic. Referring to the assertion of Doléris that cocaine so used is an oxytocic and that the same effect might be obtained by simple injection into the abdominal wall or the muscles in the sacro-lumbar region, he states that a few observations at the Tarnier clinic have seemed to support the latter suggestion.

The Action of Mercurials.—Dr. William Henry Porter (*Post-Graduate*, September) sums up a paper on Mercury—Its Action upon the System as follows: (1) Stimulant to the hepatic cells; (2) cholagogue in action by virtue of exciting supersecretion of the bile acids; (3) sedative, due to the two previous actions; (4) its alterative, antiphlogistic, antisyphilitic, diuretic actions, etc., are secondary to the above actions; (5) ptialism from mercury is due to the inactivity of the hepatic cells, and to the salivary glands attempting to do what should have been done by the hepatic cells.

Original Communications.

AN X-RAY STEREOSCOPE.

By LOUIS A. WEIGEL, M. D.,

ROCHESTER, N. Y.,

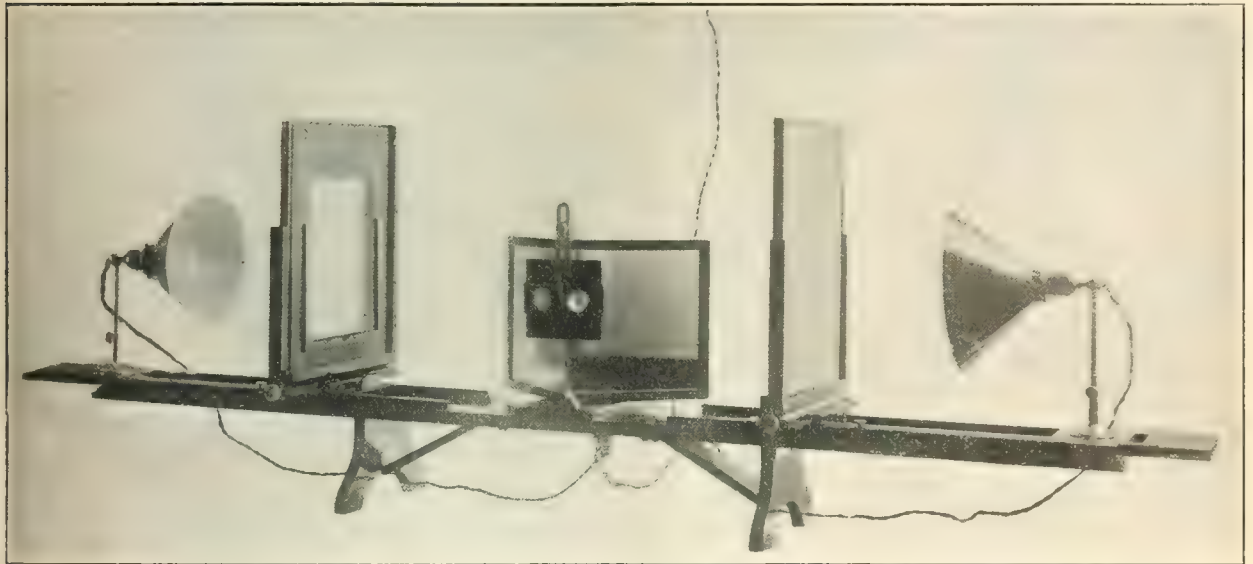
ORTHOPÆDIC SURGEON TO THE ROCHESTER CITY AND ST. MARY'S HOSPITALS.

The correct interpretation of x-ray negatives frequently presents considerable difficulty, because all parts of an object lying in different planes are projected into one, and there is practically no way of determining the order of superposition of the various planes and of the distance that separates them. This defect of the ordinary skiagraph is readily overcome by making two stereoscopic negatives, which, when placed in a suitable stereoscope, vir-

Wheatstone in 1838. In this apparatus two plane pictures, representing slightly different views of an object, are superimposed and appear to the eye as giving the same relief as the object itself.

As seen in the illustration, it consists of a bed-piece upon which, at its centre, two mirrors inclined to each other at an angle of 90 degrees are mounted on a slide having a forward and backward movement, to facilitate adjustment. At the angle formed by the mirrors a screen with openings for the eyes is placed.

Two grooved frames for holding the negatives face the mirrors and are adjustable by a simple sliding motion in two directions,—one at right angles to the base, and the other parallel with it. In the base of these frames there is also a mechanism, controlled by a milled head screw, for vertical adjust-



The Weigel x-ray Stereoscope.

tually reconstitute the object in space. Every detail of the negative is seen in its proper place, the surfaces appear in their natural form, and the various planes are correctly separated from each other.

The ordinary hand stereoscope is of little practical use for this purpose, because, aside from the time and trouble involved in obtaining prints small enough for this instrument, much of the fine detail of the original negative is lost in the reduction. As is well known, a photographic print, even when of full size, is never as satisfactory for critical study as the negative itself, and when a copy reduced in size is made, its value is still more impaired.

The stereoscope shown in the accompanying illustration is adapted for studying the original negatives, although it may also be used for examining full sized prints. It is constructed on the principle of the reflecting stereoscope invented by Professor

Wheatstone. By means of these various movements the images of the two negatives reflected in the mirrors may be quickly adjusted until they are accurately superimposed, and stereoscopic relief is obtained.

Transillumination of the negatives is necessary and this is best secured by artificial light. The most convenient and satisfactory source of illumination is from an electric light. In my apparatus a sixteen-candle-power lamp is placed behind each negative. Flexible conducting cords from these lamps are wired in parallel to a single key-socket attached to the under side of the bed. An electric light cord of convenient length and having an extension-plug at each end is used to connect the apparatus with any available lamp socket in the room. One of the plugs is placed in the key-socket of the apparatus and the other attached to the source of illumination selected. For concentrating the light on the negatives, an ordinary

metal shade or reflector surrounds the electric light bulb, which should preferably be of ground glass. An even diffusion of the light is still further secured by having one side of the negative frames covered with a sheet of ground celluloid, which is lighter and less fragile than ground glass. The lamp brackets are adjustable vertically, and as they are attached to an independent base, the distance between the light and the negatives may easily be regulated, according to the varying density of the plates. Where an electric light plant is not available, Welsbach gas lamps or acetylene bicycle lamps may be substituted for the illumination.

The negative holders are square and large enough to take in plates of all sizes up to and including 11 by 14 inches, and may be placed in the frames either vertically or horizontally. For the smaller sized plates it is advisable to use masks of black press board or other material to cut off all extraneous light. The left hand frame in the illustration shows a mask for an 8 by 10 plate in position.

Although this apparatus is somewhat large, the bed-piece being six feet long, it may be stored in any ordinary closet, as all the movable parts are detachable. The mirrors are fastened to the slide by thumb screws and are so hinged as to fold upon themselves when removed from the apparatus. The negative frames, lamp brackets, eye-screen, key-socket, &c., are also readily detached, leaving nothing but the bed-piece with the legs; and, as the latter are hinged and fold against the under side of the bed, very little space is required for it. The apparatus may be set up complete for use in less than five minutes.

I am greatly indebted to the Gundlach Optical Company, of this city, for their kind assistance in working out some of the details of the apparatus, and for the very satisfactory manner in which they have executed my design.

The technics of stereoscopic skiagraphy is comparatively simple. It is necessary, however, to follow certain rules to get the best results. In a later communication a full description of the technics for making stereoscopic negatives of the different parts of the body will be considered.

209 EAST AVENUE.

Fingers as Dental Forceps.—The *Atlanta Journal-Record of Medicine* for October cites from a contemporary the statement that Japanese dentists perform all their operations in tooth-drawing with the thumb and forefinger of one hand. The skill necessary to do this is acquired only after long practise, but when once it is obtained the operator is able to extract half a dozen teeth in about thirty seconds without once removing his fingers from the patient's mouth.

ON A CASE OF SARCOMA TREATED BY THE RÖNTGEN RAYS.*

By CARL BECK, M. D.,

NEW YORK.

The patient, a strongly built cooper, thirty-six years of age, remembers that for fifteen years he has observed a small black speck (mole?) at the region of his external malleolus. About one year ago it assumed the appearance of a common verruca. A continuous increase in size was observed then. In November, 1900, the "verruca" became sensitive and the surface began to excoriate. Carbolic-acid baths were now prescribed by the patient himself and faithfully used, until, about Christmas, the growth had reached the size of an apple. It was not until then that the patient became afraid and consulted his family physician, who referred him to my department at St. Mark's Hospital.

On December 24, 1900, I found the following state present: The strongly built patient shows a

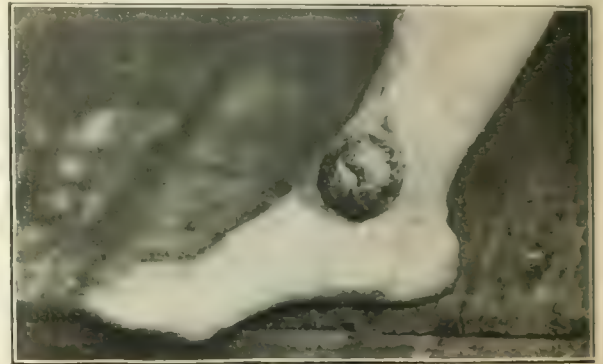


FIG. 1. Alveolar melanosarcoma before the first operation.

healthy appearance. He admits being a free drinker. The family history is good. At the region of his left external malleolus a tumor of the size of an apple is noticeable (Fig. 1). Its consistence is moderately hard, its surface of a smoky gray color, and it seems to have originated from the confluence of a number of small warts. It cannot be dislodged from its base. The inguinal region contains a gland of the size of a walnut.

At first the diagnosis of lymphosarcoma was made and amputation considered accordingly, but the patient refused to submit to it. His family, also, being adverse to such radical steps, I contented myself with extirpation of the tumor and of the inguinal gland. The apparently healthy periosteum of the external malleolus was removed, together with the neoplasm. Recovery being perfect in a few days, the patient left the hospital.

Microscopical examination of the growth revealed the presence of pigment, which proved that we had

*Case demonstrated before the German Medical Society of the City of New York, May 6, 1901.

to deal with melanosarcoma, the most malignant type of sarcoma (Figs. 2 and 3).

The patient returned to the hospital six weeks afterward. The same tumor showed at the outer malleolus again, but it was somewhat broader and

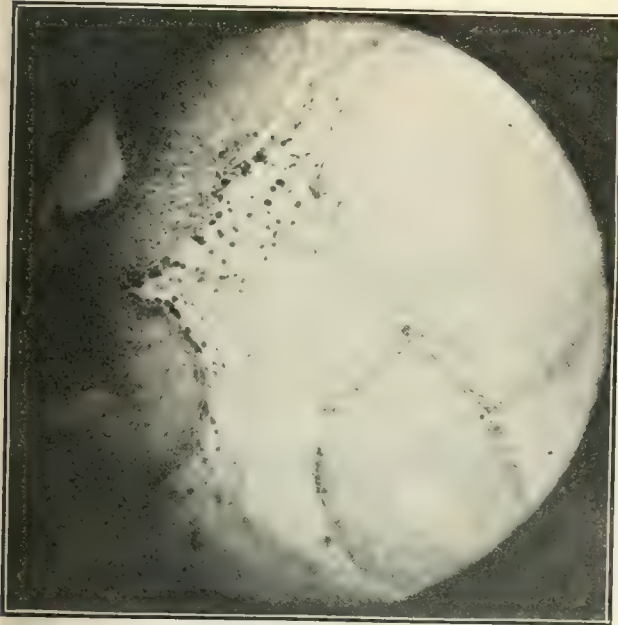


FIG. 2.

flattened. Its margin was encircled by a few bluish-black nodules, of the size of a pea, which could be compared to hæmorrhoidal nodules. A glandular convolution, of the size of a goose's egg, had

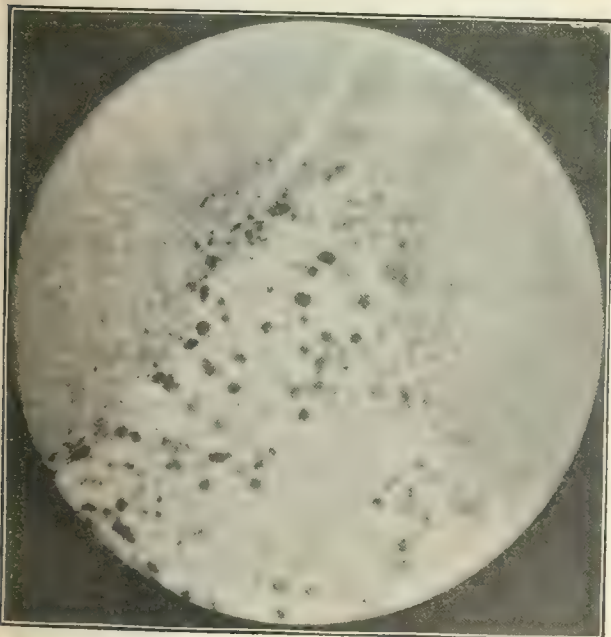


FIG. 3.

developed in the inguinal region in the meanwhile (Fig. 4). Extirpation was performed again. The patient withdrew from treatment two weeks afterward, his excuse being that he felt perfectly well

again. Four weeks thereafter he presented himself again with a relapse. This time there were about thirty dark bluish-black grape-like nodules of various size. The largest nodules bled easily on touch. The inguinal region showed a tumor of the size of the head of a new-born child (Fig. 5). On the inner surface of the leg, especially alongside the inner border line of the calf, several dozen of nodules had originated, which resembled those of the tumor itself closely. Their size varied between that of the head of a pin and that of a cherry. Extirpation was done once more. The microscopical examination of the removed portions (Figs. 6 and 7), made by Dr. H. Kreuder, showed well-developed large sarcoma cells. The pigment is chiefly seen in the form of streaks, but by higher magnification it can be recognized as fine granules which are contained in cells in the connective-tissue framework of the tumor. In some places they resemble a netting. Few cells in the alveoli of the sarcoma cells are pigmented. But some portions of the section, especially the necrotic areas, show a great amount of pigment. One of the specimens was colored with hæmatoxylin and eosin, and a second with Van Gieson's fluid. (Compare Figs. 2 and 3.)

The patient would now have submitted to amputation, but, considering the metastasis in the inguinal region, the prospects of such an operation at this late stage would not have been promising. Serum treatment was now considered first. Although I have never experienced any benefit in a fairly large number of my malignant cases, I still regard its use as justifiable in such desperate cases. But at the same time the thought of Röntgenotherapy suggested itself to me.

The excellent results obtained in lupus and other skin affections by Albers-Schoenberg, Hahn, Schiff,



FIG. 4. The Inguinal Growth.



FIG. 5. The Inguinal Growth.

Freund, Ziemssen, Kuemmell, Muehsam, Holland, Schenkel, Jutassy, and Neisser have also been corroborated by myself.¹ In epithelioma of the lower

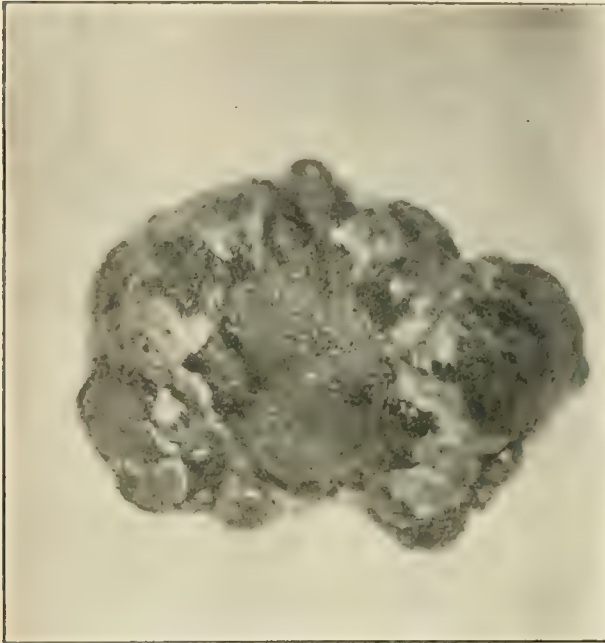


FIG. 6.—The Tumor-like Portion Removed after the Third Relapse.

eyelid and of the cheek I have obtained a perfect result after a few exposures only. Without entertaining audacious hopes, I began to irradiate the defect

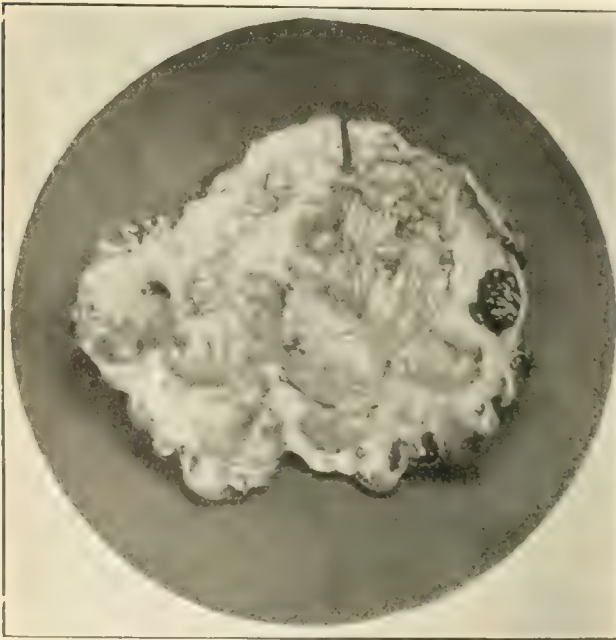


FIG. 7

left after the last extirpation. The time of exposure was at first ten, then twenty and thirty, and at last forty-five minutes. When the exposure lasted

forty-five minutes, the patient felt an itching sensation over the whole leg, which lasted for several hours. Up to to-day irradiation has been done seven times. Six weeks have elapsed now, and not only has there been no trace of a relapse, but a number of the metastatic nodules of the calf, especially those near the area of irradiation, have, *mirabile dictu!* disappeared, while others have shrunk (Fig. 8).

The inguinal tumor became larger during the time of this treatment. It is my intention to remove it again to-morrow and to irradiate the wound area left, so soon as there is a possibility.

As alluded to before, I am far from indulging in adventurous hopes. But you will no doubt find such experiments justifiable in so desperate a case, even if they should be without any result. But the fact cannot be denied that, in great contrast to the former course, after the preceding extirpation no



FIG. 8. Six Weeks after the Use of Röntgen Rays

relapse was observed, and what is still more interesting, well-developed sarcomatous tissue shrank and *cicatrized*. This proves the influence of the rays beyond doubt. How far this influence goes, however, *in toto*, is not demonstrated by this observation, and further experiments have to clear that up.

I venture to call attention to the fact that, since Heidenhain proved the existence of carcinoma cells below the fascia in carcinoma mammae, surgery has drawn the practical conclusion that the pectoralis major muscle—or at least its superficial stratum—must be removed, since no surgeon at the present time would expect recovery from the mere extirpation of those cancerous portions which are macroscopically visible.

If the carcinoma cells have advanced so far that they have ceased to be accessible to the scalpel, speedy relapse can surely be expected. Now, if we had a means which would, after thorough removal,

¹See *Transactions of the American Medical Association*, 1900, No. 10, and *Transactions with an Appendix on the Practical Use of the Röntgen Rays*, Philadelphia, 1900.

penetrate the deeper strata, so that those carcinoma cells which were situated beyond the reach of the knife, would still be attacked by it, and perhaps destroyed, or at least arrested in further development, the question of the therapy of cancer would be solved.

If the parasitic nature of carcinoma should some day be proved, the effect of an antiparasitic medium could be easily understood. The Röntgen rays possess antiparasitic properties to a certain extent. Their therapeutic significance is still sphynx-like. But it can safely be maintained that their effect is *sui generis* and cannot be compared with that of Paquelin's cautery or of the oblique mustard plaster. These views may, it seems to me, be applied to the sarcoma question.

If sarcoma is of parasitic origin, we can well understand that a proper antiparasitic medium may destroy it. And if histology tells us that the atypical proliferation of connective-tissue cells in sarcoma is produced from a matrix of embryonic cells of congenital or postnasal origin, we can appreciate that the rays, which so easily are responsible for a trophoneurotic change, may induce cell metamorphosis. The danger of burning the patient is not small under such powerful treatment. While experimenting, other parts of the body must be protected with tin-foil, and the operator himself should wear gloves lined with tin-foil. The danger of Röntgen-ray dermatitis, however, should not have great weight in a malignant case. For the poor therapeutic results reported by some investigators, the fear of using a strong current may be held responsible. If a strong effect is desired, intense irradiation must naturally be employed. The patient, of course, should be informed about the risk.

(In revising this report, three weeks after the demonstration, I would say that the defect at the outer aspect of the malleolus is perfectly cicatrized. After nine weeks no relapse has been observed. The inguinal tumor was removed on the day after the demonstration, as intended, and now the inguinal area is also irradiated. The disease has reached a stage in which final recovery can hardly be expected, and it is to be regretted that the thought of Röntgenotherapy did not suggest itself to me at an earlier period. Further reports of the issue of this case will be published.)

The Bacillus Tuberculosis in the Stools.—Anglade (*Revue de la tuberculose*, August), in a communication to the Société de Biologie, says that the *Bacillus tuberculosis* abounds in the stools of tuberculous subjects, even when there is no intestinal ulceration or evident enteritis. He therefore urges the disinfection of the dejecta of tuberculous patients.

DEVITALIZED-AIR-TOXÆMIA, A PRIME CAUSE OF TUBERCULOSIS.

By CHARLES DENISON, A. M., M. D.,

DENVER, COLO.

(Concluded from page 881.)

A year ago I endeavored to show before the American Climatological Association* that this fault of our civilization was chiefly due to the bad construction of our houses, in that their allowance of air space and motion, sun-warmth and atmospheric electricity, were curtailed until they became insufficient for healthful life.

Let us illustrate this thought by the comparison of curved lines (see chart) representing (1) the average duration of life under normal conditions, as to perfect ventilation; (2) the shortening of life by devitalized-air-toxæmia through deficient ventilation; and (3), another line representing Dr. Angus Smith's extinguishing candle light curve. The records of this indefatigable investigator show that the candle in his closed lead chamber grew dim in proportion as the curve is drawn in the accompanying diagram, and was extinguished when the amount of carbonic acid generated reached two per cent. We note in passing that Dr. Angus Smith could remain in his tightly closed chamber after the light had gone out. Further, in contrast with the light's curve, we remark that tuberculosis-free or normal life curves run nearly horizontally during the first two thirds or three fourths of the average duration of life, and then, in old age, drop off suddenly to the death line.

Now as to the deficient ventilation curve: The life of the air exists chiefly in its motion, which, with its light, heat, and electric power, comes from the sun. If the absence of this life—here denominated *dead air*—is represented as a perpendicular line, and, in contradistinction, *live air* is represented as another straight line at right angles thereto, then the gradations from live air to dead, under the subtle influence in which we human beings live and die, can be truthfully represented as a curved line which gradually leaves the horizontal line and comes down to the perpendicular. While this drawing of the deficient ventilation curve is admitted to be only approximate, it is not entirely arbitrary, for an effort has been made to have it correspond to the average deficiency of ventilation under which the inhabitants of a city of 100,000 persons live, taking as a basis the approximate cubic space *per capita* in their sleeping and living rooms. On this deficient ventilation curve, I calculate that the unhealthful conditions on the other side of the Atlantic, and I presume on this side also, place the average of people (see diagram

*The Degenerative Results of Deficient Ventilation. Read before the American Climatological Association, 1900.

E to F) from twenty to forty per cent. along on its descent toward the death line.

We do not appreciate our individual positions on this ventilation curve, as to the respective confinements of our bodies in closed spaces and the resultant imprisonment and dwarfing of our respiratory and circulatory systems. It then becomes a pertinent question to each one of us: Shall we be exterminated by these conditions, or will the final extinguishing act be transmitted to our children, with their impaired vitality caused by our present ignorance?

Let us now consider the subject of susceptibility and immunity to tuberculosis from a *pregerm* standpoint. With circulation, respiration, and nervous power perfect, the defensive body cells (the leuco-

Immunity to tuberculosis, then, is always relative. It is so in two ways: (1) Relative to the strength and health, *i. e.*, the resistant state of the individual; (2) relative to the amount and quality of the infecting material. The protecting skin of the body and normal linings to reachable cavities is a great aid to immunity and an opponent to susceptibility. So in perfect health, whether in infancy or in age, we are practically immune and insusceptible to tuberculosis. This is an important point to admit. It is the condition in Nature that we ought to enjoy.

This is the state of practical freedom from tuberculosis possessed by all wild animals living out in the open: A state of freedom once enjoyed by the wild Indians, now, however, unknown to them when civilized; an immunity even now retained by cattle

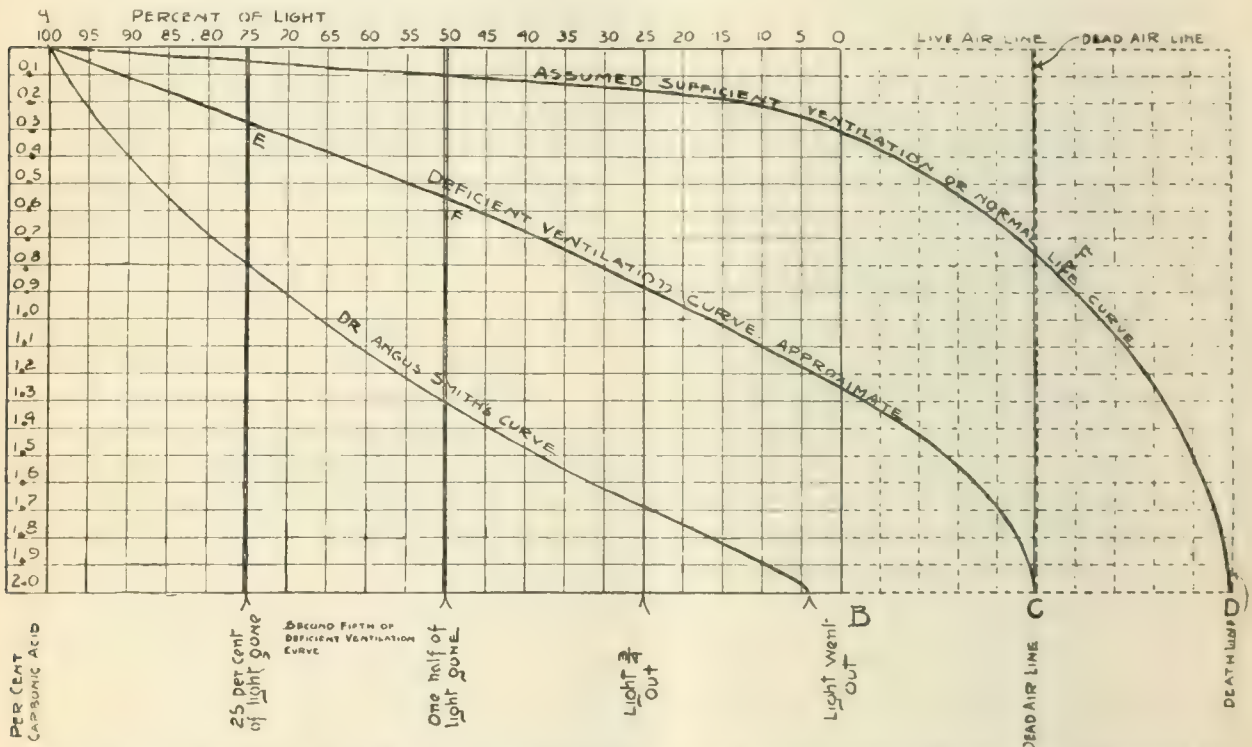


Diagram illustrating ventilation. A, B., approximate normal life line curve under healthful conditions of ventilation. A, C., assumed deficient ventilation curve for comparison with normal life line. E, F., assumed position on this curve, where human beings ordinarily live in houses. A, B., Dr. Angus Smith's extinguishing candle with increasing percentage of CO₂.

cytes and phagocytes) being abundant and on the alert—there is very little probability, even if there is a remote possibility, of an ordinary amount of tubercle bacilli infection finding a permanent lodging in the human body.

Such a resistance of the body makes it to this extent immune, but every organism has its immune limit to such an infection as tuberculosis.

⁷Hueppe attributes to H. Buchner the first demonstration of the remarkable fact "that blood serum and active tissue juices, fresh milk, etc., possess the ability to kill bacteria, and sometimes display extraordinary activity in this direction. Behring next recognized that active blood serum could nullify the effect of bacterial poisons."

Knopf (*Journal of the American Medical Association*, June 15, 1901), says: "The healthy nasal secretion is bactericidal: the ciliated epithelium of the upper respiratory tract is a physical hindrance to the bacilli. The gastric secretions, too, are in a large measure bactericidal."

living in a *natural* wild state on the western plains, but lost by the same cattle when packed in four-by-seven-foot stalls in practically (though not actually) underground stables, in an even worse condition as to ventilation than that of a crowded modern sleeping car.

Of all the varying phases of human existence which break down immunity and ring in susceptibility, that herein cited is, I believe, most fruitful of harm.

As man advances in civilization he becomes more confined and less active, and therefore needs to give more thought to his environment in order to assure physical health. The higher the order of evolution (*i. e.*, the more delicate and special the development

of the nervous structure), the more susceptible to, and influenced by, the changes in environment are all created beings.

Applying this principle to the human family, we see that a limit of civilization can be reached where delicate or slight changes of environment may cause dissolution as well as evolution; where extinction from lack of conformity may take the place of evolution *because* of conformity to our environment. We believe that the sun is the source of all life, and hence is the means of sustaining healthful activity through the medium of the air. Then, aside from that contribution of the sun's storehouse, classed as food, it is evident that the air we breathe carries in its oxygen, temperature, and electrical state, the life we need, and presumably enough of it, taken *as it was intended to be used*; that any vitiation of the forces of that source of life, leading to any fault or disease of body, will be chiefly manifest in the breathing organs, goes without saying and must be admitted to be a reasonable explanation why tuberculosis generally starts in the lungs.

With advancing civilization (the development of a man greater physically and more active mentally) an increased amount of air *per capita* is demanded. There is possible no lessening of the amount or of the invigorating quality required. On the contrary, under certain conditions of life, such as altitude, because the air is thinner, and in certain work-shops, because the air is specially impure, proportionately more is required. How much is needed? This is the greatest question of the hour. We do not know very definitely. We speculate, and then, because of our ignorance, we compromise on the side of economy. The result is gradual decay, tuberculosis, and death.

Studying this matter, I assumed as necessary a minimum of 2,000 cubic feet *per capita* renewed once per hour; and, even on that basis (which is probably too small for perfect safety), decided that the human race was probably living on a deficient ventilation curve. It is literally starving out its breathing and blood-making organs. Physicians interrogated, estimated that people in their various cities would not average half that, some even guessing as low as 500 cubic feet *per capita*; and you know that any *change per hour* is the exception and not the rule.

Considering the evidences of the general freedom from tuberculosis under favorable conditions, and, on the other hand, referring to the general prevalence of the disease under conditions worse as to ventilation than that above stated, and also to the blood changes induced by breathing devitalized air, I want to ask, Is it reasonable to substitute the germ results for such causes when the latter are so plain? Do not the changes in the clogged-up vessels and

air cells, induced by thus rebreathing devitalized air under conditions of physical restraint, possibly constitute a *culture field*⁸ which could not exist in a normal lung? Beyond question, this condition could be so bad, without germ infection, that it could not be much worse with it, so near to a created toxæmia is the dyscrasia existing?⁹

Here is a toxic condition before any positive evidence is visible of germ existence, when the tuberculin test will give distinct reactions about the same as when the bacilli are known to be present. What is it? Isn't it the same disease that it will be if allowed to go on to degeneration and disintegration of the affected lung tissue? Supposing, at this point, before known germ formation, the patient has recovered. From what has he recovered? Is it a jump from the *pretuberculous* to the *post-tuberculous* stage without any active tuberculosis ever having existed as discoverable by germs? Were, or were not, both of these *pre* and *post* conditions included in the Breslau autopsies, in Biggs's, Brouardel's, and Naegeli's *post-mortem* results? If so, are we not driven to the conclusion that the term tuberculosis should cover the whole process? If not, we must invent a new name for this toxæmia. When germification commences and how it commences will be interesting to learn, for our suspicions grow apace as the vegetable mould-nature of the germ is demonstrated.¹⁰

⁸Hueppe, page 114, concludes: "Bacteria, then, are able to construct their body substances out of various kinds of nutrient materials, and also to produce the organic pigments or fermentation products or poisons especially characteristic of individual species, and they are able to do this, either analytically or synthetically, with almost equal ease. This ambidextrous metabolic power exists among bacteria to an extent known as yet among no other living things, and these organisms consequently occupy, physiologically even more than than morphologically, a kind of *intermediate place between animals and plants*."

⁹Do we not seem to be just on the border of what Professor Hueppe refers to in declaring: "Tuberculosis occurs spontaneously in apes as well as in man and in cattle?"

Professor Edward C. Jordan, who translated this work, writes as follows in regard to this quotation:

"I suppose Professor Hueppe would explain the statement you refer to as having reference to the natural contracting of the disease in contradistinction to the production of the disease by inoculation. That is to say, guinea-pigs and rabbits, although susceptible to inoculation with tubercle bacillus, do not contract the disease spontaneously under natural conditions. That, I take it, is the author's meaning."

On the contrary, Hueppe himself seems to be ready to accept spontaneous generation as explaining the origination of these germs, for he thus concludes his chapter on "The Structure of Bacteria":

"After all is said, spontaneous generation remains up to the present time only an unavoidable general hypothesis." He further states that "indirectly these results [bacteriological researches into the synthesis of proteid substances] perhaps support the theoretical postulate of spontaneous generation, since they seem to efface still further the boundaries between animal and plant, the organic and the inorganic."

I do not wish to introduce the diversion of a discussion of the spontaneous generation of life in these mould growths, as these bacilli of tubercle are acknowledged to be, for I am not aware of any experiments which conclusively prove this. But this I do say, that, if, in warm-blooded animals, marked deficiency of ventilation, prolonged, even perhaps for generations, does eventually in whole or in part produce such a biological metamorphosis, such a change in the blood and tissues of their breathing organs as to result in the formation of this vegetable mould-growth, then such spontaneous generation, to my mind, is simply another way of saying that this dyscrasic state is a necessary precursor to a germ infection from *without* such animal body. The dyscrasia is necessary in either case. Either supposition will help us to get at the *real* cause of tuberculosis, *i. e.*, that which precedes the germ formation. Here, indeed, is susceptibility in the extreme and immunity is correspondingly lost. Up to a certain point, germs have nothing to do with it, but a condition already exists possibly as dangerous and deadly in one person as a plentiful incubation of myriads of bacilli in another.

¹⁰Hueppe says, page 143: "The so-called tubercle bacillus is not a bacillus at all from the point of view of bacterial classification, but a parasitic growth-form of pleomorphic mould." And on page 144, "The ability of bacteria to form pigments, fermentation products, and poisons, and to provoke disease, is proved by accurate investigation to be simply a quality of adaptation."

However, *the cause*, due to defective aeration (breathing devitalized or used-up air) preceded the germ in any event, and we are not going to profit anything by denying this fact. On the contrary, we have everything to gain by recognizing it; for here are both the prevention and the cure brought within our easy grasp.

Let me propose to you, gentlemen, a hypothetical question: What would be the difference in two classes of people at the end of the first, second, and third generation, as to mortality from tuberculosis?

The two classes are to typify lives in separate atmospheres represented by, for the first class, short measure, still and sunless air; for the second class, sufficient and stirring air, with sunshine.

Supposing a thousand persons, equally divided as to sex and age (from sixteen to thirty years), were to constitute each class. Each class supposedly is composed of equally hard workers in some factory employment without vacation or intervening recreations.

Choose for them a good healthy climate, as good as, or better than, the average of the whole United States. The two classes are to start exactly alike, perfectly healthy, with no tuberculous taint; to be supplied with plenty of wholesome food, with no outside causes of infection, as through tuberculous milk; and no defective drainage or any contagious diseases to be allowed to complicate the test. Each class to reside by itself and to intermarry among its own class; the only difference to be in the quality and supply of the air they breathe. The first class to have not over 800 cubic feet of air *per capita*, either in sleeping, living, or factory rooms, all occupied without ventilation or direct sunshine. The second class to have 3,000, or more, cubic feet *per capita*, changed at least once every hour, and to have direct sunlight in all living, sleeping, and factory rooms.

Your calculation of the difference in susceptibility and immunity of these two classes should reveal your estimate of perfect ventilation as a prevention of tuberculosis. Physicians in busy professional life, especially those of this congress, being representatives of large cities, can determine from their individual experience that this is not a hypothetical question impossible to answer, though the reply must necessarily be expressed in general terms. You can fairly picture to yourselves the divergence, increasing with time, between the growing susceptibility to tuberculosis of the first class and the more stable immunity of the second?

As to my own answer to such a hypothetical proposition, I do not believe that all the skill and knowledge that God has given to man, applied through foods, drinks, and drugs (toxines and antitoxines included), to stem the tide of degeneration in that

first class, could prevent it, at least from the third to the fifth generation, from becoming a hotbed of tuberculosis.

In the vegetable world, Nature eventually supplies the *soil* with its proper and congenial *seed*. This new life found in active tuberculosis, though vegetable in character, only grows in opposition to our life because the soil in us has degenerated to a state fit for its fructification. The *soil* in man is only what he has made it. It is decaying and rendered suitable for germification because the dead air breathed, the air killed as to its life-giving oxygen and electricity, has transferred its condition to the live animal tissues involved, and has made them fit only for a lower form of existence.¹¹

And what is the meaning of all this?

That tuberculosis mainly springs from, and must be the outgrowth of, a common predisposing or uniform cause, which will account for its finding a congenial "soil" in birds, cattle, horses, and other animals, as well as in man.

The conclusion is almost forced upon us that the medical profession has been trying to proceed with "the cart before the horse"; that it has assumed an *accompaniment* to be a *prime cause*, and has put it in the lead, when it was only a secondary issue, a trailing cart which should come behind. Of course, then, on this basis, we are all wrong in our methods of administrative control.

We have had our hobbies and experiments; so did those who thought to get a desirable *equable* temperature down in the Mammoth Cave of Kentucky, and came near ending the days of all the sixteen consumptives they took down there to be cured. Let us get back of the germ and its deadly environment to the prime cause of tuberculosis.

The first thing to do is to set on foot the most thorough and searching investigation possible to determine the *per-capita* need of air and ventilation, in order that the predisposition to tuberculosis may be prevented.

Would that we had an automatic deficient-ventilation-indicator, which, when built into the side of a room, would announce by sound or a visible index any degree of deficiency. Such an invention, set at liberal guage for purity and freshness of air, and universally used in living and sleeping rooms, would help to banish tuberculosis from the earth.

¹¹Hueppe (p. 141) in speaking of the tubercle bacillus, says: "It is just this belief that has made the science of bacteriology so popular in the eyes of the unreflecting multitude and of many easy-going physicians. A fatal blow is dealt to these self-deceptions and illusions by simply pointing to the fact that bacteria provoke fermentation, only when they come in contact with fermentable substances under proper conditions, and produce illness and disease only when predisposition to disease exists."

"Koch's belief that the cause of disease is the constancy of the 'specific' disease-producing bacteria, renounces at the outset a scientific explanation. With the abandonment of Koch's position, which has been made untenable by the facts discovered in the past ten years, bacteriology has progressed beyond the stage of a natural history subject and advanced to a truly scientific standpoint."

It goes without saying that the second thing to do, having determined what is sufficient ventilation, is to work through educational and administrative channels to have proper laws put in force to remedy the evils of the improper house building and overcrowding characteristic of our age. Necessarily, similar laws must apply to the housing and hygiene of milch cows, so liable are they to infect human beings, especially children.

Then, when the above has been accomplished, a properly officered and supported board of health will accomplish something more than it has hitherto done. To such a board will be submitted the plans of all buildings both public and private, and, after construction, it will have supervision of their ventilation and overcrowding. Then it will not seem so necessary to register cases of tuberculosis, for, on complaint of a fellow workman or any one, as in an overcrowded "sweat shop," of a case of tuberculosis forced into close companionship with others, the medical inspector will investigate, not only the physical condition of the person complained of, but his *whole environment*. Thus, it will be possible for the board to report such actively tuberculous person for *banishment from the city to the country*, or to where healthful conditions and non-contamination of others will be assured. The board of health should have full power to remedy the evil which should be done without resorting to any farcical compulsory registration.

Much valuable knowledge that now seems to be Utopian would result from the adoption of such preventive measures. The law, the administrative control, is then based upon prevention, and prevention rests upon a knowledge of the *prime* cause of the disease. The State can then say to the individual: "*Build your houses thus and so, and keep them ventilated; otherwise live in the open air.*"

The conclusion is that we, the human race, are living in *non-conformity with our proper environment*, the correction of which fault would be comparatively simple had we the needed intelligence.

The Treatment of Malarial Fevers.—At the Panhellenic Medical Congress, Dr. A. Tselios (*Grèce médicale*, May and June) stated that, in his own experience from the observation of many cases, methylene blue combined with quinine sulphate or hydrochloride succeeded best of all in bringing about the most rapid cure of the intermittent attacks. Dr. D. Stephanopoulos stated that in intermittent fevers, both recent and of old standing, with enormous splenic enlargement, and unaffected by quinine, iron, or arsenical preparations, a preparation containing belladonna, iodoform and quinine had a most efficacious action.

THE LANE LECTURES ON THE SOCIAL ASPECTS OF DERMATOLOGY.

By MALCOLM MORRIS, F. R. C. S. ED.,

LONDON,

SURGEON TO THE DEPARTMENT OF SKIN DISEASES, ST. MARY'S HOSPITAL.

LECTURE X.

Delivered at the Cooper Medical College, San Francisco, September 6, 1901.

Eczema continued; the Process, Course, and Symptoms; Local Varieties; Eczema in Infancy and Childhood, at Puberty, in the Adult, at the Menopause, in Old Age; Trade Eruptions; Mycosis Fungoides; Psoriasis; Pityriasis Rubra; Malignant Affections of the Skin; Xeroderma Pigmentosum; Acanthosis Nigricans; Conclusion.

Much as dermatologists differ as to the ætiology, they differ still more about the nature and characters of the disease. One has only to look at the numerous publications on the subject to see that hardly any two writers agree even as to the definition of the disease. In the whole range of dermatology, as far as my experience goes, there is no subject which presents a larger number of unsolved problems than eczema. There are difficulties that meet us at every step in the evolution of the disease. It would be out of place to discuss these obscure points here, as this would make it necessary to go into an inextricable tangle of detail in which we should be lost. I propose, therefore, to keep, as I have done throughout, to the broad highway of general features and the influence of the disease on the social life of the patient.

THE PROCESS.

Eczema is an inflammatory process which in its general course presents a marked analogy to arthritis. At first there are heat, swelling, and itching of the skin, corresponding to heat, pain, and tension in the joint. Next there is a discharging, or "weeping," stage, corresponding to the effusion into the joint. Then the discharge in eczema dries up as the fluid in the joint is absorbed. In both diseases there is a tendency to sudden exacerbations after long quiescence, and in both structural changes result from prolonged or repeated attacks.

In most cases of eczema certain stages are recognizable. At first there are the usual signs of local inflammation. The erythematous surface is soon covered with vesicles; then comes exudation of a serous fluid which stiffens linen; next the formation of crusts takes place. This is followed by a dry stage, when the surface is covered with a red, glistening epidermis; lastly desquamation takes place and nothing is left but a brownish stain. In any given case all these stages are generally present at

once, while the variety of the lesions is made still greater by the marks of scratching and suppurative lesions due to secondary infection. Eczema is essentially a polymorphous disease and, although certain types of lesion may predominate at a particular time, there is no lesion which can be regarded as absolutely characteristic. Much needless confusion has been caused by the superfluity of names that have been given to certain appearances seen at one stage or other of the disease. It cannot be too clearly understood that the so-called erythematous, vesicular, papular, pustular, squamous, etc., eczema are all different stages in the same process. It would take a volume to describe the variety of forms assumed by eczema, and it would be altogether beside my purpose to attempt it here.

SYMPTOMS.

The disease varies very greatly in severity, but only in the very worst cases, when the patient is exhausted by prolonged suffering, is there any disorder of the general health. The itching and heat are often out of all proportion to the visible changes in the skin, and these subjective symptoms are usually greatly intensified at night. In some cases, where the lesions on the skin are insignificant, the irritation is so maddening as to make strong men give way to tears and tear their skin as if they could root out the cause of their trouble with their nails. The mental excitement sometimes amounts almost to frenzy, but relief, and with it sleep, comes when excoriation has drawn blood.

LOCAL VARIETIES.

There are a number of local varieties of eczema, the lesions varying in character according to the anatomical configuration and the warmth and moisture of the parts affected. The parts with which we have to do here are the face and hands, as eczema in those situations causes disfigurement and disability. On the face the disease is usually of the seborrhœic form, and the same statement holds good with regard to the scalp. In both places long-standing seborrhœa has produced a condition favorable to the development of the disease. It is in seborrhœic eczema that micro-organisms are most common; hence suppuration and its consequences figure prominently among the lesions. Eczema of the face has generally spread by extension from the scalp. When it affects the nostrils, it is accompanied by an acrid discharge and is often very painful; the discharge, trickling down over the upper lip, causes great irritation, inoculation of the hair-follicles takes place, pustules form and cause crusts, and the lip may become permanently thickened to the degree of deformity. The upper and lower lips are sometimes so thickly crusted over that

any movement causes cracking and pain. On the hands eczema chiefly affects the palms, where it leads to great thickening with deep fissures; the condition makes movement so painful that the patient is unfitted for active life.

ECZEMA IN INFANCY.

Eczema presents certain diversities of character according to the age of the patient, and it will be well to pass the more important of these in rapid review. In infancy the focus from which an eczema of the scalp starts is generally a patch of dried sebaceous matter. Such a patch, dirty-brown in color and consisting of greasy material, may be seen soon after birth, and it is too often treated as of no account. This is a great mistake, for, if care is taken to treat this seborrhœa in the very earliest stage, I believe that a large part of the eczema which causes so much suffering and disfigurement in children would be prevented. Care must, however, be taken not to treat it too vigorously, as in the highly vascular scalp of an infant the slightest irritation may convert a trivial condition into an acute, rapidly spreading eczema. Many mothers and nurses display too much zeal in the use of soap and water. I do not, as you may have gathered, believe that these substances have such an irritant effect on the adult integument as Professor Neisser teaches, but the skin of the infant is very tender and resents the slightest roughness in handling. I think it would be well if medical practitioners made a point of warning nurses as to the danger of over-scrubbing. Washing should be done gently, and if soap is used it should be superfatted.

Next, I would advise that if there appears to be any tendency to irritability of the scalp, the child should not wear a cap in the house, and its head should not be too warmly covered when it is taken out. If, in spite of all precautions, eczema develops, it will spread in the form of circular patches, not only on the scalp, but also on the face. Thence it will come down the front of the chest, and it may pass behind the ears and so down the neck, and in that way a collar may be formed round the neck. Next, patches may appear upon the abdomen and the back and subsequently on the limbs. After a time the disease suddenly assumes an acute character, passing from the first dry red stage into an exudative stage with discharge. In young children eczema tends to become pustular. In a few days the discharge will dry and form crusts, and then the typical condition of eczema of the infant will be met with, with thick crusts all over the scalp and face and scattered about the body. In the later stages there is a considerable amount of irritation. Many mothers tie the infant's hands or wrap them in bags to prevent them from scratching themselves. This

is a wrong and, indeed, a cruel thing to do. It must be our endeavor so to modify the process that we can give the child relief without putting it to that extra torture. The local treatment should be of the very simplest and gentlest character; strong ointments and lotions are altogether out of place. There is no better application than a very weak sulphur ointment—five grains of precipitated sulphur to one ounce of benzoated lard.

What is it that converts the simple patchy dry form of eczema into an acute process? The change is often attributed to improper feeding, but I have seen eczemas commence and go through their various phases and relapse, though the child has been in every way properly fed, when it has been taking its mother's milk and the mother is in good health. As the child gets older, there are factors which unquestionably have an influence. The first of these is vaccination. The usual rule with vaccination officers is that they are not to vaccinate a child who has eczema. The chief reason is that the vaccination will not take if there is a discharging surface. On the other hand, if vaccination is done when there are only circular scaly patches of the seborrhœic type, the vaccinia as it comes to its height will sometimes rouse these patches into a state of violent inflammation. Other zymotic diseases act in the same way. It is not uncommon for a child with scaly dry patches to have them suddenly roused into activity by an attack of measles. The presence of intestinal worms may also rouse an infantile eczema into the greatest activity. In acute eczema a small dose of calomel, given at bedtime and repeated in two or three nights, is the best constitutional remedy. As regards local treatment, a powder to dry up the discharge should be applied, composed of one part of finely triturated boric acid and one part of starch, and perhaps one part of oxide of zinc. Afterward "zinc cream," consisting of seven drachms of oxide of zinc, one drachm of lanolin, one ounce of olive oil, and one ounce of lime water, should be applied to check as far as possible the formation of scabs. This form of eczema, like all others, is cyclical in its nature. It starts, comes to its height, and subsides; but the tendency of the condition is to commence again; and, in spite of all internal or local treatment, some cases go on relapsing again and again, and I do not know of any method of treatment by which cases of this kind can be certainly cured. Fortunately, the proportion of these is exceedingly small. I believe that individuals may be saved from becoming eczematous subjects in later life if sufficient care with regard to the conditions in infancy and in childhood is observed.

In later childhood eczema is also usually of the seborrhœic type. It usually begins with the formation of circular or oval patches of a rough and scaly

character upon the cheeks or forehead. These patches are usually regarded as being of no consequence, but they should on no account be neglected. At this age the question occurs whether a child who is liable to repeated attacks of eczema of this character should be sent away to school. I have seen disastrous results follow sending children with a marked tendency to relapses of eczema away to school, and in my opinion such children are far better treated at home. If an eczema of early life has left behind it enlarged glands, and if there is a tuberculous history in the family, it is in some instances wise to send the child to the seaside. But, if the attacks are extremely acute, it certainly is not advisable to send the child to the sea.

ECZEMA AT PUBERTY.

At puberty eczema may occur in the seborrhœic form. Commencing on the scalp, it may attack the face and other parts, apparently by local infection. The affection also occurs in another form associated with dry skin—xeroderma. In early life this condition is scarcely noticeable, but toward puberty the skin becomes dry and harsh, and a particular form of eczema may develop. The dry condition should be treated by soaking the skin in a prolonged bath and by softening the dry, hard parts by means of a mixture of one part of glycerin and five of water. Another form of the disease which often appears for the first time at puberty alternates with nerve attacks, more especially with asthma and commencing rheumatoid arthritis. In eczema of this type nerve tonics are especially required.

ECZEMA IN THE ADULT.

In the adult eczema often comes on very acutely after a chill. An attack of this kind can scarcely be explained as the result of microbic invasion; it has rather the character of a nerve storm. Cases of this kind should be treated on the same principles as a feverish cold. Small doses of tartarated antimony in repeated doses are particularly useful. Often, when all the lesions have disappeared, there remains an intensely irritable state of the whole cutaneous surface. The patient lives in constant dread of another attack, and this, combined with the itching, sometimes brings him to the verge of insanity. Alcohol seems to aggravate the disease in such cases in a very marked degree. No local remedy does much good, and the best hope of cure lies in a complete change of scene and surroundings.

ECZEMA AT THE MENOPAUSE.

Eczema often occurs in association with the menopause. The "flushing" so common at the change of life becomes worse and ends in an eczema of the

scalp which spreads over the face. For this condition there is in my experience no remedy like ichthyol given internally in doses of two grains and a half after each meal at first, and gradually increased up to ten grains.

In old people chronic eczema, with short, acute exacerbations, is common. The affection, in Macbeth's phrase, murders sleep, and may worry the patient almost to madness by the constant irritation. In this form of eczema, as pointed out by Kaposi, the irritation of the skin sets up reflex irritation in the intestine which prevents the proper digestion of the food. The irregularity of the bowels reacts in turn upon the skin, and thus a vicious circle is established. The patients are reduced to a pitiable condition and are often driven to end their sufferings by suicide. The only drug that does any good is opium, and it should be given freely. What does it matter if the "opium habit" is contracted in old age? The patients have not long to live in any case, and the drug may help to make their few remaining days less evil than they otherwise would be.

TRADE ERUPTIONS.

As the affections of the skin seen in those who pursue certain trades are mainly eczematous as far as the appearance of the lesions is concerned, a word or two may be said about them here. Makers of artificial flowers, paper-hangers, and workmen engaged in the preparation of arsenic and in the manufacture of aniline dyes often fall into a chronic low condition of health from the arsenic dust and fumes which they inhale; they also suffer from eczematous eruptions on the hands and elsewhere. These evil effects are much less common since attention was called by the Medical Society of London to the dangers arising from the use of arsenic in various trades and industries. Workmen employed in the preparation of arsenic are liable to eczema, especially in the folds of the integument and around the nostrils, and ulcers on the skin from the irritating contact of the metal. A scratch in them quickly develops into an ulcer. In those engaged in calcining arsenical ores, the fumes are apt to produce eruptions about the genitals and exposed parts, particularly in the flexures of joints. Workers who have to handle sulphur are subject to irritation and redness of the skin, which becomes dry and often desquamates; eczematous and erythematous eruptions often occur. Chloride of lime dust also irritates, dries, and ex-coriates the skin in those who work in it. The hands of washerwomen become sodden and so very liable to injury, often caused by the irritant action on the skin of the chemicals used in laundry work. Similar eruptions are seen in bleachers and dyers, which affect the hands, wrists, and fingers. "Baker's itch" is generally a form of eczema. Grocers have

also an "itch" of their own which consists in an eczematous eruption on the back of the hands and fingers caused by the irritation of sugar. Eruptions of various kinds are also common in workers who have to handle paraffin, petroleum, tar, bichromate of potassium, etc. They generally cease on removal of the cause; but there's the rub. Removal of the cause too often means removal of the patient's livelihood; they therefore struggle on as best as they can. A story is told of a well-known professor in a Scottish university who, after demonstrating with the delight of a connoisseur all the points of a particularly bad case of "baker's itch," suddenly asked the patient where he worked. The man named a highly respectable firm, whereupon the professor exclaimed in a tone of horror "Lord be here; my ain baker!" The legislature in England has made several attempts to protect workers against the consequences of exposure to poisonous and hurtful agents of various kinds. In the case of washerwomen, the prohibition of the use of chemical agents would doubtless be effective, and would be hailed with satisfaction by the public, whose linen suffers lesions as grievous in their way as those on the laundresses' hands. It may be added, with regard to trade eruptions in general, that they can for the most part be obviated by strict attention to cleanliness. There should be separate lavatory accommodation for those affected, so as to obviate the risk of contagion.

MYCOSIS FUNGOIDES.

In connection with eczema, mention must be made of a condition of the skin which has the appearance of eczema, but is the forerunner of one of the most formidable diseases in the whole range of dermatology. This is mycosis fungoides, a malignant process which, commencing in lesions of an apparently innocent nature, goes on slowly but surely to the development of tumors in various parts of the body, meanwhile undermining the general health and ending after long suffering in death. It is important that this insidious disease should be recognized in an early stage, though, unfortunately, but little can be done by medical art to prevent its evolution or even to mitigate its horrors. But, though an early diagnosis may not avail to save the patient, it may be useful in other ways. Therefore a somewhat detailed account of the eczematous, or rather the premycosis, stage of mycosis fungoides may appropriately be given here.

The earliest manifestations on the skin are patches of superficial inflammation scattered here and there over the surface. Any part of the body may be affected. The process involves only the epidermis or the upper layer of the corium, and the lesions are eczematous and erythematous in type. At first red, the patches become livid and finally brownish in

hue; they are smooth and dry in the beginning, afterward scaly, and later still moist or crusted. They are generally raised and rounded, but sometimes irregular in outline. From their likeness to the lesions of eczema, Erasmus Wilson called the first stage of mycosis fungoides "eczema tuberculatum." The patches are usually the seat of irritation, sometimes of pain. Some of them fade away, but others take their place and new ones spring up in other parts. The disease may make no further progress for years, and during this period of apparent quiescence it is looked upon as being nothing worse than eczema or persistent erythema. After a time, however, the process begins to advance. The inflammation strikes deeper and the patches become infiltrated and roughened on the surface by the development of papules and nodules. After a variable period the disease enters on its last stage, the commencement of which is marked by a new and serious development. Tumors, flat or spherical in shape and firm in consistence, develop on the inflamed patches and on previously healthy areas of skin. Their moist, shining surface and bright-red color give them the appearance of tomatoes. The tumors may number as many as two or three score. Sometimes they vanish, but more frequently they continue to grow in bulk. After a time they slough, leaving foul ulcers; and these, together with the infiltration of the subcutaneous tissue and thickening of the skin, may cause frightful deformity. In rare cases there is no preliminary stage, the disease showing itself in its true light at once by the development of the characteristic tomato-like tumors. As a rule the process is not accompanied by febrile disturbance unless visceral complications of an inflammatory character occur. Mycosis fungoides may last for years before it causes death, but it tends from the first to a fatal issue and treatment can do nothing to prevent this. Death results from exhaustion when the patient is not cut off by septicæmia or some intercurrent internal malady.

The cause and nature of the affection are still obscure. It is neither hereditary nor contagious. It is probably microbic in origin, but the micro-organisms described by various observers as found in connection with it have not been proved to be factors in its ætiology. The characteristic growth may be regarded provisionally as a chronic inflammatory neoplasm. It occurs in adults, mostly between forty and fifty, and shows a certain partiality for the male sex. It causes horrible disfigurement, but, except in the early stage, it is not generally painful. Besnier and Morrow have recorded cases in which the disease was diagnosticated in the premycotic stage, but in the present state of knowledge such an achievement can very seldom be possible without the gift of prophecy. In obstinate cases of eczema the

possibility of the disease proving to be mycosis fungoides should be borne in mind.

PSORIASIS.

A few words must be said about psoriasis, which causes disfigurement and, though not usually disordering the general health, in certain cases undergoes transformation into an acute disease which may cause death. The initial lesion of psoriasis consists of a scaly point of about the size of a pin's head on a reddened base; crops of these come out, and as they grow they form scaly patches covered with white or asbestos-like scales. The patches almost invariably appear first on the elbows and knees and are symmetrical in distribution. The scalp is generally attacked, the face rarely. Psoriasis is doubtless the disease described as *léprosy* in the Bible, when the skin of the patient is said to be "whiter than snow." There may be only a thin coating of scales or they may be piled up on the skin in thick heaps. This is especially apt to occur on the scalp, but the disease very seldom causes baldness. After attaining a certain size, the patches begin to fade in the centre, leaving rings which, as the process of involution continues, break up into segments; these, joining with the remains of other patches, form festoons and other curious patterns. The lesions in time disappear completely, but when the disease has lasted a long time deep-brown stains are often left. In most cases patches are left on the original sites of the disease, the elbows and knees, from which after a period of quiescence it again spreads more or less rapidly. These exacerbations often seem to be due to mental shock, change of climate, or diet.

In the great majority of cases psoriasis causes no constitutional symptoms; Hebra used to call it a disease of the healthy. Sometimes, however, there is some febrile disturbance, and rheumatoid arthritis is not infrequently associated with it. I have known psoriasis accompanied by joint affection of such severity as to cripple the patient for life. Itching is not generally so troublesome as in eczema, but its intensity varies in different individuals. It is worst in those who habitually love not wisely but too well, and who look upon the wine when it is red. In very acute cases, the skin is tender, hot, and tense, and pain may be caused by "cracking" of the skin on movement. This occurs most frequently in the "bathing drawers" area; patients afflicted in this way cannot sit down without great discomfort. In gouty people the eruptions are prone to become inflamed and irritable.

As to the ætiology, I can only say, with Dr. H. C. Brooke, that, "notwithstanding researches in every direction—social, statistical, chemical, microscopical, and bacteriological—the cause of psoriasis is still unknown." Gout is thought by some to be a

factor in its production, but there is no solid evidence of any connection between the two diseases. It has been attributed by some to parasitic invasion, but, though there is some slight evidence of contagion, no parasite which could be shown to have any causative relation to the disease has yet been discovered. The affection sometimes originates on the site of vaccination. Cases have been recorded by several writers, including myself. Most of the subjects were inoculated with animal lymph, and, although it has generally arisen after the fall of the crust, it has done so where bovine lymph had been inoculated and had not taken.

The not infrequent association of psoriasis with nervous disorder of one kind or another suggests a neurotic origin, and this theory seems to derive some support from the association of psoriasis with arthropathies which are presumed to be of nervous origin. It may be that in the case of psoriasis, as was suggested in regard to eczema, there are two factors at work—the nervous, which diminishes the resistance of the skin, and the parasitic, which actually gives rise to the disease. The disease is said to be much more common in Europe than in North America.

Psoriasis is not very amenable to treatment. Arsenic is, on the whole, the most efficacious drug, but it has to be given in large doses and with great perseverance. When it cures the disease, it often leaves pigmentations of the skin, sometimes thickening of the epidermis of the palms and soles, and in very rare cases, according to Hutchinson, corn-like growths which may become malignant. In acute forms antimony is most useful, and nerve sedatives should be administered if there is any clear indication for their employment. Thyroid feeding I have found quite useless. For local application, parasiticide substances, such as mercurial preparations, resorcin, etc., are useful, but the most efficient of all is chrysarobin. A visit to a sulphur spring will in many cases complete the cure. Whatever plan of treatment is employed, it must be followed out perseveringly. But it must be borne in mind that psoriasis, like Nature, with whatever weapon it may be expelled, *tamen usque recurrit*.

Cases have been recorded in which psoriasis has appeared to be transmitted by contagion, and on this account it will be well to take precautions against the possible spread of infection. But, generally speaking, it is not a disease that seriously interferes with the patient's earning his living. It will, however, necessarily deprive him of some measure of social enjoyment.

PITYRIASIS RUBRA.

Occasionally a formidable complication, or rather transformation, supervenes. The disease suddenly

changes its character, developing into an acute dermatitis which overruns the whole body, swallowing up all the psoriasis lesions and making the skin bright-red in color, without infiltration or thickening. Extensive desquamation takes place, the whole skin seeming to be shed in some cases. Hence the process is known as exfoliative dermatitis, or, from the reddening of the skin which it produces, pityriasis rubra. Where the scales have come away, the skin is livid in color and extremely thin and tender. This transformation is often, but not always, attended with constitutional disturbance. If the condition persists, as it may do for months and even years, the nails and hair fall out, the general health is undermined, and death occurs from exhaustion. Often, however, even in cases that have lasted a long time, recovery takes place. Pityriasis rubra, though most frequent as a sequel of psoriasis, may follow eczema, erythema multiforme, and other affections. It is sometimes induced by the injudicious use of strong applications, such as tar or chrysarobin in the treatment of the original disease. Pityriasis rubra also occurs as an independent disease. One or two epidemic outbreaks of an apparently identical disease have been recorded as occurring in workhouse infirmaries.

MALIGNANT AFFECTIONS OF THE SKIN.

I pass next to a group of diseases that cause hideous disfigurement and ultimately end in death. These are the malignant affections of the skin, the more common types of which, such as epithelioma, sarcoma, and rodent ulcer, are too familiar to every medical practitioner to need any description from me. Another—mycosis fungoides—has already been mentioned. A still more formidable disease, which develops from equally innocent-looking beginnings, is xeroderma pigmentosum, first described by Kaposi. In this affection also the chief clinical feature is tumor formation. The earliest lesions are darkish freckles which come out on the parts usually uncovered in infancy. They appear in childhood and for some years behave just like freckles, becoming fainter in winter and darker in summer. After a time they deepen in color and remain as permanent stains. Next comes a period of superficial ulceration, which is followed by cicatricial contraction. Then comes a further stage when warty-looking growths spring up on the freckles. These develop into tumors which ulcerate, the process destroying every tissue which it attacks and excavating considerable areas. The deformity produced is of the most horrible kind. Fortunately, the disease is extremely rare. The tumors are epitheliomatous in structure, and the process seems to be analogous to the malignant degeneration which sometimes takes place in pigmented moles in old

age. The only exciting cause that has been suggested is exposure to the sun, but it is evident that a special proclivity is needed for the development of the disease. The disease always ends in death, but this may not take place for years, and the general health is not affected till near the end. Treatment can be only palliative. The tumors should be excised as they form. In the early stages the advance of the disease might possibly be checked by protecting the skin from the sun's rays.

ACANTHOSIS NIGRICANS.

Another unsightly disease, which is also very rare, is acanthosis nigricans. The skin becomes harsh and rough over considerable areas, and on these warty growths develop. The skin is stained dark-brown and the growths are blackened as if with gunpowder, but the discoloration is not evenly distributed. The disease generally first appears on the neck and trunk and by and by extends all over the body. In warm and moist parts, as in the axilla and about the anus and genitals, vegetations grow with special luxuriance. A similar warty condition may be observed in the mouth and throat and in the vagina. The skin is thickened and feels like morocco leather. The hair falls out on the head, while on the face it may grow abundantly. There is generally no pain, but itching is sometimes troublesome. The skin disease makes steady progress, and sooner or later symptoms of cancer of one or other of the abdominal or pelvic organs manifest themselves. The growths, on microscopic examination, show nothing but the ordinary characters of papilloma. In a case under my care the discoloration appeared to be due to the presence of hæmatoidin from minute intra-epidermal hæmorrhages and adventitious matters, chiefly coal. Acanthosis nigricans is at present incurable. Beyond the removal of the larger growths, there is nothing to be done except as far as possible to conserve the general health.

CONCLUSION.

There are many things which the limits of time assigned to me will not allow me to touch upon. I have only flitted from headland to headland, without attempting to explore the creeks and rivers between them. Robert Louis Stevenson said that "a man who knew how to omit would make an Iliad of a daily paper." Whether or no I have been judicious in my omissions, I have omitted enough to make not only an Iliad but an Odyssey of dermatology. Perhaps, however, I have said enough for my purpose. It has been my object to show that many skin diseases which pathologically are not very serious and which may even seem trivial—to those who do not suffer from them—may from a social point of view be of considerable consequence; and to show the

importance of dermatology to the individual and to society. No one can be more keenly alive than I am to the imperfect manner in which the task has been discharged. In conclusion, I have to thank you for the courtesy with which you have listened to me, and to congratulate you on the power of endurance which you have shown during what must have been a severe strain on your patience.

PYOPERICARDITIS.

By HERBERT O. COLLINS, M. D.,

DAYTON, O.

That pericarditis, in both its serous and purulent forms, is a more common disease than is usually supposed by the profession, there can scarcely be any doubt. It is so insidious in its approach, is so frequently an accompaniment of some other serious disease which draws the attention of the clinician away from the pericardium, and is apt to run its course with so few local symptoms, that unless the practitioner is on the lookout for it, it frequently escapes his notice altogether. In fact, it has been said that pericarditis is oftener diagnosed in the dead-room than at the bedside.

Pyopericarditis may be either primary or secondary, as regards the nature of the exudation. In the former, the effusion is purulent from the first, and constitutes the real purulent pericarditis. In the secondary form, there is first a simple serous transudate, which later is changed into pus by the introduction of pyogenic bacteria, either from without (as after an aspiration) or from within, through the circulation or the rupture of an abscess in a neighboring structure. Such change in the nature of the effusion is generally marked by chill and hectic fever, although there may be no decided symptoms to attract attention to the onset of suppuration.

From an ætiological standpoint, pericarditis is usually spoken of as idiopathic or secondary. But the probabilities are that idiopathic pericarditis does not exist, and that the inflammation of the pericardium is always a secondary affection. Speaking broadly, it may be found as a complication of any disease which introduces into the circulation either toxic material or infectious germs, or it may result from inflammation extending from neighboring structures. The nature of the exudation is, of course, dependent upon the character of the exciting cause. Thus, in rheumatism, Bright's disease, and pleuropneumonia we expect a serous effusion; in cancer of the lung and tuberculosis, the complicating pericarditis is more commonly of the hæmorrhagic variety; while with all septic troubles, and pyæmia, the presence of pus in the pericardium is to be feared. And as this brings us to a consideration of

conditions so widely different, both pathologically and clinically, it would seem the more rational method to class purulent pericarditis apart from the other forms entirely. In fact, it is a question if it should be classified as a separate disease at all, any more than we should so consider the abscesses of pyæmia or the deposit of urates in the joints in gout. For, after all, with the exception of the traumatic or accidental cases, in which the infection is introduced into the pericardium by means of wounds or the perforation of foreign bodies, pyopericardium is but the local manifestation of a preexisting septic condition in some other portion of the body.

Considering it in this light, it becomes important for us to bear in mind the conditions under which the pericardium is subjected to the danger of septic infection, in order that this peculiarly fatal complication may be recognized early, and the necessary measures taken to combat it. The list of diseases due to, or accompanied by, toxic germs is so large that I can only touch upon the more prominent ones in this connection. A careful diagnosis of all diseases of the mediastinum is important, as the heart is intimately connected with the structures in this region, and infection has but a short distance to travel. Thus, an abscess of the mediastinum, previously overlooked, may rupture into the pericardium and be the starting-point of a purulent pericarditis. As in all cases of septic infection of the pericardial sac, pus accumulates rapidly, and death may result in but a few days. On the other hand, pericarditis is the most frequent cause of mediastinal abscess, so that here the relation between cause and effect may be reversed, owing to the contiguity of structures. Caries of the ribs or sternum may be mentioned among the causes to be found in this region, and Pott's disease may be complicated by purulent pericarditis, either directly through the medium of the circulation, or indirectly, by first giving rise to mediastinal inflammation or abscess. Cancer or abscess of the lungs, empyema, cancer or abscess of the œsophagus, inflammation of the breasts, and bronchopneumonia should be included in the list of diseases of the chest apt to result in pyopericardium, while myocarditis and abscess of the heart wall are probably to blame for some of the so-called "idiopathic" cases.

Those cases which result from external wounds usually fall into the hands of the surgeon in connection with the original injury. Analogous and sometimes perplexing cases are those which result from the perforation of foreign bodies from the œsophagus or the perforation of a small gastric ulcer. The possibility of its being the result of infectious trouble at the navel should not be lost sight of in the new-born. Angina, abscess of the brain, suppura-

tive otitis media, furunculosis, and even vaccination have been known to cause it.

Among abdominal troubles, an hepatic abscess may rupture through the diaphragm, or it may result from enteric fever, peritonitis, puerperal fever, abscess of the spleen, appendicitis, or any septic condition of the pelvis. It has also been found in connection with phlegmonous erysipelas, acute osteomyelitis, variola, scarlet fever, typhus, diphtheria, and the malignant form of measles. In those cases where purulent pericarditis complicates gonorrhœal infection the endocardium is usually first affected, the process being a true metastasis of the gonorrhœal germs. It is generally preceded by the symptoms of gonorrhœal rheumatism, and is more frequently found in women. In connection with pyæmia, infections of the endocardium and pericardium are responsible for a large proportion of the deaths.

Dr. Sturges is quoted as saying that, out of one hundred cases of heart disease occurring in children, only six escape adhesions.¹ This would seem to indicate that inflammation of the pericardium is more frequent in childhood than is commonly supposed.

The method of diagnosis of purulent pericarditis is so nearly identical with that of other forms that it is not necessary to go into the subject minutely in this connection. The conditions with which pericarditis with effusion is most likely to be confounded are a left-sided pleurisy with effusion and cardiac dilatation. With a careful physical examination, there ought to be no difficulty in excluding pleurisy, as the area of dulness is not the same in the two conditions. The error, however, has been made. Dilatation of the heart, on the other hand, offers more difficulty, and it is here that most care must be exercised. To the left of the sternum, the region of dulness shown with dilated heart and pericarditis with effusion is so nearly the same that but little value can be placed upon it for purposes of differential diagnosis between the two affections. On the right, however, a different condition exists. While, with dilatation of the heart, a slight amount of dulness may extend to the right of the sternum, in the region of the fifth right interspace the relative dulness does not extend more than one or two centimetres from the edge of the sternum, and it is never absolute. It has been found, on the other hand, by a number of experimenters, that even a small amount of fluid in the pericardium gravitates to the region of the fifth right interspace. Absolute dulness at this point, then, taken in connection with the other well-known symptoms, may be accepted as an undoubted sign of fluid in the pericardial sac. In childhood and infancy, it should be remembered that

the ribs are more horizontal, the diaphragm rises higher into the chest, and the heart lies more horizontally, so that the apex beat may appear to be displaced considerably to the left, even outside the mamillary line, under conditions which are normal. Also, in childhood pericarditis is very frequently present without local symptoms till effusion appears, and the exudation accumulates very rapidly and is more often purulent than with adults, although tuberculous cases are the more common. On the whole, pericarditis in all its forms is more frequent in childhood than in adult life.

Rosenbach has called special attention to the presence of a peculiar whizzing murmur at the apex, which is of pericardial origin, although not always present. It appears to be found less frequently in the purulent than in the other forms.

The nature of the effusion cannot be positively told without an aspiration. A fairly accurate opinion, however, may be formulated from the nature of the disease with which it is associated and from the symptoms and condition of the patient. The selection of the proper point for the entrance of the aspirating needle is of great importance, as there is danger of wounding the pleura, or even the heart wall. There is no point at which aspiration can be performed with absolute safety, but if it is done on the left side, the fifth interspace offers the safest location, the needle being inserted only a short distance from the sternum, and not allowed to enter deeper than one and a half or two centimetres. Others propose a point just inside the left border of dulness, while still other operators, for reasons to be given in connection with the choice of location for the more radical operation, prefer the fifth right interspace. It is probable that a great many aspirations, as usually performed, are made through healthy pleura. The danger of converting an aseptic pericarditis into a purulent one, by means of an aspiration, is a real one, even when the strictest care is exercised, as is the case in aspiration of the pleural cavity. On this account, exploratory aspiration of the sac is not to be lightly considered. On the other hand, if the presence of pus is suspected, its prompt and thorough removal is so imperative that he who waits undoubtedly does not act for the best interest of his patient.

That a purulent exudation may sometimes be absorbed there is no doubt, for cases are occasionally met with post mortem which show the remains of a pyopericarditis by cheesy and calcareous deposits in the pericardium. In fact, the abscess has even been known to point externally. A case is quoted in Keating's *Cyclopædia of Diseases of Children* in which the abscess opened spontaneously at the tip of the ensiform cartilage in an infant of four months and a half, death occurring suddenly a few days

later. Other instances are on record in which the pus was discharged under the left clavicle and in the second right intercostal space. Wyss has recorded a case in which a fistulous tract remained for years, the patient finally dying of an acute attack. These efforts of Nature to get rid of the pus only point out to us the rational method of treatment of the condition, as in abscesses elsewhere.

Skoda has been quoted as saying there are two rules for opening the pericardial sac: 1. When the sac is distended with a large exudate which shows no tendency to absorb. 2. When there is intense dyspnoea. With our present knowledge of the conditions we could add a third indication, viz: when the exudation is known to be purulent, for here the liability of absorption taking place is so small that it need hardly be considered, and prompt measures are necessary. Death may occur in a few days, as the pus usually collects rapidly, and, as a rule, the patient has already had his strength severely taxed by the primary disease. If delay is practised, there is also danger of the heart walls becoming weakened from pressure and the action of the pus, resulting in dilatation of that organ.

The question of treatment, then, resolves itself into a choice of methods of operating. Four different procedures have been suggested and practised: aspiration, simple puncture, incision through an intercostal space, and incision with the resection of one or more ribs and thorough drainage. While aspiration has been used with a fair amount of success in the treatment of non-septic cases, in those accompanied by pus the results have not been so good as could be wished. There is no means by which the abscess cavity can be satisfactorily washed out and drained, and the pus rapidly reaccumulates, making repeated operations necessary and recovery decidedly doubtful. Somewhat similar objections are to be found against puncture, with the additional danger of wounding some important structure. When the sac is filled with fluid, the heart is liable to be found pressing closely against the chest wall, unless bound down by adhesions, and a puncture is apt to injure either the cardiac wall or the coronary arteries. The chief danger is that of piercing the pleura. The exact outline of the pleura cannot be determined in any given case, as its position varies somewhat, especially in patients with pathological processes in the chest. As it is important to avoid wounding this structure even to the slightest degree, for fear of setting up a complicating pleurisy or pneumothorax, the choice of operation in purulent cases would seem to narrow itself down to the method of incision.

Incision through an intercostal space, without resection of a rib, is open to many of the objections already spoken of in connection with the other meth-

ods. In addition, there is the fault of too little space to enable the operator to choose his path, thus increasing the danger of wounding the pleura or other important structures, among which is the internal mammary artery, which is liable to be found crossing the field of operation. The more radical operation carries with it so little increase of danger, and its advantages over all others are so apparent, that its more common adoption would seem to be the rational result of a closer study of these cases. With the resection of a portion of a rib, the operator has a fairly clear view of the field before him, and can avoid injury to the pleura and cardiac wall, besides obtaining a more thorough evacuation of the pus and subsequent drainage.

This operation has usually been done upon the left side, either the fourth and fifth or the fifth and sixth costal cartilages being resected and the resulting flap turned upward, exposing the internal mammary artery and the pleura. Another method proposed is to remove a portion of the sixth and seventh ribs on the left side and that part of the sternum to which these ribs are joined. It is maintained that with this method the pleura is easily avoided and that the artery may be pushed to the left. Others urge the point that, whereas with pericardial effusion the heart lies close to the chest wall, making imminent the danger of wounding the coronary arteries, yet in the region of the fifth right interspace it does not touch the chest wall. As even the smallest effusion gravitates naturally to this point, it would seem that the contention of those who favor operating on the right side has rational support. In this method the fifth right costal cartilage is resected and the flap turned upward. The pleura can then be pushed aside, and the artery either avoided or tied at two points and divided. When the pericardium is opened, the pus usually escapes in a pulsating stream, as the heart shows a tendency to close the wound. In all cases, the cavity should be washed out with sterilized water, the pericardium being sutured to the skin incision, and the cavity drained with a strip of iodoform gauze. Subsequently, the pericardium should be irrigated daily with sterilized water and drainage kept up till recovery takes place. Care is necessary to prevent the entrance of air into the sac, both during the operation and afterward, as several deaths have occurred from pneumopericardium.

This operation is not a dangerous one when done by a careful operator, and the pericardium has been opened and drained a number of times under local anæsthesia alone. In fact, some operators have alleged that incision with the resection of a rib is a safer operation than aspiration of the pericardium. The right side has not usually been selected for the site of the incision by operators, but drainage would

seem to be better with this location. Whichever point is selected, it is to be hoped that an earlier diagnosis of these purulent cases and a more prompt and more thorough operation will result in a better prognosis.

THE DAILY MEDICAL INSPECTION OF SCHOOLS.

By D. S. LAMB, M. D.,

WASHINGTON, D. C.

The sanitary inspection of schools dates back many years. Everywhere where schools have been there have probably been medical men and laymen who have realized the evils of insanitation and the need of prevention and remedy; and, to a greater or less extent, have interested themselves to that end.

The names of Luther and Zwingli are connected with school hygiene; of Amos Comenius; of Josef Furttenbach, 1649; of Johann Peter Frank, 1786; and of others all through the nineteenth century. School physicians in Egypt are mentioned by Cohn.¹

In cities where some organization has existed having to do with the health of the city, it was only natural that sooner or later the sanitary condition of schools should receive attention and persons be appointed to make the proper inquiries into such matters as construction of schoolhouses, lighting, heating, ventilation, etc.

A periodical and systematic inspection of schools to ascertain and remedy insanitary conditions is, however, a movement of comparatively recent date, covering at the most only a few decades, and in most places only a few years. Very naturally it has fallen to the lot of the physician to do this work, because he is better fitted therefor by his studies. Of late years, however, the subject of hygiene, civil and military, domestic and personal, has been elevated into a somewhat distinct profession; and those who make a study of the subject are generally known as sanitarians. Not all of these, but probably most, are physicians. The physician has therefore come to be very intimately related to the life of the people, in other ways than simply as the family doctor. This fact is of much importance and suggests the desirability of physicians more often entering public life, where, as legislators and executives, they may give the benefits of their special education to the public welfare, and combat the ignorance of many public men in regard to sanitary matters. In those countries, as France, where physicians and sanitarians are thus prominent in public

¹Jahres. d. Schles. Gesell. f. Vater. Cult. (1898), Berlin, 1899, lxxvi. See also, Schmidtman, Viertel. gericht. Med., etc., Berlin, 1900, 3 Heft, 88, 154, et seq., and Edel, Ztschrf. f. Schulgesundheits. Hasberg and Leipzig, 1897, 8, p. 193-206.

work, there is a marked deference paid to the formulated opinions of medical and sanitary associations on matters connected with the public health.

The literature of school hygiene is quite extensive. The subject has not only been written upon by many authors, but has been discussed by local, national, and even international, associations. There is a fairly uniform opinion as to what are the hygienic needs of schools. What is true of public is also true of private schools; and what is true of the lower grades is in the main also true of the higher grades. There is no longer any question as to the advisability or desirability of the hygienic inspection of schools; that question is settled; the inspection is necessary and its neglect may be said to be a breach of trust. There may properly arise a question as to the frequency with which inspection should be made; the rational way would seem to be to vary the frequency with the circumstances.

The last few years have witnessed, more especially in this country, an extension of the inspection of schools from the hygienic to the distinctly medical. That is to say, the question is not now limited to the condition of the schoolhouse, its lighting, heating, ventilation, the shape and height of its desks and seats, its closets, its dressing rooms, etc.; but the inspection has taken within its scope the *personnel*, and by distinction this is generally known as the *medical inspection*. It includes a study of the scholars in the matter of personal hygiene, their diseases and the means of prevention, and especially the means of prevention of epidemics of disease among the children. It is not a study of the schoolhouse in relation to the child, but of the child in relation to the schoolhouse and the schoolmates. In some places it includes the anthropometry of the child; in some others it includes the giving of meals to poor children.

The most important movement in this direction was that made in Brussels, in 1874. The names of Anspach, the burgomaster, and Dr. Jannsens, the health inspector of that city, deserve to be remembered as the two most prominent figures in this movement, to which we all owe so much.

Jannsens, himself, in a report made to the International Congress of Education, held in Brussels in 1880, says that, in Brussels, prior to 1874, physicians visited the communal schools from time to time, but the results were meagre. In that year a bureau of hygiene for the city was established, which transferred the school inspection to five sanitary physicians employed by the bureau. Their duties covered the matter of the schoolhouse, its construction, light, heat, ventilation, etc., and the child, both in its condition of health and of disease. "The end of the modern school is to favor by all possible means the development of the child, physically, intellectually,

and morally." The sick children were to receive the particular attention of the physician-inspector at each weekly visit. The transmissible diseases were to be the subject of a special regulation. Other acute as well as chronic diseases should be treated at the child's home and by the family physician. But for transmissible diseases the rule was necessary, both for the recovery of the affected child, and to prevent the communication of the disease to other scholars. The school being a very favorable means of propagating infantile diseases and especially eruptive fevers, diphtheria, and whooping cough, supervision at this point should be incessant, the physician-inspector instructing the principal of the school how to recognize these diseases at their beginning.²

The report, for 1880, of Dr. Bonmariage, of the Bureau of Hygiene of Brussels, adds that the inspectors gave attention to faults in construction, heating, ventilation, size of class rooms, seats, desks, windows, etc., to temperature and the daily condition of air and causes tending to vitiate it; to circumstances affecting the healthy child, such as gymnastics, care of eyes, ears, teeth, skin and body; length of lessons, the time of study, books, evening lessons, instructive excursions, immediate closing of schools when the temperature exceeded 82° F., accurate anthropometrical records as means of constantly learning the condition of health of all pupils, and investigations into the best methods of intellectual development; rigid regulations regarding infectious diseases, including vaccination and revaccination, and careful directions for training children who were below the normal standard of health.

The result was that *there was no epidemic of infectious disease in Brussels afterward*, although other children of Belgium and the rest of Europe generally suffered severely; and the general health of the pupils improved.³

Dr. Octave Du Mesnil,⁴ in a review of the Exposition and Congress of Hygiene, etc., at Brussels in 1876, stated that the medical inspector of schools in Brussels visited the primary schools each week and made a monthly report which showed the diseases for which the scholars were detained at home, and also the hygienic conditions of the class rooms. The city bureau of hygiene utilized these reports in trying to ameliorate the health of children suffering with scrofula and phthisis; the physician-inspector prescribing for them, and the bureau furnishing the medicines; with the result that the absences from school had much diminished. Dr. Du Mesnil⁵

²Rapports sur les opérations du Bureau d'hygiène et de la salubrité publique de la ville de Bruxelles pendant l'année, 1879; et de l'inspection hygiénique et médicale dans les écoles, par le Docteur E. Jannsens, inspecteur du Service de santé de la ville de Bruxelles. Bruxelles, 1880.

³*Boston Medical and Surgical Journal*, October 27, 1881, p. 407.

⁴*Annales d'hygiène publique*, Paris, 1877, xlvii, p. 12.

⁵*Annales d'hygiène publique*, Paris, 1880, iii, pp. 76-92.

quotes also from the annual report, for 1878, of the burgomaster of Brussels, in which year eight physicians were employed; they at first visited the schools every week; afterward three times a month. All the children were examined both anthropometrically and medically. Ailing children were treated by these physicians.

Dr. V. Desguin⁶ stated, in 1881, that under article xi, annexed to a royal decree of October 15, 1846, and another regulation, August 16, 1878, the sanitary inspection of communal schools of the city of Anvers (Belgium) had been confided to the Bureau de bienfaisance. The medical inspectors were required to give attention to the schoolhouses, ventilation, etc., to take measures to prevent the spread of contagious diseases, and to attend professionally the scholars who showed predisposition to certain diseases. There were 220 class rooms and 36 kindergartens in Anvers. Each physician was required to visit 64 class rooms or kindergartens a week.

It could hardly be otherwise than that the marked success of the Brussels work, closely watched by European physicians and sanitarians, should stimulate these and publicists generally to undertake similar work in their own cities and countries. It is an interesting and impressive fact that, between 1874 and 1880, nearly every country in Europe either revised its regulations in regard to the hygienic and medical inspection of schools or formulated new ones.

It would be very interesting to take up and consider the various movements in this direction in Europe, but time and space do not permit. Some of them date back to a very early period of the nineteenth century; some were purely hygienic, a few also medical; but the Brussels movement was the first that was complete and systematic. It will be noticed that the scope of the work in that city was very comprehensive, much more so than will be popularly demanded in this country, perhaps, for a long time. And yet the conditions in that city, and in the large cities of Europe generally, seem to justify such comprehensive work; perhaps our own large cities will eventually arrive at the same desirability.

The hygienic inspection of schools in France dates back to about the year 1836, when, according to De Heredia, the first attempt at a medical service was made in the schools of Paris. These attempts were renewed in 1842, 1843, and 1855, but the service was never regular.⁷

Delvaille⁸ also states that in 1836 a medical service was organized for the municipal schools of

Paris; it required a visit at least once a month by the physician in charge of the service. After some time the regulation fell into desuetude. The law of 1855 provided also for the inspection of asylums, but in many cases the work was only nominal.

At a meeting of the General Council of the Department of the Seine, April 25, 1879, it was decided to begin the medical inspection of communal schools and asylums on July 1, 1879, with 114 physician-inspectors, who should make two visits a month, and should visit also in case of emergency. There was much division of opinion upon the question as to the frequency of visits, and it is interesting to note that Delpech favored a *daily* visit.⁹

Dr. Mangenot, medical inspector of educational institutions of Paris,¹⁰ states that the Seine was the first Department, and Paris the first city, of France to introduce the sanitary inspection of schools, under the prefectural order of June 13, 1879. A similar order of October 15th established inspection for Lyon. In both these cities the service was independent of the city hygienic service. In Havre the service began June 24, 1879, Saint-Étienne, January 31, 1881, Reims, April 1, 1882, and Amiens April 22, 1884, under control of the city bureau of hygiene.

Dr. Mangenot also states that in some departments of France there had been some sort of hygienic inspection of schools for many years; in Meurthe and Moselle since April 25, 1855, more completely since October 18, 1876; in Hautes Alpes since June 1, 1856; in Basses Alpes since December 24, 1857; that on November 14, 1879, the French minister of public instruction issued a circular to the prefects of all the departments of France, directing that inspection should include both the hygienic conditions and the health of the pupils. But, as no provision was made for the necessary expense, in most of the departments nothing was done. In ten departments only¹¹ was regular inspection made, and this was because in these there was a Service d'assistance publique.

Mangenot, in 1886, published a concise statement of the attitude of European governments, other than France, on the question of sanitary and medical inspection of schools.¹²

In England there was sanitary inspection of schoolhouses, but not of scholars; there were physicians attached to private schools. In Germany there was no hygienic or medical inspection of schools of a permanent character, but in some places, Saxony, Bavaria, Württemberg, and Baden, there were physicians authorized to visit from time to time the primary schools, gymnasiums, profes-

⁶*Progrès médical*, loc. cit.

⁷*Revue d'hygiène*, Paris, 1887, ix, pp. 280-314.

⁸These were Drôme, Cher, Basses and Hautes Alpes, Gironde, Herault, Loiret, Meurthe et Moselle, Meuse, and Vosges.

⁹*Revue d'hygiène*, etc., viii, 1886, p. 939, et seq.

⁶*Scalpel*, Liege, 1881-2, xxxiv, p. 251.

⁷*Progrès médical*, Paris, 1879, vii, p. 350.

⁸*Gazette médicale de Paris*, 1880, ii, p. 17.

sional schools, and seminaries, and to ascertain their hygienic conditions.

In Belgium there was both hygienic and medical examination of schools at Brussels, Anvers, Liège, and Lausanne, in each of which was a bureau of hygiene. In Denmark each school was visited once a month at least. In Copenhagen there were separate physicians for this purpose; in the province the work was done by the district municipal physicians.

In Roumania the law of June 8, 1874, authorized hygienic inspection of all primary and secondary schools. The inspection was exercised at Bucharest for many years; the city was divided into nine parts with one physician to each part. By article 65, law of 1874, the duties of school physicians in Russia were to care for the pupils. At St. Petersburg there was medical inspection of primary schools by five women physicians; in 1884 the number of physicians was increased to twenty-five. Servia had a very complete sanitary organization. Physicians were appointed for districts and had sanitary charge of the schools. In Hungary, by the law of 1876, article 27, the primary schools were hygienically under control of sanitary commissions.

In Switzerland, the canton of Geneva had a medical inspection of primary schools, with two visits a year; in the canton of Lausanne there was a careful medical inspection of schools. In Sweden, since 1840, there had been special physicians charged with the care of the poor pupils. The law of 1863 required periodical examination of the pupils. The law of 1878 attached one physician to each lyceum. In Norway there was no medical inspection of schools.

In Italy there was no physician charged especially with the hygienic and medical inspection of schools. In Turin there were physicians of the bureau of hygiene and bureau of bienfaisance who were obliged to visit the schools. In Portugal, the hygienic inspection of schools was ordered by a law of December 3, 1868. At Lisbon a physician was appointed by the bureau of hygiene who was charged with the inspection of schools once a month. In Greece the school inspection was entirely hygienic; in Holland also it was hygienic. In the Argentine Republic there was medical inspection of schools and scholars.

Time and opportunity have not permitted me to inquire into the present status of the question abroad. The movement has spread to Japan. Conditions have slowly and steadily improved and, within the last three years, some of the European governments have considered the complete adoption of the Brussels, or rather the American, plan, in view of the satisfactory results of the movement in Boston, New York, and Chicago.¹³

(To be continued.)

¹³*Philadelphia Medical Journal*, 1898, i, p. 623.

THE OUTBREAK OF TETANUS IN ST. LOUIS.

Last week we published a dispatch from Dr. Starkloff, the Health Commissioner of St. Louis, giving a brief statement of the main facts. We have since received from him the following account of the outbreak of tetanus, apparently caused by antidiphtheritic serum:

ST. LOUIS, Mo., November 6, 1901.

Editor of New York Medical Journal, New York City:

DEAR SIR: In response to your telegram of this date, asking for information in regard to the trouble we are having with tetanus following the injection of diphtheria antitoxine furnished by the Health Department, I take pleasure in making a statement of the facts in the case.

On the afternoon of October 26th I received a communication from a physician saying that he had under his observation two cases of tetanus which were undoubtedly caused by the diphtheria antitoxine furnished by the Health Department. I immediately ordered that the distribution of antitoxine be at once discontinued, and addressed a letter to Dr. Amand Ravold, our consulting bacteriologist, by whom our antitoxine is made, asking for information in regard to the production of antitoxine. I enclose a copy of his reply to me.

Following the reports of death from tetanus claimed to have been produced by the antitoxine, I had a conference with Dr. R. M. Funkhouser, coroner, and an investigation was begun. Also a commission of expert pathologists, consisting of Dr. B. Meade Bolten, Dr. E. C. Walden, and Dr. Carl Fisch, were appointed to make autopsies and examine the serum, a few bottles of which were found in the possession of several physicians.

Up to the present date, as far as I have ascertained, there have been twenty cases of tetanus reported, following the use of our serum, with ten deaths. I feel confident that no further cases will occur, as that lot of diphtheria antitoxine labeled August 24th ran out on October 23d, and the last dose of it was injected on October 24th. Yours respectfully,

(Signed) MAX C. STARKLOFF,
Health Commissioner.

THE CITY BACTERIOLOGIST'S REPORT.

ST. LOUIS, October 30, 1901.

Dr. Max C. Starkloff, Health Commissioner:

DEAR SIR: I wish to acknowledge receipt of your communication asking for information in regard to the city antitoxine, which was distributed during the months of September and October and labeled "August 24, 19001, 1,500 Units," and, further, of our method of preparing diphtheria antitoxine.

The horse from which the antitoxic serum labeled August 24, 1901, was taken, was quartered at the poor-house stables. He was a bay horse, 16 hands high, weighed over 1,600 pounds, and named Jim. Originally, he was an ambulance horse, had been in-

jured in the shoulder, and was turned over to me by Dr. Jordan, chief dispensary physician, in 1898. He has been under treatment for the production of diphtheria antitoxine for nearly three years, has been bled a number of times, and has furnished over 30,000 cubic centimetres (thirty quarts) of diphtheritic antitoxine. In fact, the greater part of the antitoxine distributed by the Health Department during the years 1900 and 1901 came from this horse.

On August 10th he was inoculated with 800 cubic centimetres of diphtheria toxine of a strength of 0.02. August 24th, I bled him, taking 10,000 cubic centimetres (ten quarts) of blood. (The blood was kept in an ice chest three hundred yards from the stable.) From this blood we obtained 2,400 cubic centimetres of serum, which was brought in from the poor-house August 28th and 30th. I personally added 0.4 per cent. tricresol to the serum, allowed it to stand for twenty-four hours, drew off 10 cubic centimetres, and tested it on six guinea-pigs to ascertain its antitoxic value. It was found to contain between 150 and 200 units to the cubic centimetre, and was labeled 1,500 units to 10 cubic centimetres. None of these guinea-pigs died, either of diphtheria or tetanus, although the 200-unit pigs were sick for several days. It was bottled about September 10th, and the distribution began. From that date until October 26th, no other serum was given out to physicians.

From October 23d to 26th we ran out of serum. On October 18th, Mr. Taylor called my attention to the fact that our serum was running low and that an unusual demand was being made for it. I gave instructions that not more than one bottle be given to any applicant until a new lot of serum could be obtained.

On September 22d I again injected Jim with 300 cubic centimetres of strong diphtheria toxine, and on September 30th bled him, taking 8,000 units of blood. On October 2d I was notified by telephone that Jim was sick, and Dr. Ellis, veterinarian of the Health Department, was sent out to see him. He pronounced the horse sick with tetanus and ordered him killed. The serum from the horse was sent to the City Chemist's laboratory October 8th or 9th, while I was in Chicago; tricresol was put in it by my assistant, Mr. Martin Schmidt. Upon my return, October 11th, Mr. Taylor brought two flasks containing antitoxine, and said that it came from the poor-house while I was away. It was the serum from the dead horse. I emptied one flask and Mr. Taylor the other into the laboratory sink. On October 26th, we received information from Dr. Jordan that a case of tetanus was said to have been caused by the city antitoxine.

A search was made for some of the August 24th serum. Two bottles were found in the City Dispensary on Sunday, October 27th, and turned over to Mr. C. A. Snodgras to search for the bacillus of tetanus. He will report to you when his investigation is completed.

A bottle of serum is in the possession of Dr. Johnson, of the dispensary staff, and one in your possession. I earnestly advise that one of the bottles of serum be given to Dr. E. C. Walden and the other to Dr. Meade Bolten, of this city, to ascertain whether or not the serum contains the bacillus of

tetanus or the toxine of tetanus. Both are bacteriologists and thoroughly reliable men.

PREPARATION OF ANTITOXINE.—Our antitoxine is prepared as follows: For obtaining the diphtheria toxine, we inoculated a specially prepared broth with *Bacillus diphtheriæ* No. 8 of Park, and grew it in an incubator at 37° C. for from eight to ten days. At the end of that time it is taken from the incubator; 0.4 per cent. of tricresol is added to it, and after standing for twenty-four hours it is filtered through a porcelain filter. Small quantities are injected into guinea-pigs, in order to ascertain its toxic potency. If the toxine proves highly virulent, it is injected into horses in gradually increasing doses.

Strong, healthy horses are selected, free from glanders and tuberculosis; about once every ten days increasing quantities of toxine are injected subcutaneously into them, the site of the injection being the side of the neck or the loose tissue behind the shoulder blade. Here the hair is clipped short and the hide first washed with soap and water and then soaked with a powerful disinfectant, consisting of a five-per-cent. carbolic-acid solution containing 1 to 1,000 corrosive sublimate and 0.5 per cent. of hydrochloric acid. The injection is made with a sterile syringe. When the horse can be given large quantities of diphtheria toxine without producing decided elevation of temperature or other disturbances of health, he is ready to bleed. Our method is to shave a wide area along the side of the neck over the jugular vein; this area is thoroughly disinfected with the acid (carbolic-acid solution mentioned above), and with a sterile knife an incision is made through the skin over the vein. A sterile sharp-pointed cannula, with a rubber tube attached to it, is thrust through the incision into the vein beneath, and the blood flows through the tube into specially constructed flasks, which have been steam-sterilized. The wound in the skin is stitched up and flexible collodion painted over it.

The blood, put in an ice-chest, is allowed to clot, and when the serum separates, which takes several days, it is poured off and to it is added 0.4 per cent. of tricresol. After standing several days to "ripen," it is filtered through a sterile paper filter, and the filtered serum is mixed in definite quantities with ten times a minimal lethal dose of diphtheria toxine. The mixture is injected into guinea-pigs weighing 300 grammes, to ascertain the quantity of serum which will keep the guinea-pig from dying; ten times that amount of serum is an antitoxic unit. The number of antitoxic units in one cubic centimetre is then calculated and the serum labeled. Upon the label are written the day of bleeding and the number of units to 10 cubic centimetres of antitoxine.

Before distribution, the serum is again filtered and put into small sterile bottles, each containing 10 cubic centimetres of serum and corked with a sterile cork stopper. A label upon it bears the date of the bleeding and the number of antitoxic units in the bottle.

I go to this length in explaining our methods to show the rigid aseptic precautions with which the whole procedure is surrounded. In regard to myself, I have personally selected every horse from which we have made antitoxine. I have given every injection which the horses have received since

the beginning of the work. I have bled the horses throughout the whole period of the investigation, and, further, I have with very few exceptions tested every lot of serum which has left the laboratory.

Feeling keenly the very great responsibility which has rested upon me, I have been painstaking in my endeavors to produce a high grade of antitoxic serum and have trusted no part of the procedure to anybody, except the preparation of the diphtheria broth, which my assistant, Mr. Martin Schmidt, skilfully makes for me, and the filling of the small bottles with serum, which is the work of our careful janitor, Henry Taylor.

The horse Jim seemed to be in perfect physical condition when I bled him on August 24th and September 30th. The bleeding on September 30th was followed by a decided reaction; on the following days he refused food and began breathing with difficulty. Dr. Ellis pronounced him sick beyond recovery, with tetanus, and he was killed.

I feel confident that the tetanus bacillus will not be found in the serum, both from the painstaking care with which it is prepared and from the fact that it contains 0.4 per cent. of tricresol. It is, however, within the limit of probabilities that the horse may have had the tetanus bacillus latent, or slowly acting within him, some time before August 24th, and that the disease did not develop sufficiently to manifest itself until his vitality was lowered by the bleeding of September 30th. If this were so, the tetanus toxine might have been in his blood on August 24th, the date of the bleeding. If the tetanus toxine was in the horse's blood prior to August 24th, it was beyond the range of human knowledge to detect it by an inspection of the animal.

It is a well-known fact that horses undergoing treatment for the production of diphtheria antitoxine are highly susceptible to infection with the bacillus of tetanus. We have lost six antitoxine horses with tetanus since 1895. Very respectfully,

(Signed) AMAND RAVOLD,
City Bacteriologist.

Therapeutical Notes.

The Treatment of Alopecia Areata.—Sabouraud (*Journal des praticiens*, October 12th) recommends shaving, followed by frictions with a medium toothbrush moistened with the following:

℞ Bichloride of mercury..... 3 grains;
Crystallized acetic acid..... 30 “
Alcohol..... 5 ounces;
Ether (official)..... 1 ounce;
Coal-tar soap..... 1 “
Salol..... 7½ grains.

M.

In case of increased activity at any point, touch with a pledget of cotton moistened with:

℞ Crystallized acetic acid..... 11 grains;
Chloral hydrate..... 75 “
Ether (official)..... 1 ounce.

Basham's Mixture for Urinary Troubles.—The *Clinical Review* for October says that an old, time-tried tonic in urinary affections, particularly in de-

generative conditions of the kidneys, is “Basham's Mixture.” The virtues of this preparation were extolled in lecture rooms quite half a century ago, and the same is said to-day. In its particular field of usefulness it has well stood the test of time. Its composition is:

℞ Tincture of perchloride of iron... 3 drachms;
Dilute acetic acid..... 1½ drachm;
Syrup..... ½ an ounce;
Solution of acetate of ammonia,
enough to make 4 ounces.

M.

One dessertspoonful every three or four hours.

The Administration of Quinine to Children.—The following prescriptions are cited by the *Revue médicale* for October 9th from an analytical article by Dr. Lemanski in the *Bulletin de l'hôpital du Tunis*.

Petzold gives quinine in honey dissolved in acidulated water:

℞ Quinine sulphate..... 10 grains;
Acidulated water..... 75 minims;
White honey..... 600 grains.

M.

A coffeespoonful every two or three hours.
Crépu's prescription:

℞ Distilled water..... 600 minims;
Extract of licorice..... 45 grains;
Quinine hydrochloride..... 4½ grains.

M.

A child usually makes no difficulty in swallowing the whole of this at one time.

A recent number of the *Klinische therapeutische Wochenschrift* gave the following:

℞ Quinine sulphate..... 60 grains;
Citric acid, } of each. 150 “
Syrup, }
Syrup of bitter orange peel, }
Distilled water..... 300 minims.

M.

Ten drops of this mixture are given in an ounce and a half of water, to which are added forty-five grains of sodium bicarbonate. The mixture is drunk while effervescing.

Saccharine may also be used advantageously to mask the taste of quinine.

Dr. Lemanski, himself, prefers the rectal method of administration. The suppository is better tolerated than the enema and causes no smarting or defecation.

℞ Quinine salt..... from 1½ to 7½ grains
(according to age);

Cacao butter..... from 15 to 45 grains;
Virgin wax..... q. s.

M. ft. suppositorium.

In some cases cacao butter may be replaced by glycerin solidified by the addition of gelatin. Two suppositories daily are to be inserted without regard to the thermometrical exacerbation, the object being to saturate the economy with the drug for a sufficiently long time to combat the paludism.

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NEW YORK, SATURDAY, NOVEMBER 16, 1901.

THE DIPHTHERIA-ANTITOXINE TETANUS IN
ST. LOUIS.

Last week we published a telegraphic dispatch giving in a general way the facts connected with the unfortunate occurrence of a considerable number of cases of tetanus in St. Louis in consequence of the use of antidiphtheritic serum furnished to physicians by the city health department, and we commented briefly on the sad event. We are now able to lay before our readers a fuller account, including the report of Dr. Ravold, who made the antitoxine. It seems that twenty cases of tetanus have occurred. As to the number of deaths, the accounts differ. Dr. Starkloff says there have been ten, but press dispatches of later date than that of his statement say, some eleven and others twelve. Even if we assume that the largest number mentioned is correct, the mortality, we are glad to be able to say, is astonishingly low, and perhaps we may infer from that fact that tetanus resulting from methodical, though unintentional, inoculation is less dangerous than the same disease contracted casually, just as small-pox was long ago shown to be.

The contaminated serum was taken from the horse "Jim" on August 24th, and "Jim" showed no signs of tetanus until October 1st (the day after he had again been bled). Dr. Ravold says that it is "within the limit of probabilities that the horse may have had the tetanus bacillus latent, or slowly acting within him, some time before August 24th, and that the disease did not develop sufficiently to manifest itself until his vitality was lowered by the bleeding of Septem-

ber 30th." By "probabilities" Dr. Ravold may mean *possibilities*, but, even with that interpretation, we cannot agree with him. Serum taken from a horse in the condition supposed might contain the toxine of tetanus, but not the micro-organism of that disease. The amount used on the human subject would be so small that the toxine would have practically no effect, for, in the absence of the micro-organism, it could not go on reproducing itself; moreover, what little effect it might exert would be manifested almost immediately, certainly within twenty-four hours.

It is our opinion that the condition of the horse "Jim" had nothing whatever to do with the lamentable occurrences that followed the use of his serum; it was probably contaminated in the process of bottling, as in the similar occurrences that happened in Italy about a year ago, and in the possibility of such contamination lies one of the objections to the municipal manufacture of drugs; a far graver objection, we must say, much as we deplore the loss of precious lives that has occurred in this instance, attaches to the use of public money in competition with private capital. An individual producer with a reputation to maintain knows that he cannot afford to relax his precautions to the minutest degree, and the same is true of a commercial house, but a municipal board is so intangible that it can hardly be held to strict account for imperfections in its products. While we are pained to think of the deaths that have occurred by misadventure in St. Louis, they furnish an additional argument against appropriations to cover the expense of producing vaccine, antitoxine, or any other remedial or prophylactic agent to be sold in competition with the products of private enterprise. We are not blaming anybody connected with the St. Louis Health Department; the department has simply met with a check that was almost sure to come sooner or later. We are all proud of the medical officers of the health departments of our great cities, but they may not be the same to-morrow that they are to-day—in other words, they have no permanent personal responsibility.

In the manufacture of antitoxine by commercial houses, the danger of infection of the horses is guarded against by keeping them constantly immun-

ized against tetanus by means of the injections of antitetanic serum, while the danger, which is slight, of the presence of any unchanged diphtheritic toxin is guarded against by check injections of guinea-pigs made before the serum is drawn from the horse for bottling. A further test is made of the serum immediately before its final bottling. It will thus be seen that the danger of contamination with the tetanus germ or any other bacteria is very slight indeed in the process as usually conducted by commercial houses.

Finally, we would say, since this most unfortunate accident is likely to create a certain amount of prejudice in the public mind against the use of diphtheria antitoxine, that it behooves the medical profession to earnestly strive against the growth of any such prejudice. Diphtheria antitoxine is one of the most valuable specific therapeutic agents at our command. There will always be a certain amount of risk that, through carelessness in manipulation or from other causes, the serum may become contaminated, but this risk is so small as compared with the positive and widespread benefits accruing from the use of diphtheria antitoxine that it may, so far as the general practice of administering antitoxine is concerned, be considered a negligible quantity.

SKIN DISEASES AND SOCIETY.

In many other ways than by the investigation and management of individual cases of disease are physicians of service to the community. One of them has been felicitously brought forward by Mr. Malcolm Morris in his Lane Lectures, the publication of which we complete in this issue of the *Journal*. It is undeniable that most persons of refinement are apt to entertain a certain repugnance toward the unfortunate sufferer with almost any skin disease. Perhaps the feeling has its origin in the fact of the parasitic nature of certain diseases of the integument, making them, to the unreflecting, appear to be attributable to uncleanness—in fact, as some would put it, and without any thought of metonymy, to lousiness; or possibly it has been handed down from the times when leprosy was common, with its hideous cutaneous manifestations, rendering its victims “unclean,” and is reinforced by the knowledge that many diseases of the integument are due to syphilis and therefore are the emblems of immorality. The feeling is, of course, most unjust, and is

admitted to be so by many persons who, nevertheless, cherish it. The medical man's training leads him to surmount it, and he feels it his duty to convert the general public to his own way of thinking. But he usually finds great difficulty in accomplishing the conversion of an individual layman, to say nothing of the community. In so laudable an undertaking he will, we feel sure, find his hands materially strengthened by Mr. Morris's manner of dealing with the subject, and to that gentleman will be due the gratitude of many a poor sufferer whose ailment would, but for his exposition, still go on debarring him from suitable employment and from the social intercourse that is his right.

It is proper, of course, that a person affected with a contagious skin disease should be required to recognize his duty to society by taking all possible precautions to guard against the spread of the contagion; perhaps he should for the time being be made to relinquish an occupation that involves special danger of communicating his disease to others, or be refused temporarily an opportunity to engage in such a vocation. But to brand a man as a drunkard simply because he has “toddy-blossoms,” no matter how aggravated the case may be, is an act of inhumanity, for marked rosacea is not uncommon in total abstainers. Then, too, the frequency with which syphilis insontium is observed forbids the casting of a slur on the moral character of the bearer of a syphilide without further evidence against him. In short, if a man is equal to the duties of his office, his mere appearance should not be allowed to count against him, provided his continuance in the office does not entail manifest danger of disseminating contagious disease.

THE LANE LECTURES.

In another article in this issue mention is made of one of the great services which we think Mr. Malcolm Morris has rendered in his recent course of Lane Lectures. We now wish to say something concerning such courses of lectures in general. We mean courses or single lectures that are no part of any curriculum, but, nevertheless, are important means of disseminating information. In Great Britain such lectures, provided for by endowments, have long been a conspicuous element in the diffusion of knowledge and in awakening general interest in subjects that might otherwise have remained

obscure and neglected, save among a few special investigators. With us it is only during the last few years that they have been prominent, but they are multiplying most hopefully. The Mütter Lectures, the Cartwright Lectures, the Toner Lectures, and some others that might be mentioned, have undeniably stimulated appreciation of the importance of such courses, besides fulfilling the direct purposes for which they were established; and so, too, have the Lane Lectures, and our California brethren may well feel proud that the Cooper Medical College has been enabled to take such a creditable part in a work of this character. We hope to see these formal annual courses provided for in all large American cities in which as yet they have no existence, and multiplied in places where they have already been instituted.

Naturally, it is for the most part out-of-the-way subjects that the lecturers are fond of choosing, and this fact is of no disadvantage; things that we are continually running up against are sure to be treated of with sufficient minuteness in the text-books, in the journals, and in the college courses, but who can say how great may some day be an individual's need of full information concerning a matter that is not so handled? All knowledge is useful, and any bit of accurate information may prove of great value in an emergency. Even speculative theorizing is not worthless, provided it is conducted on reasonable lines. Of singular usefulness to his professional brethren is the man who can collect stray pieces of knowledge and weld inferences from them together into a satisfactory working theory or a serviceable rule of action, even if the theory or the rule proves short-lived. In saying this it is no part of our intention to intimate that such lectures as we are speaking of are apt to be other than solid and practical, for the contrary is obviously the case, and Mr. Morris's Lane Lectures may be pointed to as brilliant examples of the fact. From first to last, they are steadily interesting, and there is much more in them than the charm of the author's style, which in itself is well worthy of mention; they are well calculated to fix in the memory many a fact that figures in our recollection of text-books as no more substantial than a nebula. Again we congratulate the Cooper Medical College and pay homage to the founder of the Lane Lectures.

THE ISOLATION OF TUBERCULOUS RAILROAD PASSENGERS.

The Travelers' Protective Association has asked the Western railroads to provide separate accommodations for consumptives on trains. The matter has been taken under advisement, but it is difficult to see how any practicable working scheme is to be formulated in the absence of a universal law compelling the notification of tuberculosis. Who is to pick out the consumptives? It could not be done on the trains, and even if it could, while those who are obviously invalids might be easily detected, the number of consumptives in good traveling condition and apparently tolerable health would be left unmolested, unless every individual on the train was examined. Presumably, every prospective railway passenger would have to undergo a medical examination on applying for a ticket; which, as Euclid would say, is absurd. Take vigorous measures to stop expectoration on the floors of the cars and have them well kept, cleansed, and above all "aired," in place of having them the culture chambers they usually are at present, and that is about as much as can be accomplished.

TETANUS SAID TO BE DUE TO VACCINATION.

Following closely on the occurrence of tetanus consequent on antitoxine treatment for diphtheria, at St. Louis, an authentic report of which appears in another column in the *Journal*, comes an account from Camden, N. J., of cases of tetanus following on vaccination. One patient is said to have died and five or six more are said to be in a critical condition. No more persons are to be vaccinated in the city until a thorough examination has been made, and it is known definitely whether there is actually any connection between the lockjaw and the vaccinations. We have already commented, in an editorial, on the general bearings of such cases.

THE FAILURE OF AN AD CAPTANDUM APPEAL TO A JUROR.

At the recent trial in Toronto of a man charged with manslaughter by failing to call in a physician in the case of his child who was suffering from diphtheria and died of that disease, as we learn from the *Globe* of November 6th, the counsel for the defense, besides going out of his way to abuse the medical profession, likened the prosecution of the prisoner, "because of his belief," he being a Christian Scientist, to the persecution of the Mennonites in former days. Apparently this was done to influence a Mennonite who happened to be on the jury, but it failed of its effect, for the jury promptly returned a verdict of guilty.

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general, during the week ending November 9, 1901:

Smallpox—United States.

Illinois.....	Peoria.....	Oct. 1-31.....	6 cases.	
".....	Springfield.....	Oct. 2-Nov. 2.....	26 cases.	
Iowa.....	Ottumwa.....	Sept. 28-Nov. 2.....	31 cases.	
Kansas.....	Wichita.....	Oct. 19-26.....	3 cases.	
Kentucky.....	Lexington.....	Oct. 25-Nov. 2.....		3 deaths.
Louisiana.....	New Orleans.....	Oct. 25-Nov. 2.....	7 cases.	
Massachusetts.....	Boston.....	Oct. 19-Nov. 2.....	22 cases.	2 deaths.
".....	Newton.....	Oct. 19-26.....	2 cases.	
Michigan.....	Detroit.....	Oct. 19-Nov. 2.....	2 cases.	
Nebraska.....	Omaha.....	Oct. 19-Nov. 2.....	14 cases.	
".....	So. Omaha.....	Oct. 17-24.....	6 cases.	
New Jersey.....	Camden.....	Oct. 19-26.....	5 cases.	1 death.
New York.....	Elmira.....	Oct. 26-Nov. 2.....	1 case.	
".....	New York.....	Oct. 26-Nov. 2.....	5 cases.	4 deaths.
Ohio.....	Youngstown.....	Oct. 12-19.....	2 cases.	
Pennsylvania.....	Lebanon City.....	Oct. 18-25.....	1 case.	
".....	Lebanon.....	Nov. 2.....	2 cases.	
".....	Norristown.....	Oct. 26-Nov. 2.....	7 cases.	1 death.
".....	Philadelphia.....	Oct. 19-Nov. 2.....	11 cases.	22 deaths.
".....	Pittsburgh.....	Oct. 26-Nov. 2.....	6 cases.	
Vermont.....	Burlington.....	Oct. 26-Nov. 2.....	3 cases.	

Smallpox—Foreign.

Austria.....	Prague.....	Oct. 6-19.....	6 cases.	
Belgium.....	Antwerp.....	Oct. 6-12.....	2 cases.	1 death.
Canada.....	Halifax.....	Oct. 19-Nov. 2.....	13 cases.	
".....	Quebec.....	Oct. 26-Nov. 2.....	41 cases.	
".....	Winnipeg.....	Oct. 26-Nov. 2.....	1 case.	
Colombia.....	Panama.....	Oct. 20-28.....	300 cases.	
France.....	Paris.....	Oct. 12-19.....		3 deaths.
Gt. Britain.....	Liverpool.....	Oct. 12-19.....	1 case.	
".....	London.....	Oct. 12-19.....	172 cases.	12 deaths.
Russia.....	Moscow.....	Oct. 5-12.....	3 cases.	1 death.
".....	Odessa.....	Oct. 12-19.....	3 cases.	
".....	Warsaw.....	Oct. 7-14.....	3 cases.	
Uruguay.....	Montevideo.....	Aug. 24-Sept. 14.....	75 cases.	11 deaths.

Yellow Fever.

Colombia.....	Bocas del Toro.....	Oct. 15-23.....	2 cases.	
Mexico.....	Vera Cruz.....	Oct. 19-26.....	17 cases.	2 deaths.

Cholera.

India.....	Bombay.....	Oct. 1-8.....		3 deaths.
".....	Calcutta.....	Sept. 28-Oct. 5.....		3 deaths.

Plague—United States.

California....	San Francisco.....	Oct. 20-30.....	1 case.	1 death.
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Plague—Insular.

Philippines...	Manila.....	Sept. 7-21.....	5 cases.	3 deaths.
".....	Taguig.....	Sept. 7-14.....		1 death.

Plague—Foreign.

Gt. Britain...	Glasgow.....	Nov. 1.....	4 cases.	
".....	Liverpool.....	Oct. 30.....	Several cases.	2 deaths.
India.....	Bombay.....	Oct. 1-8.....		174 deaths.
".....	Calcutta.....	Sept. 22-Oct. 5.....		19 deaths.
Turkey.....	Samsoun.....	Oct. 1.....	9 cases.	1 death.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending November 9, 1901:

DISEASES.	Week end'g Nov. 2		Week end'g Nov. 9	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	57	20	60	20
Scarlet fever.....	153	6	141	8
Cerebro-spinal meningitis.....	0	4	0	0
Measles.....	152	4	172	3
Diphtheria and croup.....	226	29	257	44
Small-pox.....	5	4	10	1
Tuberculosis.....	245	134	264	141

Society Meetings for the Coming Week:

MONDAY, November 18th.—New York Academy of Medicine (Section in Ophthalmology and Otology); New York County Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

TUESDAY, November 19th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, November 20th.—Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark).

THURSDAY, November 21st.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, November 22d.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, November 23d.—New York Medical and Surgical Society (private).

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending November 9, 1901:

BACHE, DALLAS, Colonel and Assistant Surgeon-General, will proceed to his home, Los Angeles, California, to await retirement from active service.

BLOOMBERGH, HORACE D., First Lieutenant and Assistant Surgeon, will proceed to Fort Bayard, New Mexico, and report to the commanding officer of the United States General Hospital for duty.

CRAIG, GEORGE G., Contract Surgeon, will report to the commanding officer of the Rock Island, Illinois, Arsenal, for duty.

GOSMAN, GEORGE H. R., First Lieutenant and Assistant Surgeon, is detailed as a member of the examining board convened at the United States Military Academy, West Point, vice FRANKLIN M. KEMP, Captain, relieved.

GREENLEAF, HENRY S., First Lieutenant and Assistant Surgeon, is detailed as a member of the examining board convened at the Presidio of San Francisco, vice JOHN A. MURTAGH, First Lieutenant and Assistant Surgeon, relieved.

JOHNSTONE, ERNEST K., Major and Surgeon, United States Volunteers, having tendered his resignation, is honorably discharged, to take effect November 2, 1901.

LYON, PALMER H., Captain and Assistant Surgeon, will proceed to Fort Hamilton, N. Y., and relieve EDWIN P. WOLFE, First Lieutenant and Assistant Surgeon, who will proceed to Fort Bliss, Texas, and report to the commanding officer for duty.

MILLHOF, CLARENCE B., First Lieutenant and Assistant Surgeon. His resignation has been accepted by the president.

MUNSON, EDWARD L., Captain and Assistant Surgeon, is detailed for duty as assistant professor of hygiene at the Army Medical School, New York City.

PAGE, HENRY, First Lieutenant and Assistant Surgeon, is granted leave of absence for one month.

SEIBERT, EDWARD G., Contract Surgeon, will report in person to EDWARD C. CARTER, Major and Surgeon, Washington.

SMITH, HERBERT M., First Lieutenant and Assistant Surgeon, will proceed to Fort Leavenworth, Kansas, and report for duty.

STARK, ALEXANDER N., Captain and Assistant Surgeon, will rejoin his proper station at Fort McHenry, Maryland.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ended November 9, 1901:

ANDERSON, F., Surgeon. Detached from the Naval Dispensary, Washington, and ordered to the *Alabama*, as relief of E. H. GREEN, Surgeon.

AYERS, J. G., Medical Director. Retired from active service by operation of law, under the provisions of Section 1444, Revised Statutes, November 3, 1901, upon which date he will have reached the age of sixty-two years; with rank and three-fourths the sea pay of the next higher grade, under the provisions of Section 11, Navy personnel law.

YOUNG, R. M., Assistant Surgeon. Detached from the *Columbia* and ordered to the *Constellation* for temporary duty.

The Montefiore Home.—Dr. Alfred Wiener has been appointed adjunct neurologist at this institution.

The St. Elmo Hospital, San Francisco, Cal.—The affairs of this institution are being investigated by the president of the State Board of Lunacy, owing to alleged irregularities.

The Richmond Academy of Medicine and Surgery.—At the last regular meeting, on Tuesday, November 12th, Dr. M. E. Nuckols opened the subject for discussion with a paper on Angina Pectoris.

Suspension of Medical Students.—Two students of the Rush Medical College, Chicago, have been suspended for rough practices in connection with a class rush between freshmen and sophomores, which took place recently in the corridors of the anatomy building.

No more Vaccine Points to be Distributed in St. Louis.—A notice has been issued at St. Louis, Mo., that henceforth no more vaccine points would be issued by the City Dispensary. This step was decided on, partly on financial grounds, and partly to avoid responsibility for vaccinations performed by private physicians.

The Medico-Legal Society.—At the next meeting, on Wednesday evening, the 20th inst., Dr. W. S. Magill will read a paper entitled Poisoning by Aconite (the Conden case) in Noting Physiological Analyses of Alkaloids. Appropriate action will be taken on the death of Simon Sterne, Esq., of the New York Bar, and other deceased members.

The St. Vincent's Hospital Burn Case.—A new trial has been ordered in the case of Helen D. Ward against St. Vincent's Hospital, in which a claim for damages is laid for injuries alleged to have been caused by a nurse who applied a hot bag to the patient while under an anæsthetic, causing severe burns. The present will make the third trial in the case.

The Craig Colony Prize Awarded.—At a meeting of the Board of Managers of Craig Colony, recently held at Sonyea, N. Y., the report of the Prize Committee, consisting of Dr. G. W. Jacoby, Dr. Pearce Bailey and Dr. Ira Van Gieson, was approved, and the prize of \$200 was awarded to Professor Carlo Ceni, of Pavia, Italy. The successful essay, the title of which is Serotherapy in Epilepsy, will shortly be published. The prize is again offered for universal competition.

A Proposed Convalescent Home for New York.—At the thirtieth annual meeting of St. John's Guild, the trustees decided to establish a convalescent hospital on the guild's property, at New Dorp, S. I. The hospital will be open all the year for the reception and treatment of women and children during convalescence.

Sufficient funds to build the hospital are not yet in the hands of the trustees, but tentative plans have been prepared and were illustrated by stereopticon views at the meeting. They call for fireproof buildings which will take the place of the present summer hospital. No serious difficulty in raising the money for the purpose is expected.

Vaccination and the Public Schools in Minneapolis.—Under the advice of its attorney, and also the city's legal representative, the Board of Education of Minneapolis has notified the Minneapolis Health Department that it will have to refuse to comply with the demand that all unvaccinated children be excluded from the Minneapolis public schools. The opinion furnished by the attorney was in substance that the board had no authority to exclude children from the public schools, neither had the health department such power. It was also held that there was no express authority for compulsory vaccination. The Minneapolis Board of Education has unanimously agreed to strike the rule of compulsory vaccination from its list.

The Appointment and Removal of Coroner's Physicians.—Dr. Hamilton Williams has obtained from Justice O'Gorman, in the Supreme Court, a writ of prohibition restraining Coroner Zucca from removing him from the office of coroner's physician. Coroner Zucca contended that he had the right, not only to try the charges preferred against Dr. Williams, but also to remove him at his pleasure, without assigning any cause for such action; but Justice O'Gorman says: "While the term of the relator was not expressly fixed by statute, yet, in view of Section 1769 of the Consolidation Act, it cannot be said that he holds office at the pleasure of the appointing power. The power of removal is expressly vested in the Board of Coroners, and not in an individual member thereof, even though he, in the first instance, made the appointment. The contention that the authority of the board to remove is confined to cases where the appointment has been made by the board is untenable. * * * The power of removal resides in the Board of Coroners alone, and can be exercised only for cause."

The Sanitary Visitation of Schoolhouses, Factories, etc., in Atlanta, Ga.—The following resolution was recently presented to the Atlanta Board of Health by Dr. E. H. Richardson:

"Resolved, That the health officer be required to visit every public schoolhouse in the city of Atlanta monthly, and to examine each teacher and pupil with the view of ascertaining the existence of cutaneous tubercular or other contagious or infectious diseases and to see that proper hygienic laws are enforced in said public institutions. Said teachers and pupils need not be ex-

amed by the health officer provided they present to him certificates of health and freedom from contagious diseases from a practising physician of well-recognized ability or a diagnostician.

"Resolved, That the health officer be required to visit the city stockade, station house and all factories and workshops of this city quarterly for the purpose of instituting and enforcing all sanitary measures necessary for the health and well-being of the inmates and employees of said establishments.

"Resolved, That the health officer shall at each regular meeting of this board submit a written detailed report of all business transacted by him, with number of visits made by him appertaining to his office, and the same shall be filed in the archives of this office."

A Women's Hospital at Manila has been opened recently, and is ready for the reception of patients. Miss Mary MacDonald, a graduate of Bellevue Hospital, who had a wide experience in military hospitals during the Spanish-American war, and has since seen conspicuous service in Manila, is the superintendent.

The founding of the hospital, which was a much-needed institution, was largely due to the generosity of Mrs. Whitelaw Reid, who expressed her willingness to give \$5,000 toward the founding of such an institution. A board of trustees was immediately named, consisting of prominent Manila officials and business men, and the work was put into immediate operation.

The present service is limited to fifteen beds, but on occasion increased accommodations could readily be obtained. The furnishing of the rooms and all the accessories are of the latest and most approved pattern. The operating room, which is thoroughly modern, was equipped through the generosity of Colonel Greenleaf, surgeon-general to the American army in the Philippines.

The superintendent, who also conducts the Training School for Nurses, is assisted by the following staff of graduate assistants: Miss Mary A. Welsh, from Grand Rapids Training School for Nurses; Miss Effie H. Wolfe, Illinois Training School; Miss Mary L. McCormick, Buffalo; Miss Louise M. Mount, Long Island College, and Miss Mary G. Barker, Roosevelt Hospital. Twelve of the leading physicians of Manila have been named as a consulting board.

An International Health Service, which has been so often and widely suggested, was discussed at the Pan-American Congress at the City of Mexico. Dr. Walter Wyman, supervising surgeon-general of the Marine-Hospital Service, has prepared a letter in English and Spanish containing his views for the organization of an international sanitation system, which has been distributed among the various delegates.

In a letter to Mr. Davis, chairman of the United States delegation, Dr. Wyman treats of the great mortality and financial distress resulting from yellow fever and other contagious diseases bred in cities where sanitary precautions are not taken. Then he speaks of the efficiency to be attained by a concentrated effort against

these diseases, which directly concern 25,000,000 people of the two American continents. He also calls attention to the practical value of the recent discoveries in regard to the conveyance of yellow fever. He suggests as measures to eliminate yellow fever from seaport cities or towns which have been epidemic habitats of yellow fever, or which are liable to become such by reason of their geographical locations or bad sanitary conditions, that harbors should receive sanitary improvements, that sewerage systems should be laid, the soil drained, the streets paved, and infection eliminated from buildings.

In connection with the enforcement of these measures, he proposes the election of an international sanitary commission, to consist of five members, no two of whom shall be residents or citizens of the same republic. They shall be appointed by the Bureau of American Republics, and serve one year, when they may be reappointed or new members appointed to succeed them. Of these five members one shall be a diplomat, one shall be learned in the law, one shall be a physician and sanitarian, one shall be a sanitary engineer, and one shall be a commercial representative. To these five members there shall be temporarily added two to represent the national government in whose domain the seaport city or town to be investigated or to be subjected to sanitary requirements is situated. These two members shall be appointed by the President of their republic, and shall serve only in their own republics. The salaries and traveling expenses of the seven commissioners shall be determined by and paid through the Bureau of American Republics, which shall also audit all accounts, and the said expenses shall be divided equally among the governments entering into this agreement.

The suggested duties of the international sanitary commission are:

"First—By an inquiry of a commercial and statistical character, to determine upon and prepare a list of the seaport cities or towns necessary to be visited, with a view to sanitary improvements, as heretofore stated. This will be done by the commission of five.

"Second—To visit said cities or towns in the order of greatest commercial necessity, and with the two additional commissioners, to make a thorough sanitary inspection of the port and city or town, and make a formal report upon the sanitary measures deemed necessary, keeping within the limits of this convention.

"Third—This report shall be in duplicate, signed by seven members of the commission. One copy shall without delay be transmitted to the President of the republic within whose domain the town or city inspected is located, and the other copy sent for file to the Bureau of American Republics."

The Students' Obstetrical Society of the Louisville Medical College was organized at Louisville, Ky., on October 31st. The following officers were elected: President, Dr. W. B. Gossett; vice-president, C. E. Ryan, of Montana; secretary, M. A. Gantt, of North Carolina; treasurer, W. F. Burnett, of California.

The Kansas State Physio-Medical Society has elected the following officers: President, Dr. A. D. Howell, of Bronson, Kan.; vice-president, Dr. M. W. Wilson, of Ellenwood, Kan.; secretary, Dr. F. P. Davis, of Kansas City, Kan.; treasurer, Dr. Du Vall, of Armourdale.

The Wayne County (Mich.) Medical Society, at its annual meeting, elected the following officers: President, Dr. Samuel Bell; vice-president, Dr. C. C. Yarbrough; secretary, Dr. Hugh Mulheron; treasurer, Dr. C. H. Leonard; directors, Dr. P. M. Campbell, Dr. W. J. Cree, Dr. G. G. Gordon, Dr. Nathan Jenks, and Dr. Wadsworth Warren.

The Alumni Association of the Internes of Christ Hospital, Jersey City, held their semi-annual dinner at the Union League Club, Jersey City, on the evening of October 21st. The following are the officers of the association: President, Dr. Henry Spence; vice-president, Dr. John C. Parsons; secretary and treasurer, Dr. Wallace Pyle.

The Southern Kentucky Medical Association, which met recently at Bowling Green, elected the following officers: President, Dr. E. N. Hall, of Woodburn; first vice-president, Dr. J. C. Douglas, of Franklin; second vice-president, Dr. W. L. Garrin, of Horse Cave; secretary, Dr. J. T. Trabue, of Elkton. Adairville was selected as the next place of meeting.

The Fulton County (Ill.) Medical Society, at its recent meeting, elected the following officers for the ensuing year: President, Dr. P. H. Stoores, of Ipava; first vice-president, Dr. W. M. Roberts, of Norris; second vice-president, Dr. W. S. Strode, of Lewistown; secretary, Dr. D. S. Ray, of Cuba; treasurer, Dr. F. M. Harrison, of Bryant; necrologist, Dr. P. S. Scholes, of Canton.

The University of Chicago Medical Society, an institution modeled after the medical society at Johns Hopkins University, completed its organization in Chicago on October 22d. Meetings will be held on the first and second Mondays of each month and membership is limited to the university faculties. One of the principal objects is to bring the workers in other lines of science into harmony with those working in medicine for their mutual benefit. Dr. H. H. Donaldson was elected president and Dr. Kyes secretary.

The Wyoming Medical Society has elected the following officers for the ensuing year: President, Dr. G. G. Verbryck, of Cambria; vice-president, Dr. T. F. Harrison, of Evanston; second vice-president, Dr. W. C. Burke, of Rock Springs; third vice-president, Dr. W. A. Wyman, of Cheyenne; secretary and editor, Dr. S. E. Solier, of Evanston; treasurer, Dr. J. L. Wickes, of Evanston; delegate to Inter-Mountain Association meeting, Dr. R. Harvey Reed, of Rock Springs; alternate, Dr. C. E. Levers, of Spring Valley. Cheyenne was selected as the next place of meeting.

The American Medical Association will hold its annual session at Saratoga, N. Y., in June, 1902, when it is expected that fully five thousand dele-

gates will be present from all parts of the United States. Dr. John A. Wyeth, of New York, the president, and Dr. George H. Simmons, of Chicago, the secretary of the association, visited Saratoga recently and completed arrangements for the convention. The convention hall, town hall, and other suitable places of assembly were secured for the accommodation of the association. Dr. Wyeth and Dr. Simmons were entertained at luncheon by Dr. George F. Comstock and other members of the Saratoga County Medical Association.

The Fifth District Branch of the New York State Medical Association will hold a special meeting at the Palatine Hotel, Newburgh, N. Y., on Wednesday afternoon, November 20th. Important papers will be presented by Dr. John P. Deaver, of Philadelphia, and Dr. Charles E. Quimby and Dr. William Rice Pryor, of New York. These papers will be followed by discussions. A large attendance of physicians is expected from among the members residing in the Fifth District Branch, which includes the counties of Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, and Westchester. For the accommodation of the physicians in Manhattan who wish to attend this meeting a special car will be attached to the 11.50 a. m. train on the West Shore Railroad, Weehawken Ferry. Luncheon will be served at Newburgh at 1.45 p. m. The meeting is called for 2.30 p. m. All physicians are cordially invited to be in attendance.

Births, Marriages, and Deaths.

Married.

BECKER—GORDON.—In Washington, on Thursday, October 31st, Dr. Arthur Edward Becker and Miss Ella Pearl Gordon.

CLARK—BENEDICT.—In Danbury, Connecticut, on Wednesday, November 6th, Dr. George Armon Clark and Miss Nellie Louise Benedict.

DOWLING—SEAVENS.—In Albany, on Wednesday, November 6th, Dr. Joseph T. Dowling and Miss Elizabeth Marshall Seaverns.

SHIRK—McDOUGALL.—In Sedalia, Missouri, on Wednesday, November 6th, Dr. William S. Shirk and Miss Mae McDougall.

Died.

BARBOT.—In Charleston, S. C., on Sunday, November 3, Louis, infant son of Dr. Louis D. Barbot.

DUNCAN.—In De Kalb, Illinois, on Thursday, November 7th, Dr. James C. Duncan.

FLYNN.—In Milwaukee, on Saturday, November 2d, Dr. James Lytton Flynn.

GRAMM.—In Philadelphia, on Saturday, November 2d, Dr. Gustavus E. Gramm.

MILLER.—In Paris, France, on Tuesday, October 29th, Dr. Faure Miller, in the sixtieth year of his age.

ORR.—In Mindanao, Philippine Islands, on Thursday, September 12th, Dr. John C. Orr, United States Army, in the thirty-second year of his age.

RIGGS.—In Pittsburg, on Saturday, November 2d, Dr. Edward E. Riggs, in the thirty-seventh year of his age.

SPALTER.—At Premium Point, New Rochelle, N. Y., on Thursday, November 7th, Dr. C. N. Spalter, in the twenty-eighth year of his age.

VAN VRANKEN.—In West Hempstead, N. Y., on Friday, November 1st, Dr. Garrett D. Van Vranken, in the sixtieth year of his age.

Pith of Current Literature.

American Medicine, November 9, 1901.

Trional Fatalities. By Dr. Archibald Church.—The facts adduced by the author appear to demonstrate that the claims for the non-toxic character of trional, as compared with sulphonal, need revision. Their intimate chemical relationship, their identical physiological action, and the similarity of the accidents following their use, would lead to the conclusion that they must, for all practical purposes, be considered as identical.

The Diagnosis and Treatment of Round Ulcer of the Stomach. By Dr. N. S. Davis, Jr.—It is difficult to distinguish some cases of round ulcer from gastralgia, especially from those cases of frequently recurring stomach pain in individuals in whom there is hyperchlorhydria. An excessive secretion of free hydrochloric acid and gastralgia are frequently manifestations of the same neurosis. In these latter cases the pain has not the constant, close relationship to eating that it has in round ulcers. Hæmorrhage never occurs in them. Tenderness is less constant and much less circumscribed, and there are usually numerous symptoms of a nervous origin. In the author's practice, if a patient comes under treatment at the time of the hæmorrhage, forty-eight hours of abstinence is directed, after which is prescribed milk diluted with lime water, in tablespoonful doses every three quarters of an hour. As a rule, the quantity can be rapidly increased to half a glassful, given at intervals of two hours. If the exclusive milk diet is begun in this way, it is but seldom that large curds form in the stomach. Milk preparations, beef juice, or egg-albumin in water, can also be taken. During convalescence the diet should be graduated—a raw egg in milk, or custard, or scraped meat; later, squab, oysters, fish, zwieback, rice, tapioca, vermicelli, etc. Regular and full movements of the bowels should be insured. Rest and milk diet are the essentials of treatment. By some, all the food is given by the rectum for weeks at a time. A guarded prognosis must always be given, though it is true that in a large majority of cases recovery takes place. Laboratory work is an important, if not an essential, aid in cases of gastric ulcer. The author advocates the organization of cooperative laboratories by societies, and controlled and managed by them, but they should be at the disposal of all practitioners. Such cooperative or public laboratories would be as great a stimulus to a better scientific study of cases in all communities, as heretofore hospitals have been where they have been founded.

The Nature of Internal Lesions in Death from Superficial Burns. By John McCrae, B. A., M. B. Mont.—Particularly emphasized are the facts that (1) the entire pathological picture presents great similarity to the conditions found in the diseases characterized by the presence of toxins of bacterial origin in the blood. (2) Damage to the lymphatic tissue is a constant feature, but is not necessarily focal, some cases presenting only diffuse degeneration. The patients that live but a

few hours after infliction, seem more likely to present a focal condition than those who live a longer time, as the condition, which the author interprets as proliferation and phagocytosis, is one which may rapidly disappear. (3) The focal lesions are not a true necrosis, but rather a proliferation of the endothelial cells of the reticulum and the capillaries, and a phagocytosis by the leucocytes and endothelial cells, to which latter is due the fragmented, disintegrated appearance which suggests a true necrosis.

The Bacteriology of Otitis Media; a Summary of Recorded Observations and a Laboratory Study of Seventy-six Cases. By Dr. John Funke. (*To be continued.*)

A Case of Elephantiasis. By Dr. John M. Ber-tolet.

Appendix Vermiformis Passed in Stool. By Dr. W. L. Wallace.

The Lane Lectures on the Social Aspects of Dermatology—IX. By Malcolm Morris, F.R.C.S. Ed.—Published also in the *New York Medical Journal*.

The Execution and Autopsy of Czolgosz, the Assassin of President McKinley. By Dr. Carlos F. MacDonald.

Journal of the American Medical Association,
November 9, 1901.

A Further Report on Permanent Catheterization. By Dr. J. Rilus Eastman.—Some reasons are given why permanent catheterization should be selected as the method of choice for routine use, in selected cases, in draining the urinary bladder. If used after operations involving opening of the posterior urethra until the perineal defect is closed, the period of convalescence is shortened since the perineal wound closes promptly if the urine is drained through the urethra. The calibre of the urethra is maintained, or even increased, and the subsequent passage of instruments is rendered easy. Much of the tedious work of after-treatment becomes unnecessary. After perineal section involving removal of a portion of the posterior urethra, intermittent catheterization or sounding is exceedingly harmful and difficult of execution. By permanent catheterization the danger of uræmic poisoning is reduced, as also is the danger of bacterial infection or intoxication. Drainage of the bladder in cystitis may be accomplished by this method without subjecting the patient to a more or less dangerous surgical operation, as must be done when suprapubic or perineal drainage is employed.

Fallacies in the Treatment of Urethral Diseases. By Dr. Robert Holmes Greene.—The author believes that prostatic hypertrophy is an inflammatory enlargement and that urethritis, while perhaps not the only, is its most frequent, causative agent. The question of urethritis in marriage, the question as to how extensive it is in its systemic effects, whether it is a simple ephemeral disease in the vast majority of cases capable of being quickly cured in a few days by the early administration of irrigations, or whether it is

often a more deep-seated affair, are questions of great import, and can be answered only by the combined scientific work of specialists in all diseases, of general practitioners, and of pathologists.

New Method of Skiagraphic Diagnosis for Renal and Ureteral Surgery. By Dr. G. Kolischer and Dr. L. E. Schmidt.—Skiagraphs frequently show the shadow of the kidney while the representation of the ureters on the plate naturally fails on account of the delicate structures of these tubes. The authors find that, by the introduction of sounds made of lead wire blended with some antimony, a skiagraph may be taken that will give results of the highest value, and diagnostic problems may be solved that hitherto have been obscure.

The Treatment of Pneumonia. By Dr. De Lancey Rochester.—The main suggestions of this article may be summarized as follows: (1) Sustaining of the metabolic processes of the individual by the administration of easily digested or predigested foods in small quantities at stated intervals, the administration of large amounts of pure water for eliminative purposes, and the administration of oxygen gas by inhalation whenever the absorbing surface of the pulmonary mucosa is involved to such an extent as to interfere with proper metabolic oxygenation. (2) Elimination (a) by the liver and bowel through the vigorous use of calomel and salts; (b) by the skin through sweats induced by external heat; (c) through withdrawal of blood when indicated by right heart distention. (3) Stimulation of heart by strychnine, alcohol, or ammonium carbonate, and, in suitable cases, by the subcutaneous injection of normal salt solution. (4) The local treatment of the lung by leeching, wet cupping, or dry cupping as indicated.

The Abortive Treatment of Pneumonia. A Plea for the Use of Cardiac Depressants in the Treatment of the Congestive Stage of Pneumonia. By Dr. W. L. Dickerson.

Strabismus; Its Treatment. By Dr. A. Edward Davis.—The non-operative treatment of strabismus should be begun so soon as the squinting is observed. About twenty per cent. of all cases may be cured by this treatment alone. So soon as the non-operative treatment ceases to improve the squint, it is time to operate, and Panas's method of operating for strabismus, by stretching the muscles before cutting them, is to be recommended as safe in execution, quick in results, and efficient. It should never be performed while the patient's eyes are under the influence of a mydriatic. After the eyes have been operated upon, the use of the stereoscope, bar-reading, the pad, glasses, etc., are of the utmost use in completing the cure.

Typhoid Fever—Dietetic Treatment. By Dr. Louis Fischer.

Philadelphia Medical Journal, November 9, 1901.

The Ultimate Results of Operation for Cancer of the Uterus. By Dr. Charles P. Noble.—The author's experience in the treatment of cancer of

the uterus has not been entirely satisfactory. The fact that the great majority of patients are absolutely beyond the hope of cure when first seen by the surgeon, is the most discouraging feature of the whole matter. So long as the cure of cancer must depend upon operation, the hope of improvement in the results of treatment must depend more upon securing early diagnosis and early operation than upon extending the limits of operation. A perusal of the literature indicates that the number of cases of cancer of the cervix free from recurrence at the end of five years, after vaginal hysterectomy, is about ten per cent. Hysterectomy, whether vaginal or abdominal, for carcinoma of the corpus uteri results in the permanent cure of about seventy-five per cent. of the cases. The abdominal radical hysterectomy for cancer of the uterus, involving the removal of the pelvic glands and the parametrium along with the uterus, is still upon trial. Its primary mortality is probably double that of vaginal hysterectomy, and it has not been practised long enough for permanent conclusions as to the results which may be thus secured. The author refers to the harm done by the classical teaching concerning climacteric hæmorrhages. Women should be made to realize that irregular discharges, whether at or between the menstrual periods, and especially those subsequent to the menopause, whether bloody or not, are due to disease of the uterus.

Chronic Ulceration of the Stomach Simulating Cancerous Disease; Relation of a Case of Gastro-enterostomy with the Murphy Button; Recovery. By Dr. James F. W. Ross and Dr. E. B. O'Reilly.—After gastro-enterostomy, the stomach, if previously largely dilated, becomes reduced in size in a very short time. There may be difficulty produced by a narrowing of the new orifice, but, if the operation is properly performed, this is not likely to occur. As a consequence of the operation, both bile and pancreatic juice find their way into the stomach, but they evidently do no harm. Pyloric spasm is produced as a consequence of the presence of a gastric ulcer. After gastro-enterostomy the hyperacidity of the stomach disappears and the ulcer heals as a consequence of the rest obtained by the organ and the cessation of the spasm.

The Surgery of Pulmonary Abscess, Gangrene, and Bronchiectases Following Pneumonia. By Dr. Daniel N. Eisendrath.—Both acute and pulmonary abscess and pulmonary abscess and gangrene following pneumonia may develop immediately, and chronic and simple putrid abscesses, with or without bronchiectases, are more remote sequelæ of both croupous and influenzal pneumonia, especially the latter. The most valued points in the history are the ætiology, the sudden expectoration after an apparent crisis of pure non-odorous pus in the simple abscess cases, or of fetid pus in the gangrenous variety. In the chronic cases there is usually a history of pneumonia having preceded the condition at some considerable time previously, followed by the expectoration of large quantities of pus, with exacerbations of fever, accompanied by emaciation, and frequently by clubbed fingers, etc. Signs of

cavity are seldom present. The moist râles, especially of large metallic character, are the most reliable physical signs. The character of the sputum is of value. The x ray is of confirmatory value. Many cases can be successfully treated by pneumotomy. The prognosis, however, in the chronic cases is not so favorable.

Report of Seventy Cases of Acute Lobar Pneumonia. By Dr. J. N. Hall.

Medical News, November 9, 1901.

Some Further Remarks on Hospital and Dispensary Abuses and Mismanagement, with an Account of the Means to be Employed to Mitigate or Arrest Them. By Dr. Thomas J. Hillis.—The author protests against the commingling of "boy patients," paupers, and criminals in the wards of the hospitals, and advocates separate wards and separate tables for each class. Each ward should be maintained perfect in itself and under the control of a physician and surgeon appointed by some one, not a politician, who then may be a judge of their fitness. The examination to be held for the fitness of applicants of eighteen months' experience in practice, which is now admitted to be a good deal of a fake, exclusively got up in the interest of the college and for the ultimate benefit of its special students, should not be limited to graduates from any hospital, but be open to bright lads practising under the observing eyes of their preceptors, who will now be preceptors in fact as well as in name. The author advocates the payment of a yearly salary for services rendered to every attending physician and surgeon in every public hospital in the city.

The Relation of Sunshine to the Prevalence of Influenza. By Dr. Howard S. Anders.—The most rational conclusion justifiable from obtainable facts and figures is that non-equability of the weather is a marked feature of influenza epidemic; and that a slight relative diminution of sunshine is associated with epidemic seasons. It seems not improbable that *grippe* likes the darkness better than the light. But it is certainly not to be inferred that there is the positive and direct causal relation between the absence of sunshine and "*die Intensität und Extensität der Grippe*" that Ruhemann would have us believe.

A Case of Suppurative Otitis Media Following Influenza; Operation without Opening of the Antrum; Complete Lack of All Constitutional Symptoms of Inflammatory Disease. By Dr. O. Waterman.—Taking into consideration the extensive lymphatic plexuses which are in the immediate neighborhood of the ear, it would appear to be a very unusual circumstance that fever and all other symptoms of inflammatory disease were entirely lacking in this case.

A Case of Raynaud's Disease. By Dr. W. A. Haley.—This affection is not similar to red neuralgia in that there was no local fever, the parts were cold, the cyanosis was preceded by a whiteness of the skin, and the arteries did not throb, but seemed rather to be constricted. Heat had some influence in relieving the intensity of the pain. Cold made it worse.

Three Obstinate Cases of Empyema of the Maxillary Antrum Cured with Injections of Solutions of Nargol. By Dr. A. G. Wippenn.

Treatment of Typhoid Fever. By Dr. Basil M. Taylor.

Medical Record, November 9, 1901.

Some Observations on the Symptomatology and Differential Diagnosis of Apoplexy, with the Reports of Several Illustrative Cases. By Dr. Theodore Diller.—The author reports, among others, a case of apoplexy without paralysis or loss of consciousness, and with the production alone of homonymous hemianopsia, leading to the suspicion that many attacks of apoplexy occur which are unrecognized, because of the temporary or insufficient symptoms which they produce. The author points out that apoplexy is only a symptom, not a disease. Hæmorrhage or thrombosis can only occur when the blood vessels are diseased; and embolism can only occur by the entrance of a foreign body in the blood stream. The rise of blood pressure is the most frequent determining cause of apoplexy, and in this single proposition we have our most significant hint for prophylactic treatment.

Some Remarks on the Ætiology of Apoplexies. By Dr. W. K. Walker.

Concerning the Clinical Significance of the Klebs-Loeffler Bacillus. By Dr. Adolph Rupp.—Clinically, there are two kinds of diphtherias when Klebs-Loeffler bacilli are taken into account: (a) Those having Klebs-Loeffler bacilli present; (b) those having none. Both forms, however, develop the same clinical signs and symptoms, the same complications and sequelæ. The character of the Klebs-Loeffler bacilli present in any case of diphtheria does not prognosticate its course. Klebs-Loeffler bacillary diphtheria may be so mild as to simulate a simple amygdalitis, and yet the most virulent Klebs-Loeffler bacilli be present. Klebs-Loeffler bacilli vary much in size and shape from a regular and artificially determined type, and the quantity and quality of their toxicity is not bound in any special or definite way, to fit any particular typical or atypical form, if the most recent bacteriological utterances on the subject are true. The assumed ætiological and pathological supremacy of Klebs-Loeffler bacilli is largely a synthetical demonstration.

An Unusual Case of Death from Ether Anæsthesia, with Autopsy and Microscopic Study. By Dr. Harlow Brooks.—In this case the respiration ceased absolutely, two or three minutes before the heart stopped. By a process of exclusion the author is compelled to accept as the cause of death the action of the drug on the ganglion cells of the respiratory centre. He doubts very much, however, if an effect so quickly produced as in this case would leave in the nerve cells any morphological lesion evident by our present methods of examination.

Practical Results with One Thousand Cases of Nitrous-oxide and Ether Narcosis. By Dr. H. W. Carter.—The advantages of nitrous-oxide and

ether anæsthesia over other anæsthetics are many. Its only disadvantage is that it requires somewhat complicated and expensive apparatus, and considerable skill to use it successfully. Its general adoption would lead to the systematic instruction in anæsthetics, and would make of every hospital interne a skilled anæsthetist.

Gunshot Wound of the Abdomen. By Dr. D. E. Biggs.

Sulphur in the Treatment of Carbuncles and Boils. By Dr. G. Hardy Clark.

Multiple Disseminated Subdermal Nodules. By Dr. Mark A. Rodgers.

A Painless Method of Skin Grafting. By Dr. Charles G. Foote.

A Case of Triplets Complicated by Partial Placenta Prævia and Transverse Presentations, Followed by Severe Post-partum Hæmorrhage. By Dr. W. G. Williams.

Boston Medical and Surgical Journal, November 7, 1901.

Medical and Sanitary Conditions in the Philippines. By Dr. W. P. Chamberlain.—With the cessation of hostilities and the establishment of permanent garrisons, barracks and hospitals adapted to the tropics must be constructed to guard the whites from the dangers of living in their present makeshift quarters. Ice-machines and water-distilling plants must everywhere be installed. Measures for municipal sanitation must be enforced among the native population, to protect the white man from the effect of epidemics among his neighbors. General vaccination must be vigorously carried out, and lepers must be segregated and cared for. Dispensaries and civil hospitals must be founded, and laboratories should be established for the investigation of the many unsolved problems of tropical medicine. The initiative and the execution in all these matters must depend upon the American army surgeon, unless a special medical service is established to look after the civil side of medical and sanitary supervision.

The United States Army System of Personal Identifications. By Dr. C. H. Alden.—The identification system in use is a modification of the Bertillon system. Data are obtained as to the race, white or colored; as to the kind of marks, scars, tattoos, or moles; as to the region in which the marks are found; and as to the height of the individual. The information thus obtained, by outline figure cards and by the card catalogue system, is made available.

On the Establishment of Medico-legal Diplomas; 1. Necessity for Medico-legal Diplomas; 2. Standard of Medico-legal Diplomas; 3. Arrangements for Giving Course; 4. Recognition of the Diploma. By Dr. Wyatt Johnston.—According to the author, the establishment of medico-legal diplomas is the first step in any scheme for reforming expert testimony, whatever the particular methods followed in making appointments. The exaction of a year's additional study for the medico-legal specialist seems to be a reasonable

minimum. Most medical schools have the means for giving the necessary instruction, provided that, by cooperation with the courts, sufficient access to material can be had.

The Erickson Murder. By Dr. F. H. Baker.

Artificial Noses and Ears. By Robert H. Upham.

British Medical Journal, November 2, 1901

Some Thoughts on the Principles of Local Treatment in Diseases of the Upper Air Passages. By Sir F. Semon.—After speaking first of the great and manifold progress that has been made through the introduction of local treatment in a number of frequent and troublesome affections of the upper air passages, the author deprecates the excessive specialization so prevalent at the present time. Each specialist has a favorite operation which he resorts to under all circumstances.

It may be stated as a general principle that if a disease of the upper air passages be (a) purely local, (b) causing considerable local discomfort or serious disturbance of the general health, and (c), amenable to local treatment—such treatment should be adopted forthwith, without losing time by waiting or by constitutional treatment. Foreign bodies should never be allowed to remain impacted, even though they may not produce serious symptoms. Malignant disease of the larynx calls for early and energetic local intervention. In many cases it can be lastingly cured by thyrotomy and removal of the affected area, if the operation is performed early enough. As regards adenoids, the author strongly opposes the views held by Arbuthnot Lane, and believes that the condition, if severe, can only be benefited by operation; "breathing exercises" are of no value. Adenoids may be subdivided into three classes: 1. Permanent, typical adenoids, with respiratory obstruction, open mouth, snoring, deafness, etc. In this class operation is absolutely indicated, as the only means of relief. 2. Periodical and transitory. Here free intervals alternate with periods of nasal obstruction, otitis, etc. During the attacks the lymphoid tissue is engorged and swollen. Unless the symptoms are severe, operation should be performed; if mild, and occurring at long intervals, a waiting policy is best. 3. Adenoids producing no symptoms. These do not require removal, and should be left alone, especially in adults.

Never diagnose adenoids from facial appearance and nasal obstruction alone. So far as the operation itself is concerned, the author lays great stress on thoroughness. Many of the so-called cases of "recurrence" are only instances of incomplete operation. And next to over-operation, nothing has damaged the reputation of the procedure so much as these same recurrences. Chloroform is the best anæsthetic, and the patient should be in the recumbent position. Never make use of "antiseptic" injections through the nose. Should the tonsils also require removal, operate upon the adenoids first. (*End of first lecture.*)

A Remarkable Case of Aortic Aneurysm of Sixteen Years' Duration; Death from Rupture Externally. By T. R. C. Whipham, M. B.—The remarkable points about the case here reported are: 1. The length of time during which the patient was

known to have an aneurysm (fifteen years). 2. The frequent, and at times rapid, variation in the size of the aneurysm, which on several occasions seemed likely to abruptly end the patient's life. 3. The marked benefit which accrued from long periods of rest and treatment, both medicinal and dietetic. 4. The recovery from an intercurrent attack of pleurisy and pneumonia. 5. The fact that the entire external portion of the aneurysm sloughed and came away, after which the patient lived nine days. 6. The termination by rupture externally.

A Case of Ulcerative Endocarditis, with Recovery. By H. E. Whitehead, M. R. C. S., and Dr. H. W. Syers.—The authors report a case of ulcerative endocarditis, occurring in a man aged thirty-five years, which, contrary to the usual termination of such cases, ended in recovery. This the authors attribute to careful nursing, feeding, and the use of stimulants, and also to the administration of sodium sulphocarbolate, which was given in fifteen-grain doses every four hours.

Remarks on a Case of Infantile Scurvy. By Dr. J. McCaw.—The author reports a case of infantile scurvy, the diagnosis of which was based upon the occurrence of hæmatemesis and the fact that the child had been fed upon proprietary foods since birth. Arsenic and iron were given, together with fresh vegetables, and recovery promptly took place. The case was noteworthy for the absence of the more prominent symptoms of scurvy rickets. There was no periosteal swelling, the gums were normal, and subcutaneous hæmorrhages never took place.

Contract Practice and its Difficulties. By Dr. A. E. Larking.

Preliminary General Education of Medical Students. By Dr. W. Gordon.

Sixty-ninth Annual Meeting of the British Medical Association.

Section of Ophthalmology.

A Discussion on the Relation of Gonorrhœa to Disease of the Eye (Excluding Purulent Ophthalmia). By J. B. Lawford, F. R. C. S., and others.—The first speaker states that the ocular affections known to occur in association with gonorrhœa (exclusive of the conjunctivitis due to direct inoculation with the gonococcus) are a form of conjunctival inflammation, scleritis and episcleritis, iritis, irido-cyclitis, and neuro-retinitis. Suppurative keratitis has been described in cases of a severe pyæmic character. Iritis is probably the best known of all these, although conjunctivitis is said to occur with greater frequency. Gonorrhœal iritis, in the large majority of cases, occurs concurrently with arthritis, and is a manifestation of systemic gonorrhœal infection.

On the Comparative Value of the Various Preparations of Silver in Ophthalmic Work. By G. Hartridge, F. R. C. S.

Recent Therapeutic Discoveries in Ophthalmology. By Dr. A. Darier.

Remarks on Suprarenal Gland in Ophthalmology. By J. A. Bower, M. B.—The author's experience with the use of suprarenal extract in ocular

practice has been most unsatisfactory. It is decidedly contraindicated in corneal ulcers, nor has he ever felt justified in using it in surgical cases. All the dried preparations are uncertain and unreliable; it is best used in the form of a fresh solution, twelve grains of gland substance to the drachm.

A Note upon Tuberculosis of the Chorioid. By Dr. G. Carpenter and S. Stevenson, M. B.

The Varieties and Treatment of "After-cataract." By F. R. Cross, F. R. C. S.

The Workmens' Compensation Act and the Testing of Workmens' Eyesight. By H. E. Jones.

Lancet, November 2, 1901.

Metallic Poisoning. By Sir W. R. Gowers.—In this article the author discusses lead and arsenic poisoning. The tremor which occurs in lead poisoning is very fine and is present only on movement. There is a quick lateral movement of the fingers, the result of contractions in the interossei. Great stress is laid upon the lead line on the gums as an aid to diagnosis. It is said to be blue, but it really black. In rare cases it may be absent, but far more commonly it exists only in fragments. It may be at only two or three isolated spots, or at the tips of the projections of the gum between the teeth. Both the upper jaw and the lower jaw should be carefully searched with a magnifying glass. If the symptoms of the patient are such as to suggest lead, and there is no trace of lead line on any part of the gums, one may be confident that it is not at work, provided the state of the gums certainly is such as to give rise to it. By this is meant that the gums in places do not adhere closely to the teeth, thus allowing the deposition of albuminous material from the food; the lead combines with this, forming the sulphide. But if the gums are everywhere perfect, lead as a factor in disease cannot be eliminated.

Arsenic, like lead, causes neuritis, but arsenical neuritis usually affects the legs before the arms. Just as the line on the gums is the indication of lead, so changes in the skin, especially certain forms of pigmentation, are the outward sign of the influence of arsenic. The pigmentation is brown and begins as small spots which may commence in spots of congestive redness, and the brown tint succeeds the red. Uniformity of pigmentation is usually due to coalescence of these spots; it is greatest on the parts of the trunk least affected by Addison's disease. When the small discrete spots coalesce, they often leave small impigmented areas. These pearly white areas are very characteristic of arsenical poisoning. Thickening of the skin of the palms and soles is also a common symptom of arsenical poisoning.

Human and Bovine Tuberculosis. By E. M. Crookshank, M. B.—The author agrees with Koch that the extent of human infection by the milk and meat of tuberculous cattle and by the butter made from their milk, is hardly greater than that of hereditary transmission. But he entirely disagrees with Koch's statement that human tuberculosis cannot be inoculated in cattle, and cites numerous instances to the contrary. Numerous cases also occur in which bovine bacilli invade the human tissues. Cooks and butchers often have tuberculous cutaneous nodules,

contracted from infected meat. But such cases are the result of direct inoculation. Infection by means of the meat and milk as food, however, can only be quite exceptional. The author does not accept the theory that abdominal tuberculosis in children is due to infection from tuberculous milk. These cases occur almost entirely among the poorer classes, and are due rather to lack of milk than to its being tuberculous. The view that an animal in prime condition, but with a minute tuberculous nodule, is a diseased animal, and that the carcass should therefore be destroyed, is a very extreme view and cannot be carried into practice. The infectious nature of tuberculosis has been greatly exaggerated; indeed it is very doubtful whether it is contagious at all. That the virus of tubercle, scattered far and wide, becomes a constant source of danger is not a theory which is supported by experiment and experience. The author believes heredity to play the largest part in the causation of the disease, such inheritance being either a predisposition to the disease or transmission of the actual tuberculous virus.

Ventilation. By A. W. Blyth, M. R. C. S.—A presidential address.

Milk or Whey in Enteric Fever? By P. Selby, M. R. C. S.—The object of this paper is to condemn milk entirely as a food for enteric fever cases, and to point out an efficient substitute in the form of whey. Milk should not be given as a diet to enteric fever patients, firstly, because milk in many cases forms hard cheesy curds in the stomach. These curds pass along the intestines, giving pain and scraping the raw surfaces of the ulcers, and causing in many cases hæmorrhage, perforation, and death. The effect of these cheese-like masses of casein is worse for the patient than feeding on well-masticated solids. Moreover, the perpetual distention of the bowel from the large amount of gases evolved by the digestion or decomposition of the milk, keeps the ulcers stretched and thus thins their floors. Secondly; because the *Bacillus typhosus* breeds rapidly in milk; the more bacteria there are, the more toxins are produced, and the more the toxins, the greater the fever and constitutional disturbance, with foul mouth, headache, cardiac weakness, delirium and a feeling of illness. Whey furnishes an efficient substitute for milk. It contains only about half as much solids as milk, and practically consists in a solution of milk sugar, with a small amount of fat, albumin, and salts. It is surprising that the body can carry on its functions on such a starvation diet as this, but practical experience shows that it can.

Preparation of the whey. To each quart of new milk stir in two teaspoonfuls of rennet. Put it in a pan and warm slowly until it curdles. This takes about twenty minutes. Break up the curd and strain the whole through fine muslin. The quantity given varies from a pint and a half to six pints daily. Most patients take whey well without any flavoring, and they generally infinitely prefer it to milk. The amount of emaciation on this diet varies very much, but not more than it does on any of the usual diets for enteric fever. Its most marked beneficial effects are in the clean mouth and tongue. One never sees sordes, thick dry fur, cracked tongue, ulceration,

etc. The pulse-rate gradually diminishes in nearly every case. The author has used this mode of treatment in seventy-three cases with a death rate of 2.7 per cent. For the previous seven years, the death rate had been 15.5 per cent. Of the two fatal cases among the last seventy-three, one patient died of hæmorrhage, the other of dysenteric diarrhœa eight weeks after the beginning of his illness. Alcohol is an important factor in feeding in enteric fever cases, from one to four ounces being required daily. In none of the cases was the cold bath resorted to; cool sponges and cold-air baths were always effectual in reducing the temperature.

Drugs are required only for complications. The grass-green motions occasionally seen were rapidly cured by the administration of small doses of salol.

Advances in the Treatment of Diseases of the Nose. By Dr. H. L. Lack.

The Removal of Superfluous Hair by a Combination of X-ray Exposure and Electrolysis. By Dr. D. Walsh.—The author recommends the removal of superfluous hair, in the following way: The exposure to the x-ray focus tube is made in the ordinary way, and a week or ten days later, when the hair becomes loose, each hair is extracted and the electrolysis needle passed into the puncture.

A Case of Septicæmic Plague in a European. By J. M. Atkinson, M. B.

Münchener medicinische Wochenschrift, September 24, 1901.

Combination of Rhodanic Acid. By Professor A. Eddinger and Professor G. Treupel.

Extensive Capillary Hæmorrhage in the Pons, Medulla, and Cerebrum.—Dr. T. Struppler records the autopsy findings in a patient who died in the status epilepticus, in whom were found so many hæmorrhages in the pons, the medulla, and the cerebrum that, although they were all minute, they made the impression during life of a single large hæmorrhage. The blood-vessels were found to be diseased.

Senile Pruritus of the Tongue.—Dr. Egmont Baumgarten narrates two cases in which pruritus of the tongue was a marked early symptom of a general senile pruritus. The author enumerates the various conditions which can give rise to this affection: diabetes, gastric and intestinal, hepatic or renal disturbances, usually of a vascular nature, and, in women, pelvic disease, especially at the time of the menopause.

Two Cases of Lysol Poisoning. By Dr. Georg Burgl.

Multiple Neuritis Following Carbon Monoxide Poisoning. By Dr. H. Schwabe.

Case of Perforative Peritonitis Cured by Operation. By Dr. Brunotte.

Tamponing of the Peritoneal Cavity with Air to Control Hæmorrhage. By Dr. Georg Kalling. (Conclusion.)

Berliner klinische Wochenschrift, September 30, 1901.

Demonstration of Aceto-acetic Acid in the Urine. By Dr. E. Allard.

Splashing of the Stomach and Atony.—Professor B. Stiller argues that atony of the muscular walls of the stomach may exist without the signs elicited by succussion. According to the author, splashing is a sign of ptosis and atony. Muscular atony is a concomitant of general atony of the entire organism, a mark of neurasthenia.

Seeming and Actual Foci of Disease. By Dr. Buttersack.

Gastrosuccorrhœa. By Dr. L. von Aldor.

Tumor of the Kidney in a Child of Six Months. By Dr. A. Schönstadt.

Riforma medica, August 26 and 27, 1901.

On the Pathogenesis of Cysts of the Spermatic Cord. By Dr. Paolo Fiori.—The author reports a case of cyst of the spermatic cord in a man aged twenty-five years. He noticed a swelling at the upper part of his scrotum ten years before. The swelling was fusiform in shape at first. A surgeon removed some liquid from the cyst in 1888, which made the swelling disappear for a time. Then it increased again, and continued so for five years, when it remained stationary. The swelling was irreducible and its lower boundary was well defined as separate from the scrotum. The diagnosis was one of encysted hydrocele of the cord, and the patient was operated upon for the relief of this condition. On examination it was found that there were two cystic sacs. The upper was an extension of the peritonæum through the abdominal ring, then came a fibrous cord connecting the upper with the lower sac, and then the lower sac, with thin, distensible walls. The sacs were in front of the spermatic cord, and adherent to it. The upper was a vestige of the peritonæum, the lower may have been taken for a vestige of embryonal structures in the genital apparatus—the body of Giralde's—but its lining contained no traces of the characteristic cells which such cysts would show. Hence the author concludes that the lower cyst developed in the cellular tissue of the spermatic cord, thus proving Velpéau's theory of the origin of this class of cysts, a theory that has been generally rejected.

August 28, 1901.

Bacteria which Resist Decolorization with Acids in Gangrene. By Dr. Alberto Folli.—Of late there has been described a series of bacteria, which, like the smegma bacillus, and the pseudo-tuberculosis bacillus, resist the action of acids in decolorization. The author found such germs in a number of cases of gangrene. He found the pseudo-tuberculosis bacilli in three out of six cases of gangrene, but, although he did not obtain them in pure cultures, he found that they varied as to morphology. They all resisted the decolorizing action of acids. This resistance, however, varied, as testified by the different hues assumed in the final preparation after staining. He noted that the resistance to acids was always

inferior to that offered by the bacillus of tuberculosis.

August 29, 1901.

A Clinical and Pathologico-anatomical Study of a Case of Chorea Minor. By Dr. Vincenzo Scarpini.—In this instance the disease terminated fatally, but at the autopsy the findings did not point to chorea as the sole cause of death. There was a history of acute articular rheumatism, the course of the disease was rapid with noteworthy febrile movements, maniacal hallucinatory delirium, severe convulsions, and coma.

August 30 and 31, 1901.

Rupture of the Urethra. By Dr. Giacomo Marocco.—Rupture of the urethra may be caused by traumatism, either internal or external. Perineal traumatism may wound either the bulbous or the membranous urethra, according to the direction of the injury, the shape of the object inflicting it, and the position of the patient at the time. The mechanism of these last ruptures is always the violent compression of the canal against the arch of the pubes in the case of the bulb and against the Carcassone's ligament in the case of the membranous urethra. Clinically rupture of the urethra shows itself by hæmorrhage and a perineal hæmatoma, followed soon by extravasation of urine, and later by stricture. The treatment comprises catheterization, with a catheter *à demeure* until the lesion is healed; external urethrotomy, with or without suture of the urethral wound or wounds, which should be performed so soon as possible after the traumatism; suprapubic cystotomy, if for some reason the perineal route is not convenient, or if the wound cannot be found. The prevention of stricture follows the immediate treatment.

Journal Akouscherstva i Gienskich Boliesney, June, 1901.

On the Treatment of Cancer of the Cervix Complicating Pregnancy, Gestation, or the Postpartum Period, and on the Use of Cæsarean Section, together with Excision of the Whole Organ through Abdominal Incision, in this Condition. By Dr. S. S. Kholmogoroff.—The author's conclusions, based upon the literature of the subject as collected by him, and upon a study of one case reported by him, are as follows: In cases of cancer of the cervix in the first months of pregnancy, suitable for operation, the uterus with its foetal contents should be immediately extirpated. In cases seen between the sixth and eighth month, when the cancer is susceptible of operation, a vaginal Cæsarean section should be performed, and the uterus subsequently excised through the vagina. In cases in which the diagnosis of cancer of the cervix is made at term, and in which the cancer is suited for operation, a Cæsarean operation should be done, and some form of Freund's operation should be performed through the abdominal incision. After labor, in cases of cancer of the cervix in which the patient has given birth to a child by the natural method, the uterus should be removed through the vagina, if the case is adapted to operation. If not, and if the child is

not yet viable, then we should wait until the period of viability and perform a Cæsarean section by Porro's method.

On the Bacteriology of the Uterine Cavity and of the Fallopian Tubes in Non-pregnant Women. By Dr. P. V. Mikhine.—(*Second Article*).—The author studies in this paper particularly the occurrence of anaerobic germs in the cavity of the uterus and in those of the Fallopian tubes. He found, on examining fifty cases, that germs were present in these cavities in twenty instances. Of these, only two cases showed the presence of germs in the uterus which grew in the ordinary atmosphere, while the other eighteen cases showed germs that grew in nitrogen. Of the latter, in four cases these germs were found in the uterine cavity, in thirteen cases from the tubes, and in one case from the uterus and the tubes. In the majority of cases, only one tube in each case showed the presence of germs, in a few instances both tubes were found to be infected. The author did not succeed in finding the same germ in the uterus and in both tubes. The further from the vagina the less numerous the microbes found, for they perish in the more distant parts in great numbers, not being able to adapt themselves rapidly enough to altered conditions. Only in one case were the germs found to have any pathogenic properties. Most of them are characterized by the fact that they are facultative anaerobes, and can rapidly change to anaerobic existence. It is probable that when germs have existed for some time in the internal genitals, they lose their pathogenic power. Experimental and clinical evidence tends to show this. Possibly the absence of oxygen in the Fallopian tubes may so influence the bacteria that penetrate into these structures that they change completely.

Materials and Considerations on the Question as to the Treatment of Cancer of the Uterus. By Dr. A. P. Dalinger.—A collection of operated-on cases of cancer of the uterus, reported from 1847 to 1890 in Russia, showed a mortality of 11.8 per cent., a recurrence within the first year in 21.7 per cent., no recurrence for from one to five years in 13.7 per cent., unknown ultimate result in 64.4 per cent., and freedom from recurrence for over five years in 10.2 per cent. The results of vaginal hysterectomies performed by Russian surgeons for the ten years from 1890 to 1900 showed a mortality of 10.3 per cent., radical cure, i. e., no recurrence for five years or longer, in 12.0 per cent., and unknown ultimate results in 75 per cent. of cases.

On Preventive Perineotomy during Labor. By Dr. V. Mandelberg.—The author's conclusions, terminating a long and exhaustive article on this subject, in which he reports perineotomies in one hundred cases, are as follows: In a certain proportion of cases the functions of the perinæum are impaired after childbirth, no matter what measures have been taken to prevent such an impairment. The first labor changes the floor of a woman's pelvis just as the first coitus changes the external genitals of a virgin. It is much more advantageous to incise the perinæum during labor than to have it torn so that the function can

never be restored afterward. The results of suturing such incisions cannot be compared to the results of suturing torn perineal muscles. After perineotomy the technics of the suture is simpler, the wound heals more frequently by first intention, and the restoration of function is more complete, than after the operations upon torn perinæi. If the head is delivered cautiously after perineotomy, there is no fear of having the cut spread to the rectum. The indications for perineotomy can be discerned only when the head is about to pass the perinæum, and when the tension of the parts, the amount of yielding, and the size of the head, are carefully gauged. Perineotomy is also indicated in those cases in which the rapidity of delivery must be increased. The author performed the operation sixty-six times in two years, and of these cases sixty-two were in primiparæ; the latter constituted 6.1 per cent. of all primiparæ delivered.

Vratch, September 29 (October 11, New Style), 1901.

On Popular Medicine in the Orthodox Russian Monasteries. By Dr. B. Th. Boushoujeff.—A historical sketch of the hospitals and asylums connected with the monasteries of the East and of Russia. (*To be concluded.*)

The Alkalinity of the Blood in Normal and Pathological Conditions. By V. F. Orloffsky.—Many authors have found that the alkalinity of the blood is lowered in a variety of conditions, but the majority of the later investigators have found that these conditions for the most part are accompanied by an increased stability of the blood. By the stability of the blood is understood the power of the red cells to resist the solvent action of saline solutions. The author has found that in determining the degree of alkalinity of the blood by Landois-Jacksch's method the result depends greatly on the number of cellular elements in the blood, and on their stability. The same may be said of all other methods, for the removal of the cellular elements from the blood before titration, in order to determine the alkalinity, is bound to be accompanied by some destruction of red cells, thus influencing the figure of alkalinity. The author has found that the part of the alkalis in the blood which is contained in the red cells is considerable, constituting about fifty per cent. of the total alkali in the blood. He tested the accuracy of Engel's apparatus for determining the alkalinity of the blood, and found that there was a constant error of about five per cent. in the alkalinity indicated, when the method was followed exactly. Engel's apparatus gives a figure which is 106.6 milligrammes higher than the actual amount of alkali present, when a piece of litmus paper of the sensitiveness prescribed in his method is used as indicator of the end of the reaction. In addition, Engel's apparatus gives an error varying from 8 to 12 milligrammes, depending upon the small amount of blood used in the test. The normal alkalinity of the blood was found to be from 240 to 270 milligrammes of sodium hydrate in 100 cubic centimetres of blood. (*To be concluded.*)

The Use of Curetting in Dispensary Practice. By Dr. F. B. Boukojemsky.

Proceedings of Societies.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

Fourteenth Annual Meeting, held in Cleveland, Ohio, Tuesday, Wednesday, and Thursday, September 17, 18, and 19, 1901.

The President, Dr. W. E. B. DAVIS, of Birmingham, Alabama, in the Chair.

(Continued from page 901.)

Galvanism as a Remedy for Uterine Hæmorrhage.—Dr. EDWIN WALKER, of Evansville, Ind., read a paper on this subject. He stated that galvanism as a remedy in gynæcology had been unduly lauded and condemned. Apostoli's method commanded the respect of surgeons, but the results had not been commensurate with the claims and had not been without danger. The minor uses of electricity partook of the character of tinkering, and were objectionable. There still remained a limited field in therapeutics for it, but it did not replace surgery. Its use in uterine hæmorrhage was quite satisfactory. It should not be used where the cause of the hæmorrhage could be removed by a clean surgical operation. In mild cases, in which the hæmorrhage was practically the only symptom, and where no radical operation would be entertained, galvanism was the remedy. In another large class of cases where grave disease in other organs contraindicated an operation, relief and often a cure could be effected. Accurate diagnosis of all lesions in each patient was of the highest importance, so that life should not be hazarded by an operation in the presence of a serious lesion elsewhere which was overlooked, or the patient, even if she recovered, was not benefited, for the same reason.

The method of application was quite simple. The positive pole was attached to a platinum electrode and introduced into the uterus; the negative pole, attached to a copper plate covered with moist absorbent gauze, was placed over the abdomen. The current was gradually turned on until a distinct burning was felt under the negative pole, and continued from ten to thirty minutes. Strict asepsis was necessary. The application was not painful. From two to eight applications were required.

Dr. C. C. FREDERICK, of Buffalo, stated that electricity had to a certain extent been replaced largely by surgical procedures. In the experimental stages the results that had been promised by the use of electricity by a great many who were enthusiasts were not borne out. Practitioners met with poor success with it, and in consequence became disgusted and abandoned it, and were now depending upon massage and surgical procedures to control uterine hæmorrhages.

Dr. HAYD had used electricity for many years; in fact, for five months he had worked with Apostoli; consequently he spoke advisedly. When he considered the amount of good that had been done with it in treating pelvic troubles, and compared it with the amount of harm wrought, he felt that it would have been the best thing if practitioners of medicine

had known nothing about intra-uterine galvanization.

Dr. PRICE expressed the belief that the application of electricity had a great deal to do in favoring the growth and development of fibroids, rather than preventing or arresting them. He detailed two or three such cases.

Dr. CARSTENS referred to the various causes of uterine hæmorrhage. In all cases of excessive hæmorrhage there was some cause for it. Sometimes the cause was constitutional and required simply constitutional treatment, but no operation. In other cases the hæmorrhage was indicative of malignant disease of the uterus. If the use of electricity was advocated in these cases, and the information was circulated among general practitioners that this agent was good for uterine hæmorrhage, the result would be that a great many cases of beginning cancer of the uterus would be treated for weeks and months, and the golden opportunity for removing the disease by early and timely surgical measures would have passed, and a diagnosis would finally be made too late. He argued against the indiscriminate use of electricity for uterine hæmorrhages.

Retrodisplacements of the Uterus in Young Girls and Unmarried Women; their Frequency and the Best Methods of Treatment.—A paper with this title was read by Dr. HERMAN E. HAYD, of Buffalo, in which the author made the following generalizations: 1. The paper was a plea for the more careful examination of young women by competent and skilled men who could undertake any operative measures that were necessary. 2. Every case of retrodisplaced uterus in the young or unmarried or married woman might not require any treatment. 3. If they produced definite symptoms, the Alexander operation should be employed, if the case was an "operable" one—that is, if the uterus was freely movable and the tubes and ovaries were healthy. 4. Retroversions and retroflexions in the young and unmarried should never be treated by pessaries, but by the Alexander operation. Tampons and pessaries had their place in retrodisplacements in married women or women who had been pregnant, but they accomplished practically nothing in the displacements of young women. 5. The Alexander operation was safe and without mortality incident to the operation, and no harm could come from its proper performance; even if the uterus subsequently fell, the patient was no worse off than she had been previous to the operation. 6. It did not in any way interfere with pregnancy and future child-bearing, but, on the contrary, materially helped the possibility of pregnancy. 7. No pain or distress followed the operation if the case was properly selected, and if pain and suffering resulted, there had existed at the time of the operation latent tubal and ovarian trouble which sooner or later perhaps would have required a radical operation. If it became necessary to do a cœliotomy on a person who previously had had an Alexander operation, the uterus would be found in its normal anteflexed position, which was necessary in every case, whether the tubes and ovaries were removed or not, to insure good health and freedom from future suffering.

A Method for Suspension of the Uterus.—Dr. ROBERT T. MORRIS, of New York, read a paper with

this title. The abdomen was opened in the middle line. An incision two inches long would suffice for most cases. The peritonæum over one round ligament was split, and the round ligament was drawn out with a hook to a distance of three inches, more or less. Drawing out the round ligament with a hook made naturally a long loop. The arms of the loop were sutured together with silk or chromicized catgut. This threw the sutured part of the round ligament out of commission, and left the ligament there inches shorter, more or less. The sutured loop was tucked back into the slit in the peritonæum of the broad ligament, and the opening was closed. The operation shortened the round ligaments and allowed the uterus to ride easily and elastically in a normal position. Its advantage over other ligament-shortening operations lay in the securing of union of muscular structures. The surgeon did not have to depend upon peritoneal adhesions, which must be a failure in many cases.

Diseases and Injuries of the Cervix Uteri and their Treatment.—Dr. J. W. HYDE, of Brooklyn, N. Y., presented a paper thus entitled. The salient points in this paper were as follows: 1. In cases where the injury was recent, and the constitution of the patient was so good that no extensive degenerations had occurred—in short, where there was a reasonable probability of being able to restore the cervix to a normal condition, this should be done by Emmet's operation. 2. In old cases, where extensive alterations had taken place, as proved by direct examination, and not less certainly by the unmistakable and intractable reflexes that attended such alterations, the unbearable headaches usually referred to the vertex and the nuchal region, the gastric disturbances, and the endless procession of psychic, neurotic, motor, cardiac, and respiratory aberrations, so familiar to every experienced physician, trachelorrhaphy was out of the question. To remove all the diseased tissue, and that alone, would call for an unattainable amount of nicety of dissection; and, supposing the dissection accomplished, the sewing up of what was left might result in a most interesting thing "of shreds and patches," but it would not be a cervix uteri, which was the only legitimate object of trachelorrhaphy. In such cases amputation was as effective clinically as it was logical in theory. 3. The operation was not more dangerous than trachelorrhaphy. 4. It was not likely to be followed by stenosis of the canal. 5. There was nothing in the operation that seriously militated against conception or a normal gestation and delivery.

The Mechanical or Combined Plastic and Mechanical Treatment of Retrodeviations of the Womb.—Dr. M. ROSENWASSER, of Cleveland, stated in this paper that retrodeviations of the womb were either simple or complicated. The complicated were subdivided into those with a movable and those with a fixed womb. Of 116 patients treated for retroversion, 63 of the second and third degrees had been selected as proper subjects for mechanical treatment. They were treated by means of the pessary alone, or the plastic operation was supplemented by a pessary. From a table furnishing the details the following summary was obtained: Cured, 11; symptomatically cured, 15; improved, 26; not improved, 11.

In the body of the paper the writer considered each of the divisions, as above classified, and illustrated each by a brief history of typical cases. He maintained that cases of complicated retroversion with a movable uterus could be converted into simple ones by plastic operations, and were then subject to treatment by mechanical support. After refuting the objections generally raised against the pessary, he submitted the following conclusions, based upon the present imperfect status of suspension operations: 1. A retroverted womb uncomplicated by disease should be replaced and supported by a pessary. 2. Retroversion complicated by a diseased womb or by an impaired pelvic floor, the womb being movable, required a preliminary plastic operation to restore the normal condition before using a mechanical support. 3. Suspension operations should not be done simultaneously with the plastic in face of the probability that a pessary could sustain the uterus in position. 4. Retroversion complicated by aggravated prolapsus required simultaneous plastic and suspension operations to effect a cure. 5. The treatment of retroversion with a fixed womb was that for pelvic inflammation. Whenever the latter required laparotomy or colpotomy, the retroversion became subject to such surgical treatment as might appear best suited to the particular case. 6. Retroversion, simple or complicated, in which mechanical support and a plastic operation had failed to cure or to relieve, and in which the symptoms demanded relief, constituted a proper indication for a suspension operation.

Some Observations on the Surgery of the Spleen.—Dr. LEWIS S. McMURTRY, of Louisville, presented a paper thus entitled. Knowledge of the physiology and pathology of the spleen was so imperfect, he said, that the surgery of this organ had not advanced proportionately with that of the other organs of the abdominal cavity. In view of this fact, every case which might possibly contribute to our knowledge should be studied and recorded. He then reported a case of large cyst of the spleen. The patient was a vigorous woman of thirty, well nourished, with a fluctuating abdominal tumor, appearing upon the left side of the abdomen, and readily movable from pelvis to diaphragm. The diagnosis was that of ovarian cyst with an elongated pedicle or floating cystic kidney. On abdominal section, the tumor was found to be a cystic spleen. This was removed without difficulty and without hæmorrhage, and the operation was followed by prompt recovery. A careful microscopic examination showed the cyst to be simple and sterile. Three similar cases were reported.

The author then considered the technics of splenectomy for cystic tumors of the spleen, commending the median incision and enucleation from below. He stated that it was not the purpose of the paper to consider all varieties of disease of the spleen, or to tabulate the statistics of splenectomy for hypertrophy and miscellaneous diseases, but rather to show that cystic degeneration of the spleen was sufficiently common to make a class of tumors deserving recognition as a factor in the diagnosis of cystic tumors of the abdomen. The results of operation in these cases showed that the spleen was not essential to life and health.

Is the Cæsarean Section Justifiable in Placenta Prævia?—Dr. E. GUSTAV ZINKE, of Cincinnati, in a paper with this title, went rather exhaustively into the history and literature of the subject and considered the cases reported. He referred to the justifiability of the operation and the class of cases to which it was applicable. He also dwelt on the contraindications to the operation, and compared the management of placenta prævia with and without Cæsarean section. He believed that the Cæsarean and the Porro operations were perfectly legitimate and elective procedures in all cases of placenta prævia, central and complete, and especially when the patient was a primipara, when the os was closed and the cervix unabridged, and when hæmorrhage was profuse and could not be controlled by tampons and separation of the placenta around the internal os. That there were cases of partial placenta prævia that might be successfully treated in the old way, he did not doubt. Perhaps a small majority of all the placenta prævia cases could be treated successfully, so far as the mothers were concerned, after the manner of Fry and others. But what of the large minority of mothers that succumbed and the great majority of children that were sacrificed at once? The question presented was a very serious one, and should be earnestly considered, and when confronted with a case of central or complete placenta prævia or any other variety, where dilatation of the cervix was impossible or difficult, the patient and her immediate friends should be made acquainted with all the facts concerning both methods of treatment. If properly presented, he thought it was doubtful whether the majority of women would select forcible dilatation, version, or extraction.

The President's Address.—After congratulating the association upon the great work it had accomplished, the president urged the fellows to use their influence in the better organization of the sections of the American Medical Association. He said: "The greatest and most influential organization in the United States should be the American Medical Association; the brightest lights in the profession should gather at its annual meetings and be prominent in the work of its sections and committees. Failure to be an active contributor to the work of this general national organization should be a deserved reflection on a prominent physician, whether he be a general practitioner or a specialist. It is not enough that our special societies should succeed, but they should prove a source of strength to the entire profession, which can be best served by strengthening the American Medical Association, making it not only a power in scientific work, but giving it the prestige which will enable scientific medicine to receive due recognition from our national government."

The remainder of the address was confined to the principal operative procedures for cholelithiasis. He favors cholecystotomy, as a rule, for gall-bladder and cystic-duct calculi. Cholecystectomy should be reserved for stricture of the cystic duct, inflammatory changes which greatly endangered the walls of the bladder, and malignant disease.

In discussing stone in the common duct, he said: "Choledochostomy without suture is called for in the large majority of common-duct stones. Suture of the duct may be practised if the patient's condition

has not been rendered serious by much suffering and protracted jaundice, and if the duct is enlarged and not markedly inflamed. Gauze drainage should be resorted to in all cases, it matters not how carefully the stitching of the duct has been carried out. The time required for suturing the duct adds very greatly to the gravity of the operation in cholæmia of long duration. It would also be contrary to surgical practice elsewhere to suture when offensive, infected bile escapes from the duct. Morison's pouch, which will hold nearly a pint of fluid, makes drainage in this location entirely satisfactory. The lumbar stab is preferred by some surgeons, but the entire safety of transperitoneal drainage has been abundantly demonstrated. Kehr, who has done more gall-stone operations than any other surgeon, claims that he first advised the open treatment of the duct, but it is known that he is in error, as the operation has been urged for the reasons he gives, in this country, since the early part of 1892, at which time experiments were conducted by me on lower animals and reported to the American Medical Association. At that time and for some years afterward it was admitted by surgeons that the operation would succeed on normal organs with normal bile, but not otherwise. I afterward induced pathological changes in the biliary passages and demonstrated that the operation was successful in infected and enlarged ducts. Experimental and clinical experience demonstrate conclusively the safety of the operation."

At the Indianapolis meeting, two years ago, Dr. Davis reported two cases in which hepatotomy had been done in obstruction to the biliary passages. The operation was indicated, he said, in cases of obstruction with enlarged liver where the gall-bladder or duct could not be isolated, if the patient's condition from exhaustion and cholæmia would not permit of a protracted search for the bladder or ducts. After the patient's condition was better, a radical operation might be done. It would only exceptionally be called for, and the cases would be fewer as the surgeon's experience increased in choledochous operations, for he would then be enabled to better locate the bladder and ducts so much changed by inflammatory processes. In addition to these indications, he thought the operation should be resorted to in hepatitis before it had reached the stage of pus formation, if the liver did not rapidly become smaller after drainage of the biliary reservoir of the duct. His attention had first been attracted to the value of the procedure in a case in which the amount of pus removed was not more than half an ounce, but in which the division of the biliary canals resulted in the escape of large quantities of bile for many weeks. In December, 1898, he had done hepatotomy in one case in which there was a movable stone in the common duct, and in the same month in a case of obstruction of the hepatic ducts by malignant disease.

In July and August of this year he had conducted a number of experiments on dogs to determine the value of incisions into the liver in relieving biliary obstruction. Five dogs were killed and the liver was injected with fluid, either through the gall-bladder, the common duct having been tied, or through the common duct. Incisions were then made in all parts of the liver, with the result that streams of the fluid issued from the bile-canals and general oozing of the fluid from the wounded sur-

faces of the organ if much force was used. Six were anæsthetized and the liver was injected as above mentioned, and this fluid with blood flowed, as a rule, freely when much force was used in injecting the fluid. Four had the common duct tied, and after twenty-four hours the same experiment was conducted under anæsthesia, with similar results. In nine the common duct was ligated and gauze packed around the field of the gall-bladder and ducts. After from twenty-four hours to a week the liver was incised in one or more places, and, as a rule, the bile escaped satisfactorily through the gauze. It was very dark after prolonged obstruction. Two of the dogs died and the others were killed in from five days to two weeks. Before killing them and while they were under the anæsthetic, fluid was injected through the bladder or duct, and flowed from the wounds which had been previously made in the liver and also from incisions made at that time. Five had the gall-bladder removed and the cystic and common ducts ligated, but, as gauze was not used at the time of the operation to wall off the general cavity, they died in from twenty-four to forty-eight hours from the escape of bile, with shock. With the advance in choledochus surgery, the field for cholecystenterostomy grew smaller. Dr. Davis had been assisted in his experimental work by Dr. R. E. Hogan, of Birmingham.

(To be concluded.)

Miscellany.



DR. EDWARD WALLACE LEE.

The photograph of Dr. Lee, who was connected with the case of the late President McKinley, did not reach us in time for publication in the October 19th number, in which we presented the official report in the case. At the time of the operation Dr. Lee was a resident of St. Louis. He is now in practice in New York.

The Appointment of an Advisory Board for the Pathological Institute of the State Hospitals.—The reorganization of the Pathological Institute of the New York State Hospitals for the Insane, undertaken by the State Commission in Lunacy, is gradually taking shape. To add to its

efficiency a great deal of careful thought has been given to the appointment of an advisory board, that should aid in the development of the institute and the carrying on of its work on broad lines, and assist the new director soon to be appointed. The reorganized institute aims to carry on work in the sciences correlated with psychiatry much according to the original scheme, but with modifications calculated to meet more immediately the needs of the hospitals as expressed by the superintendents and to obviate some of the criticisms of the former plan. Original research in the various sciences having a bearing upon the subject of insanity will go on as before, but, in addition thereto, the institute will be utilized to give special instruction in clinical psychiatry as well as in methods of scientific research to physicians on the staffs of the hospitals for the insane and to young men about to take up an asylum career. In order to obtain this clinical experience the institution needs to be combined with a hospital for the insane, and for this purpose it is for the present to be connected with one of the asylums on Ward's Island, and until such time as a reception hospital for the insane can be established in Manhattan.

In selecting the members of the advisory board, the lunacy commission deemed it expedient to have the three university medical schools of New York represented, viz: Columbia, Cornell and Bellevue University. Furthermore, it was decided to accord to the chief sciences correlated with psychiatry representation upon the advisory board. These sciences are pathology, chemistry, psychology and general biology. Inasmuch as the Pathological Institute was created for the utilization of the material of all the State hospitals, and for the purpose of raising the standard of scientific study, treatment, and care of the insane under State care, it was thought best that these institutions should also have a voice upon the advisory board. A member to represent general clinical medicine and neurology was likewise selected. Accordingly the Commission in Lunacy has established an advisory board consisting of the following gentlemen: J. McKeen Cattell, professor of psychology, Columbia University; James Ewing, professor of pathology, medical department of Cornell University; Christian A. Herter, professor of pathological chemistry Bellevue and University Medical College; Hermon C. Bumpus, assistant to the president of the American Museum of Natural History, to represent the department of general biology; Henry Hun, professor of the diseases of the nervous system, Albany Medical College, to represent neurology and general clinical medicine; Dr. Charles W. Pilgrim, superintendent of the Hudson River State Hospital, at Poughkeepsie, and Dr. A. E. Macdonald, superintendent of the Manhattan State Hospital, East, to represent the State hospitals; Dr. Frederick Peterson, president of the Lunacy Commission, a member *ex-officio*.

All of the appointments to the advisory board are permanent except two. The two superintendents of asylums on the board were elected by the fourteen asylum superintendents of the State, at a meeting held in Buffalo, Sept. 28th, for a

term of two years only, thus permitting all of the asylums to be represented in rotation on the board. All of the gentlemen selected have accepted their appointments and will serve the State without charge, giving their time and services free in the interests of science and of the insane.

The Woman's Health Protective Association of New York is credited by *Vogue*, a fashion weekly, with having done much excellent work for the health of the metropolis. It says: "The association has made a lively crusade against permitting fruits and vegetables to be exposed for sale on the sidewalks by retail grocers and others; it has effected reform in this matter already, and it is its intention to take active steps to suppress the evil practice. The visit of the association to the almshouse on Blackwell's Island resulted in some reform. Among these were fly screens in the Hospital for Incurables; abolition of an open sewer; alterations suggested in the Hospital for the Blind; an improvement in the quality of meals. This association also has been to the front in agitation and legislation for the regulation of the sanitary condition of bake shops and for the increase of public parks and playgrounds for children. In school hygiene it has been most encouragingly successful during its seventeen years of existence. So long ago as 1890 it established the School Hygiene Committee. Another committee, that on slaughter houses, has seen a marvellous change in the conduct of these necessary but repellant spots. From being the most overworked, this committee, which had at the start to develop a public opinion to coerce the managers of these establishments, has now very little to do, so excellent are the conditions of the abattoirs as a result of the work of the society. It has also rendered great service in the crusade against expectorating in street cars, for it was at its request that the board of health first used prohibitory notices. It was also in response to agitation on the part of the society that the cocoa matting was discarded. The association, moreover, is vigilant in securing the enforcement of laws against expectoration, and is at the present taking special active measures in ferry houses and ferry boats. This society has rendered excellent service in its attempt to remedy existing conditions in regard to dumping garbage; and all this public service, every branch of which affects the well-being, and in some instances the life, of citizens, is so quietly performed that it is safe to say not one in 10,000 of New York's inhabitants knows that there is so vigilant a society watching over his interests."

Modern Venesection.—Mr. Briscoe (*Clinical Journal*, August 28th) closes an interesting paper on the subject with the following summary of blood-letting:

1. Careful incision; open the vein obliquely; shampoo limb if blood does not flow, and apply the same to the other extremities; keep warmth to the body; to encourage the flow of blood give an inhalation of nitrite of amyl, either with wet-cupping or with venesection pure and simple; after operation

keep patient quiet in the recumbent posture and in a darkened chamber; administer milk and diluent drinks, and relieve the intestines with some suitable aperient.

2. In certain cases of heart disease, uncomplicated mitral regurgitation when compensation has become inadequate, there arises a gorged and distended right heart and lung with recurring hæmoptysis. From six to twenty or more ounces may be removed in these cases. After the operation, drugs like digitalis and diuretics, which have previously failed, will complete the relief.

3. Sudden deprivation of pure atmospheric air from a healthy lung causes the right heart to become distended and paralyzed. This chemical origin of cyanosis is shown in bronchitis and in all gaseous suffocations, and the practice of blood-letting in these cases must be bold and thoughtfully considered. Venesection is thus the therapeutic agent.

4. To discriminate between two conditions:

(a) When a patient is much choked, laboring hard with his breath, and moreover with his veins distended, and the heart dilated, then bleeding is our sheet-anchor. It is obvious that with this state we get a small pulse, and when the distended right heart is emptied the pulse becomes full.

(b) On the other hand, the patient is choked with bronchitis, but his right heart is acting well. His surface wears a leaden hue from the free circulation of venous blood in his arteries. The pulse is good, but of high tension from the quality of the blood contained in the arteries. The venous system and the liver are not engorged. Bleeding is not indicated in this class of case, and is an instance of one of the errors and abuses of blood-letting. The right heart is quite able to take care of itself so far. As Dr. Hare, in *Good Remedies out of Fashion*, puts it, the right remedy in this class of cases is the "emetic." He says, "In suffocative bronchitis the effect of emetics is sometimes magical, and by their administration in such cases not only is immense relief given, but I verily believe—I am certain—that lives are saved." This, then, with respiratory stimulants is the proper treatment when the bronchial tubes are choked.

5. Avoid bleeding weakly people, broken-down old men, and drunkards. Venesection is also a doubtful agent in acute peritonitis, but a few leeches may give relief.

6. In capillary bronchitis and in pneumonia venesection may save lives. In the former, where there are signs of distention of the right heart; in the latter, when there is a large extent of lung involved, with symptoms of cyanosis and heart paralysis. In pleurisy of a diaphragmatic nature venesection is indicated. In pericarditis and pneumothorax; bleeding in the former is useful when orthopnoea, irregular pulse, distended jugulars, and arterial anæmia are present, should these signs not depend upon excessive effusion into the chest. In the latter, when there is arrest of circulation in the collapsed portion. Again, in thoracic aneurysm and tumors of the mediastinum, venesection is advisable, as it relieves painful tension and assists the action of iodide of potassium. Only a few ounces should be allowed to flow, so as not to impoverish the blood.

7. In acute nephritis and uræmia blood-letting is sound practice.

8. In lumbago and certain forms of headache of a congestive nature. Dry cupping will be useful in the former, and bleeding from the nose, by leeches, or by venesection, will give the necessary relief in the latter.

9. When symptoms of impeded venous flow are present in cranial affections, as indicated by labored breathing, surface veins full, and face congested, venesection is to be practised.

10. Blood-letting should not be practised in a routine fashion.

The above summary will give us some idea of the principles and practice of blood-letting. There is a growing tendency in these days, says the author, to look upon the practice of surgery and medicine as a business or trade. True business qualifications are essential for every professional medical man, but there is another debt we owe to society, which they do not all seem to grasp, namely, the science of our calling, which is not a thing to be carelessly talked about. The fundamental principle of science is truth, and from this arises the true growth of our profession. It is our duty to know why we administer our drugs, antitoxines, and other therapeutic remedies, not to thoughtlessly apply them because we are told they are beneficial, but to work out our own scientific salvation.

Gandaberoza.—In our issue for October 12th, p. 689, under the heading, For Hæmorrhoids; an East Indian Remedy, we referred to this drug and stated that it was probably identical with *Boswellia serrata*. A further examination of Kanny Lall Dey's work, *The Indigenous Drugs of India*, brings out the fact that there are two drugs with closely similar vernacular names, the general therapeutical values of either of which make it difficult to distinguish which is likely to be the one referred to as useful in piles. According to Kanny Lall Dey, the gum resin of *Boswellia serrata* (N. O. *Burseraceæ*), the Bengali name for which is *Gandhabiroja*, "is used externally in the form of ointment as a rubefacient and stimulant application to boils, carbuncles, etc. It has been occasionally given as an astringent and diaphoretic. Its action, when taken internally, being chiefly directed on the mucous membrane especially of the lungs, it may be given in bronchitis, chronic laryngitis, and bronchorrhœa."

The other drug is the oleoresin of *Pinus longifolia*, the commonest of the Himalayan *Conifera*. Its Hindu name is *Gandha-biroza*. The oleoresin, which exudes from the bark, is heated to obtain the resin, both of which "are much used as external stimulating applications, for ulcers, abscesses and the like, and as a basis for plasters and an ingredient in ointments. Internally they are used to some extent and with some success as a stimulant diuretic in gleet and similar affections. The purified oleoresin might be given in doses of one to two drachms in emulsion. The tar is employed in chronic bronchitis and phthisis, and is a favorite application in skin diseases." It has been suggested to us that North Carolina pine-tar and gum turpentine are the nearest local similar products to the tar and resin, respectively, of *Pinus longifolia*, and might possess whatever virtues belong to *gandaberoza*.

A Case of Subcutaneous Injection of Paraffin for Cosmetic Purposes.—In our issue for March 16th we referred editorially to the Therapeutical Injection of Solidifying Fats, and called attention to the fact that what had been recently described as Gersuny's method, was practically identical with Corning's method of "elæomyenchasis," as described by him in our columns on April 14, 1894. Corning's case was one of obstinate painful spasm of a neck muscle. Kapsammer had used this plan in three cases of incontinence of urine. In the *Virginia Medical Semi-Monthly*, for September 13th, Dr. Junius F. Lynch reports a case of "saddle nose," the result of a blow received some ten years previously, successfully treated by him. The portraits of the patient's face before and after the correction of the deformity are very striking. Dr. Lynch says that the operation is very simple, and requires little time. In his case the patient left the operating room and went immediately to his work. The usual preparation of the field of operation is, however, very necessary, as is also the thorough sterilization of all instruments used. After the injection of cocaine, the paraffin, which has been previously boiled and allowed to cool, is drawn into the syringe and injected just under the skin until the depression is filled. It produces no irritation, and heals in place with little or no inflammation. In the course of two or three months it grows harder, and becomes of cartilaginous consistence.

The term *paraffin*, says Dr. Lynch, used in this connection is misleading, as one naturally infers that it is the hard paraffin which is used—the substance from which candles are made; whereas the soft paraffin, or "white vaseline," should be used, which is a soft salve at the temperature of the room, and emerges like a worm from the point of the needle.

Gynæcological Massage.—R. Olshausen (*Aertzliche Central-Anzeiger*, August 5th; *Post-Graduate*, September) says that massage is often uselessly and recklessly employed. In many cases it is positively harmful. Its use has been wrongfully extended to tearing up of peritoneal adhesions in the retroflexed fixed uterus or the slow stretching of pathological displacements. In the latter cases, as in lateral deviations, due to shortening of one broad ligament, this may be occasionally indicated and useful, but these movements are really not massage, which consists principally of kneading and friction.

The author denies the value of massage in displacements of the uterus. At most it may be directed toward adhesions. Replacement of recent retroflexions within a few months after delivery is also practised by the author, but this is not massage. He does not believe that the ligaments or muscles can be sufficiently strengthened by massage to develop the necessary contractility to hold the uterus in place. Similarly massage has no place in the treatment of endometritis. Almost the only field for massage in gynæcology is in the management of connective-tissue exudates, either of puerperal or postoperative origin. Even here, care must be exercised in selecting torpid cases in which there are no evidences of active inflammation. Tumors of the tubes are seldom accessible to this treatment. Peritonitic adhesions, hæmatoceles, anomalous positions of the vagina and uterus are inappropriate conditions for massage.

Special Articles.

ON THE ADVANTAGES OF A

TRACE OF ALBUMIN AND A FEW TUBE CASTS IN THE URINE OF CERTAIN MEN ABOVE FIFTY YEARS OF AGE.

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Year by year I see an increasing number of cases which justify the somewhat paradoxical heading of this brief paper. I do not wish to minimize the importance of the information to be obtained by an examination of the urine, but we must ever bear in mind the adage—true to-day as well as in the times of the old "Pisse-Prophets;" *urina est meretrix, vel mendax*—the urine is a harlot or a liar.

What I wish to emphasize is the importance of basing a judgment less on the urine than on the general condition of the patient. The cases to which I refer are well known to every examiner for life insurance. The successful business or professional man, who lives intensely and strives hard to get wealth or reputation, or both, and who takes plenty of good food three times a day, with two or three glasses of spirits, and smokes six or ten cigars, works in blissful ignorance that his bodily mechanism is constructed on much the same principles as a steam engine. In the one, as in the other, fuel, combustion, transformation of energy, and the accumulation of waste materials tell the story of the day's work. The engineer as a rule understands his machine better, and accommodates the amount of coal burnt to the size of the engine and to the amount of work required. He does not "stoke" No. 15, a small yard engine employed to shunt empty cars, as he would No. 580, the superb machine drawing a limited express. Another important difference is the automatic action of the human engine in getting rid of its ashes and clinkers. The waste-pipes bear the strain of the extra work when the amount of fuel consumed and energy liberated is out of all proportion to the work demanded. No. 15 "stoked" as if it were No. 580, drawing the lightning limited, would go to pieces very rapidly. So it is with our business friend, Mr. Silas Lapham. Careless stoking with high pressure for twenty-five years and bad treatment of his machine mean early degenerations, and his waste-pipes—kidneys—are often the first to show signs of ill usage. Such a man receives a very rude shock when in a polite note the head office of the New York Mutual or Equitable Company declines the extra fifty thousand dollars which he had wished

to place upon his life, as the medical examiner reports "a slight trace of albumin and a few tube casts" in the urine. After a period of great distress and worry Mr. Lapham begins to take heart, and on the advice of his family physician remodels his mode of life. He restricts his appetite, takes a light lunch and a moderate dinner, gives up whiskey and champagne, resigns from six or eight boards, and at fifty starts to live a rational life. Prospectively nothing could have been more advantageous than the discovery in the urine of a trace of albumin and a few tube casts.

Let me give a few illustrations. Throughout the winter of 1880-'81 I repeatedly examined for Dr. R. P. Howard the urine of a very distinguished man in public life in Canada, in whose urine albumin and tube casts had been accidentally discovered, on the occasion of his applying for additional life insurance. At this date the patient was a man of nearly sixty, who had lived a very active life, and who had been very careless in his habits of eating and drinking. I remember well the great anxiety of the patient himself and the distress that was felt at the possibility that the career of so useful a man would be cut short. In the summer of 1881 I went to England on the same steamer with him, and in London I discussed his condition with Sir Andrew Clarke, who took a very sombre view of the case. After a year or more of rest, the patient gradually got over his fright and began to resume work, of which he has in the past twenty years done perhaps quite as much as he did in the previous twenty years. He is still alive—an octogenarian of exceptional vigor.

Many of the most notable cases are those in which the patients have been rejected for life insurance. In the cathedral at Antwerp this summer I was touched on the shoulder and a voice in my ear whispered, "Not dead yet!" On turning I saw a gentleman who came to me on the 30th of January, 1891, at the age of fifty-three, in a condition of great trepidation, having been rejected a few days before for Bright's disease. He had been a hard worker and a high liver, and had a marked gouty history. In the ten years I have seen him once or twice professionally, and he has tried on several occasions to get additional insurance, but the urine, he tells me, though sometimes free from albumin, has, on centrifugalizing, a few tube casts. He is to-day a vigorous man of sixty-three.

Another interesting patient belonging to the same group of "the rejected of the life insurance companies," was a prominent politician, aged sixty, whom I saw on April 23, 1893, also much distressed in mind after the discovery of albumin and tube casts in the urine. He had been a very hard worker and a pretty steady drinker to his forty-fifth year,

but since that date he had been very temperate. The patient had regarded himself as a very healthy man, and was much shocked to find his application for additional insurance refused. I have seen him at intervals, and while he has retired from active work, he is to-day a very healthy man of sixty-eight.

What I wish to call special attention to is the fact that in men in the fifth and sixth decades albuminuria is by no means infrequent and not always serious. It is probably the expression of presenile changes in the kidneys, the result of arterial degeneration, and is often a renal inadequacy, to use Clarke's term, not of vital importance. Neither the presence of albumin nor the number and variety of the casts have the same value in estimating the character of the disease and the prognosis as other factors.

The points on which one should lay special stress as indicative of serious disease are:

1. Persistent low specific gravity of the urine, 1.008 to 1.012.
2. The state of the heart and arteries. Marked sclerosis of the peripheral arteries, with the apex beat of the heart an inch or two outside the nipple line, and a ringing, highly accentuated aortic second sound.
3. The presence of albuminuric retinitis.

It is not always easy to reach a decision, as there are cases in which the detection of a trace of albumin and a few tube casts first calls attention to the existence of serious organic disease. Two conditions have to be carefully differentiated. First, a primary arteriosclerosis, manifest sometimes as early as the fourth decade, and quite common in this country in men who live at very high tension, and who eat and drink a great deal. It is surprising how often this state is overlooked by the general practitioner. The renal changes are secondary, and are expressed by a transitory albuminuria, a not very low specific gravity of the urine, which is not in very large amount. The kidneys post mortem are often of full size, red and beefy in color, with a patchy, cortical sclerosis.

Secondly, the granular, contracted kidneys. Here the ætiological factors are all-important. The cases, which are less common than the arteriosclerotic variety, are met with in young persons consecutive to scarlet fever and other infectious disorders, in middle-aged individuals who have had gout, in workers in lead; while in others, in whom no definite factors can be determined, it would seem as if the kidneys had become prematurely aged and hard and fibroid. The cardiovascular changes are very much the same as in the arteriosclerotic group, uræmic symptoms are much more frequent, persistent headache is a notable feature, and retinal changes are very much more common.

Very few of us are made as was the Deacon's masterpiece, the wonderful One Hoss Shay, and lurking somewhere there is a weakest spot, very often in our modern mode of life the kidneys, which, to use the language of the Autocrat's fine poem, may begin to show "a general flavor of mild decay" in the fourth or fifth decade. In very many cases the albumin and the few hyaline casts are simply the expression of this "mild decay" in the kidneys, and not of a condition serious enough to be called Bright's disease. A very important factor, I am sure, is the excessive amount of food eaten. I am much impressed by Aphorism 13 of George Cheyne's *Essay on Regimen*, so well known to our grandfathers; it is worth quoting, as containing the one important element, I think, in the treatment of the condition of which I am speaking: "Every wise man, after fifty, ought to begin to lessen at least the quantity of his aliment; and if he would continue free of great and dangerous distempers, and preserve his senses and faculties clear to the last, he ought every seven years to go on abating gradually and sensibly, and at last descend out of life as he ascended into it, even into the child's diet."

In conclusion, let me not be misunderstood. A trace of albumin and a few tube casts are danger signals, the red lights which may mean an open draw-bridge or a wrecked road ahead; but they may be simply warnings to the engineer to "go slow," that the pace is too rapid for the state of the track, and it is to the latter significance of the "red lights" that I wish to call attention.

The Pulse in Infancy.—Dr. H. Oliphant Nicholson (*Scottish Medical and Surgical Journal*, May) concludes a paper on this subject as follows:

The chief points that I have endeavored to establish in this communication are: (1) That, notwithstanding the statements of Ozanam and Keating and Edwards, the sphygmogram of the new-born infant's pulse is not the simple type of curve which they describe; (2) that it shows a distinct percussion wave which forms a pointed summit to the curve, and that the usual secondary waves are quite recognizable, therefore the sphygmogram is *not* of the monocrotic type; (3) that it reveals all the characters of a *relatively* high-tension pulse; (4) that in very young infants the form of pulse tracing is comparable to that obtained in aortic stenosis and aortic aneurysm in the adult, where the characters of a high-tension pulse are also produced; (5) that diastole is as fully represented at birth as it is in any high-tension pulse; (6) that the summit of the pulse curves becomes more pointed, and the secondary waves are accentuated during the first year of life, but the pulse still remains of moderately high tension; and (7) that pyrexia in children under a year old very rarely produces diastole or hyperdiastole of the pulse.

Original Communications.

MODIFICATION IN THE METHODS OF OPERATIVE SURGERY RESULTING FROM LABORATORY RESEARCH.*

By JOSEPH D. BRYANT, M. D.,

The relations between the deductions of theoretical inquiry and those of practical demonstration are not matters of recent significance. All along the pathway of human advance are noted conspicuous evidences of these relations in every line of great attainment. In fact, the establishing of important truths and beneficent results demands the cooperative influences of creative thought and demonstrative action.

Benjamin Franklin, in Nature's laboratory, with his kite and key, demonstrated the identity of lightning and electricity, the presence of electric current, and laid the foundation of electric utility.

In the same workshop some years previously Newton conceived the idea that gave birth to the determination of the power that controls the physical stability of tangible objects—the universal law of gravitation.

The foresight and courage of Martin Luther, stimulated by papal abuses, led to the Reformation, and laid the foundation of religious tolerance and popular education throughout the civilized world.

Tyndall's demonstration of the presence of germs in a single pencil of light, followed by Pasteur's isolation of them by filtration of air through cotton; and, later still, the determining by Pasteur, Schwann, and Von Dusch, that organic matters, like blood, tissue, etc., were preserved from putrefactive changes when protected from the influences of these organisms, caused the wise and thoughtful Lister to guard fresh wounds from deleterious changes, by excluding and destroying the agents producing them.

Thus, by the creative labors of Tyndall, Pasteur, and others, supplemented by the no less important demonstrative work of Lister, were scientifically laid the foundations of a modified surgical technics, more beneficent in its contribution to relief from the effects of human physical disaster and affliction than that of any other therapeutic conception.

Although it is true that some of the conclusions of these eminent gentlemen proved fallible, yet it cannot be justly denied that their labors in this field laid the foundations, and attended at the birth, of modern antiseptic care. Antisepsis, the older, and asepsis, the younger of the offspring of these surpassing conceptions, will increase in importance in

direct proportion to the increase in the number of the human family, and the environments that beget human physical mishaps. In a broad sense, the modifications of operative method flowing from pioneer thought and labor, are almost limitless in their application and quite incomprehensible in the beneficence of their outcome.

It may not be amiss at this time, in passing, to refer to the fact that the reader was not born yesterday. Although superfluous as a statement, yet it may serve the purpose of impressing the idea that his early experience in Bellevue Hospital, as interne, compared with that of a later experience, as visiting surgeon there, emphasize in no uncertain manner the importance of the findings of laboratory research in the outcome of the treatment of physical injuries within the walls of this institution. Neither verbal contention nor questionable tradition can enter into the consideration of the differences of the outcome of these periods, since the records of the time and the memory of this participant are agreed. From October 1, 1870, to April 1, 1871, the reader served as house surgeon in Bellevue Hospital, terminating thereby an eighteen months' service as interne in that institution.

No mention will be made of the associated services, except to say that all suffered alike from frequent invasions of erysipelas, and the almost constant presence of pyæmia, usually of the chronic character.

Bellevue Hospital at this time received nearly all of the surgical cases in the city, as the New York, Roosevelt, Presbyterian, Gouverneur, and many other of the present important hospitals, were yet unthought of or in practical abeyance.

Bellevue only had an ambulance service, established a few months before, at the instance of the then warden, the late Hon. Thomas S. Brennan. The visiting, numbering many of the best names in the profession, were zealous and effective in their efforts, according to the understanding of that period of professional activity.

Carbolic acid, balsam of Peru, oakum, and long-established remedies of corresponding nature, were freely and constantly employed. Antisepsis, in the present sense of comprehension, was practically unknown and certainly unappreciated, and asepsis, of course, yet further removed from the field of utility. As an illustration of the status of special scientific investigation on the part of some at this time, I am prompted to repeat the assertion of a distinguished visiting surgeon of my division, who, while examining a somewhat startling array of temperature findings in a series of cases of compound fractures, said: "I can tell the temperature as well without as with the thermometer, and before long, young man, its use for this purpose will be discontinued."

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It is with no intention of belittling in any way the well-earned reputation of this gentleman that this incident is recalled, but rather to illustrate the lack of appreciation of the scientific value of accurate records, also to emphasize a truth—viz., that the outcome of close clinical observation begotten of broad experience without the aid of technical means is just as apt to be trustworthy as the outcome of extended technics unfortified with a proper degree of rational observation.

A short time before and during this period, the echoes of the practical demonstrations of Lister in wound treatment, based on the laboratory findings of Tyndall, Pasteur, and others, began to arouse the favorable attention of many, and the forcible opposition of some, of the eminent surgeons of the period.

It should be emphasized at this time that then, as to-day, Bellevue Hospital, though of comparatively meagre appointments and devoted to the cause of charity, yielded as creditable results to surgical aims as were elsewhere attained.

But enough of this. Please listen to the fact that during my house service of six months, not less than nine patients died from pyæmia, as a complication of compound fracture and of amputation. Then severe compound fractures and compound dislocations were amputated to obviate pyæmia, and thus save the patients' lives, and many of these died thereafter from it, because of primary or secondary involvement.

To-day and long ago, in only such compound injuries as forbid retention of the damaged parts is amputation practised, and pyæmia so seldom occurs as to escape the recognition of the house staff, and perhaps at first of the visiting surgeon as well. During an active visiting service in the surgical wards of Bellevue Hospital, from 1882 to the present time (nineteen years), I do not recall having to deal with as many cases of pyæmia as during my previous six months' house service!

During the earlier period, as before remarked, antiseptics were used blindly, empirically, and, therefore, most inefficiently. They were known to be serviceable, but for what exact reasons and to what extent were enigmas.

The following case is historically a matter of some interest, as bearing on the question of the initial use of the Lister dressing in Bellevue Hospital:

"John McNamara, aged fifty, admitted March 11, 1871, compound depressed fracture of the skull from blow with a hatchet; bone elevated; dura not involved; Lister dressing applied."

In the treatment of this case Lister's lac plaster dressing was employed by the author. It is believed to be the first application to a wound in Bellevue Hospital of the then Lister plan of antiseptic pro-

cedure. The patient recovered only after the occurrence of erysipelas. We are not disposed now to attach much special importance to this treatment, except in so far as it related to the influence of cleanliness. To inform those not familiar with the lac plaster and its use, the following statement is added:

Extract from *British Medical Journal*, November 14, 1868, p. 516:

"*Lister's Lac Plaster* is formed thus:

"Shellac, 3 parts; crystallized carboilic acid, 1 part. Heat the lac with about a third of the carbolic acid over a slow fire until the lac is completely melted. Then remove from the fire and add the remainder of the acid, and stir briskly until the ingredients are thoroughly mixed. Strain through muslin and pour into the machine for spreading plaster; and when the liquid has thickened by cooling to a degree ascertained by experience, spread to a thickness of about one fiftieth of an inch. Afterward brush the surface of the plaster lightly with a solution of gutta-percha in about 30 parts of bisulphide of carbon. When the sulphide has all evaporated, the plaster may be piled in suitable lengths in a tin box without adhering, or rolled up and kept in a canister."

The gutta-percha and bisulphide of carbon were applied to prevent the plaster adhering to the skin. The idea was to provide an agent that would not be impaired by the discharges, and that, when placed around the wound, would render the discharges more or less innocuous because of the exhalations of carbolic acid.

This dressing bespeaks the ingenuity exercised by Lister thirty-three years ago, in his effort to perfect the method of treatment that now bears his name.

Prior to established antisepsis, the pleura, meninges of the brain and spinal cord, and especially the peritonæum, were regarded as almost inviolable to surgical invasion; and when suffering from involuntary trespass, even of trivial degree, the gravest apprehensions for the safety of the patient were aroused. It is not impossible that this sentiment influenced the course of action of eminent visiting surgeons in the following illustrative cases that fell under the writer's observation during his hospital internship:

CASE.—"A patient with a greatly distended bladder from retention due to stricture, was given an anæsthetic for operative purposes. During the active stages of anæsthesia the bladder ruptured into the peritoneal cavity. At once the case was declared hopeless, and no active effort was made to forestall the inevitable result, and the patient died eight hours after. Autopsy revealed two and one half quarts of light-colored fluid in abdomen, bladder collapsed; circular opening at apex one half inch in diameter bearing no evidences of ulceration."

The present active methods of relief rescue over sixty per cent. of such cases as this.

In 1870 "a rugged patient, thirty-six years of age, was admitted with extraperitoneal rupture of bladder, from retention due to stricture. Free incisions were made to relieve extravasation, and abscesses due to it were opened. No effort was taken to determine and repair the seat of rupture. The patient died at the end of six weeks, from exhaustion. Autopsy revealed rupture of anterior wall of bladder."

The present method of operative practice saves about seventy per cent. of this class of cases.

Penetrating gunshot and stab wounds of the belly received no active interference at this time, opium being the agent employed in the treatment. The outcome and the reasons for it require no comment.

CASE.—*Pistol shot wound of abdomen.* "Patient, aged forty-eight, admitted November 27, 1870, 2 a. m.; in hypogastric region. Probe entered $1\frac{1}{2}$ inch. Bloody urine. Soon after admission, pulse 76, temperature $98\frac{3}{4}^{\circ}$ F., respiration 30. *Treatment:* Drainage of bladder by catheter and abundance of magenthe cups to kidneys. Gradual failure until patient died, 4.30 a. m. on following day. *Autopsy.* Ball passed through several knuckles of small intestine, penetrated bladder posteriorly, entering obturator internus muscle. Several pieces of clothing found in bladder. Considerable clotted blood in peritoneal cavity."

Modern methods of procedure in gunshot wounds of the intestines result in 30 per cent. recoveries instead of 95 per cent. deaths when following the old expectant plan of treatment. From 13 to 40 per cent. of stab wounds of the abdomen recover now under these methods.

I recall, about 1875, a consultation of the surgical visiting staff, in a case of intestinal obstruction.

CASE.—"Patient, aged thirty-four, April 22, 1875. Past history of inflammation of the bowels nineteen years previous, following child-birth.

"Present history: After having had no movement for two days, was seized with cramps, five days after which she entered hospital, distended, tender and vomiting, having had no movement for seven days, vomiting bile and mucus. Pulse, 108; respiration, 15; temperature, $100\frac{1}{2}^{\circ}$ F.

"Distention became extreme, vomiting continued, no movement of bowels, and on fourth day after admission a consultation of physicians and surgeons was called.

"It was concluded that there was a constriction caused by some bands of adventitious tissue, the result of an old peritonitis. It was decided to perform gastrotomy to relieve the constriction, and that immediately before the operation, with the patient completely anæsthetized, a cannula of an aspirator should be plunged into the abdomen at various places, in order that in this way exit might be given to the gases.

"This being done and being followed by the desired result, the operation was performed in the following manner: Abdomen opened and adhesions around transverse colon and sigmoid flexure torn up.

"Patient died ten or twelve hours after operation. *Autopsy.* Peritoneal cavity contained moderate amount of blood-stained serum. Recent peritoneal exudation. Large intestine distended and contained some fæces. A loop of small intestine near ilio-cæcal valve was strangulated over a band. It was filled with fæcal matter."

Modern methods of practice rescue from twenty to fifty per cent. of these cases, as they present themselves for relief.

It is hardly required to further multiply personal examples substantiating the fact that the important operative practice of to-day represents largely the methods born of human ingenuity and courage, fortified by the outcome of modern laboratory research.

Then, patients with rupture of the spleen, kidney, intestine, etc., and with serious structural and traumatic injuries elsewhere, were left to recover through Nature's resources, to die unrelieved, or, in the latter class, subjected to destructive operative practice.

Now, the knowledge gained from laboratory study of the fluids and solids of the body, enables us to exercise scientific prudence in determining the operative cases, and in indicating the time when operation may be done.

Now, antisepsis and asepsis point the way of safely attaining operative aims, by the establishing and maintaining of absolute cleanliness of the operative field and of everything coming in contact therewith at any time.

Now, the dangers from shock, hæmorrhage, and sepsis, the old and indefatigable trinity of surgical disaster, are met with a degree of precision that has quite shorn them of their dread uncertainties, and consigned them to the field of rational scientific deduction.

The outcome of surgical effort, guided by the high order of laboratory knowledge and of human courage and experience, has established an era in surgical attainment in the relief of human suffering and physical shortcoming, akin in the medical world to that of the fulfilment of the beneficent sayings of the prophets in the spiritual.

However, it should not be forgotten that practical effort does not necessarily require the guiding hand of laboratory research in all instances, and also that a too great heed to its admonitions may rob a patient of valuable chances of relief.

Time will not permit, nor does the occasion demand, that I should enter into the consideration of the specific modifications of methods of operative practice arising from bacteriological and pathological research. These are already well expressed.

It is possible that too much time was given to the somewhat striking examples of the *then* in the earlier and the *now* in the latter part of the paper.

If so, in the former instance the course was prompted by the fact that nowadays one not infrequently hears from those of the more recent periods of surgical activity the statement, "I've been told that gunshot wounds of the belly were untreated formerly," and that "intestinal obstruction was not operated on then as now," and other remarks like unto these.

Yes, my friends, such was the case, and had you been living then, you also would have dared no more than they, and, like them, would have regarded your efforts, as you may now, as the exemplification of the best that is known.

VESICAL EMERGENCIES; THEIR SURGICAL MANAGEMENT.*

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The great majority of vesical emergencies requiring immediate surgical attention depend entirely, or at least primarily, on retention of urine, and it is a consideration of these conditions which is the object of this paper. Consequently, nothing will here be said concerning vesical rupture from indirect violence, vesical perforation from direct violence, or concerning other conditions which may arise chiefly as complications of various pathological states of the bladder and which may occasion a surgical emergency.

When one is called in a case of retention of urine, the service demanded—the necessity of emptying the bladder—is usually so clearly defined as to be self-evident to the surgeon. Still I have, on more than one occasion, known of instances where physicians of considerable general experience have failed in that particular and made a wrong diagnosis. The cases where such failures have been made, and in some of them the advent of the retention has been so insidious as in a measure to palliate the surgical mistake, are those where the vesical function has failed as the result of great bodily prostration consequent on general disease or injury, where it has failed owing to injury to the nerve centre or supply, or where the failure, owing to the very gradual development of an obstruction to the outflow of urine, has been so slowly progressive that a condition of what is termed chronic retention has developed.

In that class of cases the patient himself does not make evident to the surgeon just what the trouble is, by frantic and ineffectual attempts at urination

or, as a rule, by any personal complaint directed toward the bladder. Where a person's vitality is greatly lowered, especially if he is past middle life, as may occur in the course of typhoid, pneumonia, or other severe febrile disturbance, the occurrence of the gradual development of retention should always have the attending physician's attention. Such retention is not infrequently an outcome of severe surgical shock, especially in those addicted to the free use of stimulants. Chronic retention is not infrequently seen in the case of elderly individuals suffering from prostatic or urethral obstruction.

In these cases the passive dribbling away of urine from the meatus, which constantly wets the clothing or bedding, and the discovery by abdominal palpation of the hypogastric tumor resulting from the full bladder, are in themselves sufficient to lead a surgeon to a correct conclusion. The mistakes in diagnosis are not made by those who look for this complication and fail to find it, but only by those who, forgetful of the possibility of its existence, fail to look for it.

Cases of vesical retention can be surgically subdivided into two general classes, those amenable to catheterization, and those that are not. Under the first heading can be grouped instances of spasmodic retention and those dependent on paralysis or on causes which have occasioned a marked lowering of vitality, all instances dependent on so-called passable stricture of the urethra uncomplicated by urinary extravasation and its sequelæ—gangrene, abscess, and septic absorption—prostatic retentions uncomplicated by urethral laceration, free hæmorrhage, or sepsis, and some of the rare forms of retention due to neoplasms, calculi, etc. Although catheterization may be easily effected in some of the lighter grades of deep urethral traumatism causing retention, the urethral lesion being a severe contusion or a minor degree of laceration, still such cases cannot be grouped among those suitable for treatment by means of the catheter, owing to the disastrous consequences which generally follow dependence on a catheter and the avoidance of perineal incision and drainage.

It is hardly necessary to enumerate the instances of retention which are grouped under the second heading, since they include all cases excluded from the first list.

When one encounters a case of retention where traumatism, the result of external perineal violence, is not the evident cause, the first, and one might almost say the natural, surgical indication is to pass a catheter and draw off the accumulation. In this connection it is needless to state that careful antiseptic precautions should be observed. No effort will, however, here be made to detail the nature of these precautions, since the aim of this paper is the dis-

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cussion of instrumental manipulation and operative procedure. One extremely important point to be especially emphasized before attempting relief by catheterization, is gentleness in instrumental manipulation, in order to avoid all needless urethral traumatism. One should always remember, in cases of great vesical overdistention, that much resistance will be encountered when the attempt is made to pass any instrument along the membranous and prostatic urethra, even in cases wholly free from organized obstruction in that portion of the canal. This resistance, which is caused by tenesmus and spasm, immediately disappears with the relief of the retention. If one forces a sharp-pointed or rigid instrument against such an obstruction it is a very easy matter to cause a false passage, an accident which is very likely to remove the case immediately from the group of retentions that can be treated by simple catheterization to the group demanding a serious operative procedure undertaken in an emergency. Harmful traumatism can never be done by a soft rubber catheter. Such an instrument is, however, rarely of use in this connection, since its softness is so marked that its shaft doubles up or kinks, owing to the deep urethral resistance, an accident which checks its further progress. Gum elastic silk woven catheters are often of great value. If a retention is spasmodic in character, the urethra being free from stricture or other complicating conditions, a blunt-ended instrument of this description, of good calibre, will generally pass without difficulty. Or if not a blunt-pointed, an olivary-pointed one is apt to answer equally well. Less resistance will be met in passing the olivary-pointed instrument. In fact, if marked resistance is met with, that form of instrument should be abandoned, since, if its point is arrested and firm pressure continued, there will occur a sharp bend at its neck, so that its point will face backward rather than forward. If retention is caused by urethral stricture, chief dependence must be had on gum elastic olivary-pointed catheters. In such an instance, if the olivary point is fine enough to pass the stricture, then it may be that the wedge-shaped neck may so dilate the narrow area as to allow the passage of the shaft. In using such an instrument if the point cannot be made to pass the stricture by gentle manipulations force will not avail. In fact, it is only after the point has passed the stricture and the neck is engaged that any force should be used to push the instrument along. Where olivary-pointed catheters fail, recourse should be had to whalebone filiform bougies. As the opening of many strictures is excentric as regards the natural calibre of the urethra, it is well to bend the necks of these instruments at various angles with their shafts, in order to facilitate their engagement in the orifice of the stricture. If the point of one of these fine in-

struments once becomes engaged in the orifice of the stricture, the subsequent passage of its shaft is usually an easy matter. When a filiform bougie cannot be made to pass, the fact is usually accounted for by the existence of some complication, such as a false passage or secondary traumatic or inflammatory changes, which have caused a disorganization of the part. If a filiform has been passed, much has been accomplished. Many a time, urine will flow freely along the shaft of such an instrument. If the surgeon has no other means of relief at hand, the filiform should be tied in and the patient put to bed, the great chance being that there will be gradual relief, at least from the state of overdistention. In the Gouley tunneled catheter, however, which slips over the whalebone filiform as a guide, one has then the means by which the retention can be immediately relieved. In an obstinate case, especially where there is marked tenesmus and where the preliminary attempts with catheters have failed, conditions can be made more favorable for their passage by eliminating the element of spasm. This can be accomplished by cocainizing the deep urethra or by the administration of general anæsthesia. If failure still attends the surgeon, and for some reason or another a radical operation cannot well be performed, the bladder can be emptied by suprapubic aspiration. The bladder being so relieved, it is not improbable an instrument which had previously failed will then pass readily. If retention is due to prostatic obstruction, the problem of relief by catheterization is different from that presented in the previous class of cases. In the latter cases, there is no narrowing of the urethral calibre from a stenosis of its walls, the obstruction being due to a localized extra-urethral tumefaction which, by direct pressure, collapses the lumen of the canal. Consequently, it is obvious that a catheter of good calibre can be made to pass, provided its point is progressively maintained in a line with the direction of the canal and prevented from becoming arrested by impingement against irregularly projecting masses of prostatic hypertrophy. In many prostatic cases where there are no such projecting masses, the relief of retention is as easy a matter as in simple spasmodic cases, while, in the other class, it may be most difficult. Where the retention is not accompanied by much tenesmus and the volume of the fluid is moderate, it may be possible to pass a soft rubber catheter. Such an instrument, owing to its elasticity and flexibility, is very apt to avoid impingement on jutting hypertrophies. These same qualities, also, make it fail where spasm or pressure offers much general resistance to its passage. Among the silk woven instruments, those straight and blunt or olivary-pointed may pass. They will not do so, however, if, as is frequently the case, the floor of the prostatic urethra presents ir-

regularities due to the impingement of hypertrophies. Such instruments may be tried, but if, at the first attempt, the point of the one employed becomes arrested, it should be withdrawn and no other instrument of such pattern tried. In order to avoid the irregularities along the floor of the prostatic urethra, the silk-woven catheter with the single or double Mercier bend is most useful. Next in order, if these do not pass, the English gum instrument, bent so as to conform to the prostatic curve, and kept in shape by its stylet, may be employed. Last of all comes the time-honored silver catheter, with its prostatic curve. Although the silver instrument, when properly used, can be made to pass in almost all instances of prostatic retention unattended by complications, it is dangerous unless very carefully employed, owing to the great leverage which its rigid curve represents. It can nowadays be almost said to represent an emergency instrument, since no progressive surgeon now advocates it for constant use in a given case. Where prostatic obstruction is so grave as to require this instrument, a prompt resort to radical surgery should be insisted upon. Anæsthesia, local and general, and suprapubic aspiration play about the same rôle in this form of retention as in the form previously considered.

In the second group of cases—those not amenable to catheterization—the surgeon has to meet the emergency by liberating the retained fluid through the medium of an incision. There are two practical routes for such incisions, the perineal and the suprapubic. In the great majority of instances, the perineal is the one chosen. The few instances in which, to my mind, it is not advisable, will be noticed in the following discussion of the subject. Perineal operations of this character are usually surgically subdivided into two classes, those with, and those without, a guide. The mere entering of the bladder by perineal incision in cases where the point of the knife is guided by the groove of a staff, which instrument has been passed along the urethra and into the bladder, is not a difficult operation, although one that is very frequently faultily performed. In most instances of retention caused by stricture, which are not amenable to catheterization, no staff can be so passed. In some of these instances the difficulty lies in the fact that, as a result of previous unskilful instrumental attempts, one or more urethral lacerations or false passages have been made in front of the anterior face of the stricture, while, in some of them, a filiform instrument becomes arrested after its point has apparently become engaged in the anterior orifice of the stricture. In such cases and in those of very recent rupture of the urethra, in the absence of perineal gangrene or marked diffuse inflammation of the part, the surgeon should pass first of all a tunneled grooved sound along a filiform, if

it has been found possible to engage the tip of that instrument in the anterior orifice of a stricture; and if not, a simple staff should be passed down until its end is arrested by the obstruction. When so passed, the instrument should be steadily maintained there by an assistant while the patient is placed in the lithotomy position. A free median perineal incision should then be made, laying open the urethra from one half to three quarters of an inch above the end of the steel instrument down to its end, and continuing in the median line down to the rectal sphincter. A short incision is always a mistake. The first thing to do after thus laying open the part, is to see if the upper portion of the canal exposed, represents the interior of the urethra, and not a false passage into which the instrument has been deflected. The terminus of the urethra anterior to the stricture having been definitely determined and exposed by lateral traction on its cut edges, the next step is with a filiform or fine probe, under the guidance of the eye, to try to pass the stricture. By gently probing in likely places, aided by careful dissections in the median line through the cicatrix, this can generally after a short time be accomplished, after which it is an easy matter to enlarge the narrow path and complete the operation. The accomplishment of perineal section without a guide is classed as a difficult operation. A skilled operator ought, however, to be equal to any difficulty it may present, provided the perinæum is not in a state of thorough disorganization from extravasation, accompanied by gangrene and suppuration, or from traumatism. Where any of these contraindicating factors exist, certainly to a marked degree, their presence can be recognized by the surgeon before attempting the operation just described. When a surgeon encounters a patient suffering from retention, complicated by perineal gangrene and suppuration the result of extravasation, the indication is to drain the bladder and the perinæum as quickly and as thoroughly as possible. In such an emergency, first put the patient in the lithotomy position and make a median perineal incision, deep enough to expose freely the pathological focus. If there has been burrowing of the extravasation, from the central incision lateral ones should be made, freeing from all pent-up secretions the ischio-rectal, the scrotal, and whatever other parts, the process may have invaded. Pay no attention to the deep urethra. This being accomplished, the next step is, placing the patient flat on the back, to open the bladder suprapubically and arrange suprapubic vesical drainage. Then, at the end of two weeks' time, after all perineal gangrene and slough have become detached, leaving a healthy granulating surface, a secondary perineal operation for the repair of the urethral disorganization should be undertaken. The posterior end of the urethra can then be definitely indicated by

retrograde catheterization, an aid which obviates the necessity of the operation without a guide. In some of these cases, where a portion of the urethra has become involved by the gangrene and so disappeared, the location of the posterior end of the canal in this manner is most essential.

In case of complete rupture of the urethra, where operation is undertaken early and before gangrene has commenced, retrograde catheterization to locate the posterior urethral segment and repair of the urethra should be undertaken immediately after the bladder has been drained suprapubically.

The method here detailed of managing cases of retention due to stricture, complicated by extravasation and perineal gangrene, I first published in 1896,¹ in my book of last year.² I have practised it since 1895, and my impression is that it is original with me. By this, I do not mean that there is anything original in the operative technics, but in the manner of timing the different steps in the general operative procedure, and in the rule laid down, not to attempt direct draining of the bladder by way of the perinæum at the time of the first operation. Surgical emergencies of this description, especially where extravasation and gangrene are extensive and the accompanying evidences of general septic absorption marked, are usually and justly considered desperate surgical risks; yet, in my experience, which has been considerable, with the method here advocated, recovery is the rule and death the great exception. The reasons for the great lessening of mortality from the method here advocated are several. In the first place, the patient, when first seen in a low septic condition, is in no state to withstand a long surgical ordeal, such as is likely if the surgeon attempts to find the deep urethral opening without a guide in the midst of gangrene and inflammatory disorganization. By such surgical disturbance of these gangrenous tissues a great amount of septic material is suddenly introduced into the lymphatic and circulatory system, a fact in itself which generally turns the scales against the patient. In severe instances, the suprapubic incision in itself serves to liberate deep extravasations, the presence of which would not otherwise have been suspected. The suprapubic vent entirely diverts the urine from the extravasated area, thus effecting a quicker resolution than could be attained had the perineal route been chosen. The aid given by the suprapubic incision in enabling the operator to make use of retrograde catheterization in connection with the secondary operation, is oftentimes marked.

Where prostatic retention occurs in cases not amenable to catheterization, the rule should be im-

mediately to perform prostatectomy, thus effectively and radically removing all future obstruction to urination. If such a patient is seized by retention in some place where a little delay before operation cannot be avoided, then the aspirator can be employed to tide over the interval. In cases such as this, never be content with establishing urinary drainage, either suprapubically or perineally, and with leaving the prostatic obstruction undisturbed. It may be that some will take exception to the rule I have laid down, and argue that the surgeon, in these cases, should content himself with the establishment of suprapubic drainage. If a surgeon is not equal to the skilful performance of prostatectomy, I admit that the exception to my rule is well taken. I, however, feel that I can perform prostatectomy in these cases in conjunction with effecting a relief of the retention, without adding materially to their immediate hazard. While, on the other hand, if vesical drainage only is established, the lives of these patients still remain in jeopardy from the many ills attendant on their prostatic malady. It may also be asked why I do not in these cases, as in those previously considered, advocate a division, as regards time, between the establishment of vesical drainage and the removal of the obstruction. In answer I would state that there is no suppurative or gangrenous tissue in the second class of cases, the disturbance of which is especially dangerous. To be sure, the vesical contents in many of the prostatic cases are purulent, but with thorough irrigation at the time of operation, and with the surgical establishment of perfect vesical drainage, little general absorption from that source is to be expected. One of the chief reasons, however, against making two surgical operations in the case of prostatics, lies in the age of the individuals. Old people cannot endure a series of surgical ordeals or continuous confinement to bed. Do whatever surgery their cases may require quickly and completely. Arrange their prostatic operations so that the vesical drainage will be free, the after-discomfort slight, and the pain associated with surgical dressings *nil*. Let the time during which they must lie still in bed be very brief, making them sit up and move about as soon as the condition of the wound will possibly warrant. Confinement in bed for a considerable interval is, of itself, sufficient many a time to hasten death in the case of aged individuals.

The Mütter Lecture for the year 1901 will be delivered by Dr. Harvey Cushing, of Baltimore, in the hall of the College of Physicians, at Philadelphia, at 8 p. m. on Tuesday, December 3d. The subject of the lecture will be Some Experimental Observations Relative to the Surgery of the Nervous System.

¹Good Results Following Urethral Resection. *Medical News*, July 25, 1896.

²*Diseases of the Genito-urinary System*. The Macmillan Co., 1900.

LEUCOPLAKIA.

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CASE I.—History. A man, sixty-seven years of age, referred to me on November 26, 1897, gave the following history: He had been an inveterate smoker nearly all his life and especially of late years. He also chewed tobacco, habitually carrying the weed in the left side of his mouth. For the past thirty-five or forty years he has had a lesion upon the inner side of the left cheek. Sometimes the disease has been irritated by smoking, but, on the contrary, it has sometimes seemed to be soothed by that practice. At one time, the patient gave up the habit of smoking entirely for two years and a half. As a consequence, the lesion at first almost healed, but subsequently it returned and became as bad as or worse than ever. When he smokes he has long been accustomed to carry his cigar in the corner of his mouth, so that the smoke does not come into direct contact with the patch. The man is in good general health. According to his statement he suffered ten or twelve years ago from eczema. He says that nearly all his life he has been subject to some kind of an eruption upon the skin. He has never had syphilis.

Status præsens. Upon the inner side of the left cheek, extending from the angle of the mouth to the junction of the cheek with the roof of the mouth, is a silvery white patch, similar in appearance to that produced by carbolic acid. The affected surface is rough in consequence of the projection of the papillæ. The surface is almost continually involved within the specified limits. A small linear patch of similar appearance extends along the left side of the lower border of the tongue. There is no ulceration. In former years the patch would at times entirely heal. This temporary improvement has not, however, occurred during the last ten years. From time to time the lesion becomes worse and desquamates ("peels off"), after which it seems better for a while. Many years ago the diseased patch was irritated by the use of some strong infusion, and ever since then it has been worse than before. The mastication of food and the contact of hot or sour liquids cause pain. On the contrary, lukewarm water has a soothing effect. The patient thinks that the lesion is aggravated when he takes cold.

The whitish discoloration is especially marked opposite the alveolar border and along the interdental line. The surface is irregularly elevated, due to hypertrophy of the papillæ.

CASE II.—History. On April 12, 1901, a man, fifty-four years of age, presented himself at the skin clinic of the Medico-chirurgical Hospital, seeking advice as to the condition of his tongue and lip. About ten years previously he first became aware of a small swelling upon his lower lip, a little to the right of the centre, and at nearly the same time the tongue became affected. The lesion upon the lip has remained ever since and has gradually enlarged. Upon the tongue the disease began in the form of several whitish spots, or, at least, that was the appearance when first noticed by the patient. These

spots were situated near the tip of the organ. They gradually increased in size and coalesced until at length they covered most of the upper surface of the tongue. At various times fissures and excoriations have been present. The tongue is dry much of the time, especially at night. The affected surface is rough to the touch. There has been moderate desquamation.

The man has been an excessive smoker from his youth. He has continued the immoderate use of tobacco notwithstanding the progress of the disease. He has also been in the habit of drinking freely of spirituous liquors. He has had gonorrhœa, but asserts that he has never acquired syphilis. There has been sharp, stinging pain in the tongue from the commencement of the case, and it is often so severe as to keep him awake at night. The condition has at times been worse than it is at present. The use of acids causes pain in the tongue. There is also pain in the lip, though less than in the tongue. The man's general health and appetite are comparatively unaffected. He is of robust build.

Status præsens. The dorsum of the tongue is almost completely covered, from tip to root, with a uniform patch, of whitish color, rough to the touch, and the mucous membrane is thickened. No fissures or excoriations are now visible. There is nothing abnormal upon the cheeks. Upon the lower lip, in the locality indicated, is a nodule about the size of a cherry, of a rather firm, but not dense, consistence. The glands of the neck are uninvolved.

DIAGNOSIS.

The histories of the foregoing cases and the aspect of the lesions, distinctly characterize them as identical. The disease is a peculiar affection which bears little resemblance to those ordinarily occurring in the mouth.

I. Syphilis. As regards mere color, the lesions in these cases might suggest a thought of the mucous patch. The latter is one of the commonest disorders of the mouth. Its favorite seat is the inner surface of the lips and cheeks and upon the tongue. Its grayish color has been compared to the stain left by silver nitrate upon the mucous membrane. It is slightly, if at all, elevated above the surrounding level. The mucous patch readily ulcerates.

Though this manifestation of syphilis is extremely frequent, persistent, and recurrent, it is amenable to specific treatment. Under this influence it disappears, although it recurs again and again when the treatment is neglected. The mucous patch makes its first appearance in the early secondary stage of syphilis, and coexists with other evidences of the constitutional infection. This lesion, however, never continues alone for so long a period as ten years, to say nothing of thirty-five or forty, without ulceration or other change. Neither is it accompanied by desquamation. In the cases which form the basis of this paper there is no history of syphilis and not the slightest indication upon other parts of the body of the past or present existence of that disease.

The lesions of late syphilis may be eliminated. These are far more common upon the tongue than upon the cheek. They consist of scleroses of gummata. Syphilis of the tongue always affects the upper surface and is usually situated along the middle line. In my first case the disease affects the lateral border and in neither case is ulceration present. Syphilitic sclerosis is attended by more marked induration than existed in the two cases which I have just described.

Gummata develop in the first place as tumors in the substance of the tongue. If allowed to progress, they break down to form ulcers, which are located upon the upper surface of the organ. In syphilis of the mouth we can usually obtain a history or other signs pointing to the nature of the disease.

The preceding considerations warrant me in excluding syphilis as the cause of the appearances observed in the mouths of my patients.

II. *Tuberculosis*. Tuberculous ulcers of the tongue generally occur toward its tip. They have sharply defined margins, the granulations are pale and flabby, and there is but little surrounding induration. Tuberculosis in this situation is usually a secondary process, and we can find evidence of the same disease in other parts of the body, notably in the lungs.

III. *Epithelioma*. This is the form of cancer which attacks the tongue. After no long duration it becomes an ulcer which readily bleeds and involves neighboring parts. Epithelioma is habitually attended by severe pain, irrespective of the food, and by characteristic induration. The average duration without operation scarcely exceeds eighteen months. Neither of my patients had undergone operation. It is inconceivable that epithelioma should be in existence for more than thirty years. It is scarcely possible that it should remain upon the surface of the tongue for ten years. It is true that a long-standing disease may acquire malignancy, but there is no evidence that this transformation has yet attacked the tongue in either of the cases of which I write. I will not speak at present of the nodule in the lip of the second patient.

IV. *Chronic glossitis*. Long-continued irritation, as, for instance, that due to the custom of smoking tobacco, may give rise to a chronic superficial inflammation of the tongue. In such cases, however, there is little desquamation, and the disease is often accompanied by lesions at the commissures of the lips and inner surface of the cheeks. In the first case of which this paper treats, the cheeks are, indeed, the principal seat of the disease and there is a history of excessive smoking, but there has been abundant desquamation, together with papillary hypertrophy.

V. *Opaline patches*. Glass blowers are subject to opaline patches within the mouth, due to compression of the air and constant irritation. Such patches are constituted by macerated and accumulated epithelial cells, and always occur upon both sides of the mouth. They disappear when the man is out of work. They never ulcerate. These features distinguish opaline patches of glassblowers from the lesions of the cases studied in this paper, and, moreover, these men had never worked at the glassblowing trade.

The present cases, in fact, bear no resemblance to epitheliomatous, tuberculous, or lupus ulcers. There is no ulceration but a rough, irregular surface of silvery white color, the seat of constant desquamation. Epithelioma and tuberculosis lack the pearly white appearance. Though the mucous patch of syphilis and the opaline patch of glass-blowers have a similar color, yet their other characteristics differ from those presented by my patients.

Having eliminated these various affections, there remains but one disease which affects the mouth, runs a protracted course, and produces the appearances found in the cases under discussion. This is a rather rare disorder known as leucoplakia or leukokeratosis. It has, however, been carefully studied by a number of observers, and, by a comparison of the reported cases, its symptomatology has been clearly delineated. Again, as the disease develops by a successive outbreak of lesions, it is sometimes possible to watch the development of a new spot or patch.

SYMPTOMS.

Leucoplakia begins upon the tongue or inner surface of the lips or cheeks, according to Schwimmer, Mauriac, and Vidal, in the form of a red, circumscribed, hyperæmic spot or spots. Around these spots or upon their surface, some of the papillæ may be seen to be slightly swollen. This may be termed the first, or erythematous, stage. After an uncertain duration of weeks or months, its aspect changes. The redness is succeeded by a pearly white, bluish, or grayish color. At the same time, the epithelium of the affected area becomes thickened.

Butlin, Debove, Nedopil, and other writers have failed to recognize this early stage of redness, and describe the lesions as of a whitish or bluish hue from the beginning of the disease. One of the latest writers, Dr. John S. Marshall, of Chicago, shares this view,¹ stating that, in his own observation, the disease begins in the form of whitish patches. Leucoplakia does not usually come under the physician's care until it has been in existence for a long period; yet, nevertheless, a case is occasionally seen which presents the erythematous stage. Of this phase

¹*Journal of the American Medical Association* February 25, 1900.

Lacoarret records an example. He was consulted by a man, upon the anterior and left half of whose tongue were several round patches of a somewhat darker shade of red than the surrounding surface. One month later, the color had deepened a little; five or six months then passed without examination. During this interval a marked change had occurred. The spots had enlarged, coalesced, and assumed the characteristic aspect of leucoplakia.

If the disease has begun in a number of initial spots, these at length become confluent and form a single lesion, which at first remains red at its periphery. In contour the patches are round, oval, or oblong. Shallow transverse or longitudinal grooves divide the surface into a series of polygonal patches. In certain cases, the disease assumes the form of a band, from half to three quarters of an inch in breadth, sometimes rough and slightly elevated, and in other instances smooth, and seated upon the mucous membrane of the cheek.

The progress of the disease is attended by flaky desquamation due to the successive reproduction of epithelium. This feature was so prominent in one of Besnier's cases that the patient was greatly embarrassed by the necessity of scraping from his tongue thick epidermic flakes. The desquamation is a fact of diagnostic importance. The surface of the patches gradually becomes cornified, hard, rough, and the constant movements of the tongue may produce fissures, especially on the borders. These fissures can be rendered more apparent by making traction upon the tongue. At this time, the condition has been likened to a cat's tongue. Vidal regards this as the second stage of the disease. In the course of time more or less deep ulceration may take place. All these features may sometimes be perceived coexistent in the same case.

In the later course of the disease papillomatous growths may develop from the affected locality, and, finally, it is very apt to degenerate into epithelioma.

The duration of the disease is extremely indefinite. An existence of twenty years is not uncommon, and, according to the history of the first case which I have herein recorded, it may persist for nearly twice that length of time without ulceration or malignant transformation.

From the beginning of the disease the affected part is somewhat swollen. If the tongue is involved its movements are clumsy and speech is embarrassed. Its venous circulation becomes obstructed, especially at the lower surface and lower border. The organ becomes enlarged and considerably deformed.

As a rule leucoplakia begins upon the tongue and spreads secondarily to the cheek. In the first case which I here report, this order seems to have been reversed. The lower surface of the tongue is rarely

attacked. In one of Besnier's cases the pharynx and larynx were implicated. The disease may, in fact, affect other mucous membranes.

In an early stage of the malady, normal sensibility is little, if at all, disturbed. At a later period, the lesion becomes sensitive, particularly to contact with hot or acid liquids, alcohol, highly seasoned food, etc. The sense of taste, however, is not changed. At first there is a feeling of dryness in the mouth, but subsequently there is abundant salivation.

The rate of progress may not be uniform. At times the disease may remain stationary or even recede. It may then awaken to renewed activity.

It must be acknowledged that the recognition of leucoplakia at an early date, prior to the development of the characteristic pearly hue and keratinization of the epithelium, is by no means easy. As a matter of fact, the physician seldom observes a case at this period. The absence of subjective symptoms will very often, if not generally, prevent the patient from noticing its presence before the development of the discoloration, desquamation, and roughness. Not long since I found a patch of leucoplakia upon the tongue of a physician, who was totally unaware of its existence.

PATHOLOGY.

Leucoplakia appears to be essentially a chronic inflammation of the mucous membrane, with infiltration, localized cellular hyperplasia, and keratinization of the epithelial layer. The hyperplasia begins around the vessels, whence it spreads to the corium and papillary layer. There is an infiltration of young cells into the superficial portion of the corium and summits of the papillæ. The connective tissue of the papillæ is increased. In mild cases, or in an early stage, the papillæ can be distinctly recognized. At a later period, their individuality is destroyed by the general infiltration of embryonal cells. Eventually the papillæ are flattened or atrophied, and thus resemble those of the skin. The proliferated cells of the corium encroach upon those of the epidermis.

The embryonal cells accumulate also in the submucous tissue and glands of the mucous membrane. The epithelium of the glands is likewise proliferated.

The upper layers of the epidermis undergo a corneous transformation, while the cells of the Malpighian layer exhibit atrophy. The epithelium as a whole is markedly thickened.

The infiltration of the tissue and the compression of the superficial vessels produce the elevation and the whitish color of the affected patches.

With the occurrence of fissures comes the special danger of transformation into epithelioma. From the edges of such fissures the cells of the Malpighian

layer penetrate deeply into the corium and arrange themselves into the epidermic nests characteristic of that form of carcinoma.

ÆTIOLOGY AND RELATIONS.

The principal exciting cause of leucoplakia is prolonged local irritation. This irritation is generally due to the habit of smoking tobacco. It is commonest in men and between the thirtieth and fiftieth year of age. Schwimmer's youngest patient was twenty-three, and the oldest sixty-two years of age. A small minority of cases has been observed in women and children. A broken tooth or an ill-fitting tooth-plate may have the same effect. The disease not infrequently begins in situations corresponding to the crowns of prominent upper or lower molar teeth. The excessive use of condiments, alcohol, and certain drugs, especially potassium and mercury, are also mentioned as causes.

Constitutional conditions are thought to exert a predisposing influence. A considerable proportion of cases occur in syphilitic subjects. M. Barthélemy asserts that he has witnessed eighty-three cases of leucoplakia, in only fifteen of which could syphilis be excluded. He adds the significant statement that a man had come under his observation who for thirty years had smoked thirty cigars a day without the development of leucoplakia. He contracted syphilis and two years later exhibited a considerable area of leucoplakia. Zambaco, of Constantinople, asserts that, although he lives in a country where everybody smokes, yet he has never observed a well-marked case of leucoplakia except in a syphilitic. That the affection does not necessarily depend on syphilis, however, is shown by the fact that the subject of leucoplakia may acquire syphilis, as has been witnessed by Schwimmer and Debove. Furthermore, as my own cases attest, it may occur in persons entirely free from the history, symptoms, or signs of syphilis.

In other instances lithæmia, diabetes, or gastro-intestinal disorder, has been present. I have witnessed its occurrence in patients long afflicted with gastro-intestinal catarrh. Vidal states that "most of the patients have personal or hereditary antecedents of rheumatism, gout, or gravel." Hertzka² observed several cases, in women as well as in men, in which the disease of the tongue seemed to be excited by chronic gastric or gastro-intestinal catarrh. One of his male patients was also an excessive smoker.

In some cases, leucoplakia has been observed to follow an attack of typhoid fever or measles. Heredity and consanguinity have also been cited as predisposing causes. In all such instances we may pre-

sume that the mucous membrane is unusually susceptible to an assault of chronic inflammation.

It was once thought that those female patients who suffered from leucoplakia were in the habit of smoking, as is not uncommon in Flanders and some other countries, and among certain classes. This may, indeed, be true of some, but it cannot apply to all cases. Moreover, although the mouth is its common seat, leucoplakia is not absolutely confined to that locality. It has been detected in the larynx, nose, and middle ear. Schwimmer has seen it upon the mucous membrane of the vulva. Case XIII of the series published in his original paper³ is headed: *Leukoplakia lingualis et buccalis; leukoplakia vulvæ*. The patient was a woman, fifty-six years of age, who had had leucoplakia of the mouth for several years. "The mucous membrane of the labia majora is in spots deprived of its epithelium and, together with the dark red surfaces exposed, are thick white heaps of epithelium. The right and left labia minora as far as the vaginal entrance are similarly altered and exhibit superficial erosions with infiltration. There is a creamy secretion from the vaginal mucous membrane, the vagina is very sensitive and painful, and permits no examination by the speculum in order to ascertain the condition of the uterus." The same author had the opportunity of witnessing a second case in which the vulva was involved as well as the mouth.

In recent years, also, the same condition has been discovered upon the mucous membrane of the urinary bladder. Brick⁴ describes forty-one cases of vesical leucoplakia which he was able to recognize by the use of the cystoscope. In this situation it is the consequence of long-continued inflammation, especially of a gonorrhœal character. It often gives rise to papillomatous or glandular neoplasms. Hallé has likewise written on the same subject, more particularly in relation to a cancerous termination.⁵ He concludes that the normal epithelium of the bladder may become transformed into layers of flat epithelial cells of an epidermoidal nature, and that in certain cases the leucoplakia assumes the features of epithelioma. The presence of this disease in the living subject was described by Cabot, and has since been witnessed by a number of observers. It has also been seen in the vagina and upon the uterus. Apart from its own individuality leucoplakia is interesting historically on account of the confusion which long existed as to its nature and relationship. It claims our earnest study, furthermore, by reason of its tendency to terminate in epithelioma. The earlier writers compared the disease of the tongue to ichthyosis, psoriasis, and even to more distant af-

³*Vierteiljahrsschrift für Dermatologie und Syphilis*, 1877, iv., p. 511, et seq.

⁴*Wiener medicinische Presse*, 1896, Nos. 36, 37.

⁵*Archives ann. genurin.*, 1866, 481, 577.

²*Deutsche medicinische Wochenschrift*, 1880, vi., 157.

fections of the integument. Alibert has described a case as ichthyosis of the tongue, occurring in a person attacked by generalized ichthyosis. Rayer has witnessed, in an otherwise healthy man, a morbid development of papillæ of the tongue, resembling ichthyosis. Samuel Plumbe, an English writer on diseases of the skin, made use of the same term. Hulke denominated his cases buccal ichthyosis. Bazin and others have made use of the term buccal psoriasis. So long ago as 1858, it was designated tylosis linguæ, and this term has been retained by Lailler and Fairlie Clarke to designate a special form of leucoplakia terminating in epithelioma. In France it has also been described under the title of "*tâches des fumeurs*" (smoker's patches).

The name by which we now know the disease was given it by the late Professor Schwimmer, who had made it the subject of an elaborate study.⁶ Vidal prefers the term leucoplasia, and Hutchinson has written of it under the title leucoma.

Occurring in association with psoriasis of the integument, leucoplakia was formerly considered identical with the latter disease. Professor Joseph Ransohoff, of Cincinnati, speaks of having witnessed one case in which lingual and cutaneous psoriasis coexisted. The patient was a man, thirty-three years of age, who had long been subject to attacks of cutaneous psoriasis, and upon whose forehead and breast punctate spots were present at the time of examination. The entire left side of the tongue to the line of the circumvallate papillæ, but not involving the anterior half inch, was occupied by a dense leucomatous patch; the tongue had been involved for three years. On the contrary, Besnier, of Paris, has found so few instances of the coexistence of leucoplasia and psoriasis, that he denies any relationship between the two affections. Out of more than a thousand cases of psoriasis, he has never met with one in which that disease was present upon both the skin and the mucous membrane of the mouth. Lewin has denied that psoriasis ever attacks the tongue. A number of esteemed authors coincide in this opinion. The question hinges largely upon whether we should regard leucoplakia of the mucous membrane as equivalent, histologically and pathologically, to psoriasis of the skin. This is a matter still unsettled, but there can be no doubt that leucoplakia and psoriasis may coexist. Dr. Lacoarret, of Toulouse, has reported⁷ an interesting case in which psoriasis and leucoplakia were simultaneously developed. The patient, a man, fifty-eight years of age, consulted Lacoarret on account of throat trouble. He had been a great smoker. He had never suffered from syphilis. He had experienced several attacks of

psoriasis, in the last of which, beginning three months previously, the tongue had become painful, at the same time that the eruption appeared upon the skin. Upon the tongue, especially on its anterior portion and toward the right border, was a series of rounded, smooth, bluish white spots. A fissured and slightly ulcerated lesion of the same kind was seated upon the right border of the tongue.

In 1885, Schuetz, of Frankfurt on the Main,⁸ had under his care a strong and otherwise healthy boy, ten years of age, who had been afflicted with psoriasis since his second year. A brother, a sister, and a father were subject to the same disease. In one attack, when the eruption upon the skin had notably faded, there appeared a milk-white patch at each corner of the mouth, and a large, pearly white patch involving the inner surface of the right cheek and the roof of the mouth; streaks of similar aspect existed upon the inner side of the left cheek. The child had good teeth, was free from syphilis, digestive disorder, anæmia, or scrofula, and the leucoplakia could not be due to the use of tobacco, as he had never used the article. The same writer also refers to a woman in whom an obstinate leucoplakia had preceded an outbreak of psoriasis of the integument, but endured after the latter affection had disappeared. This patient, likewise, had never smoked or had syphilis. In a third case observed by Schuetz, leucoplakia of the left cheek occurred in a woman aged twenty-two years, who had been troubled by psoriasis since her eighth year. Schwimmer, in a series of twenty cases, has recorded two in which leucoplakia coexisted with psoriasis in the same patient. Vidal, Lailler, Lang, Neisser, Pospelow, Polotebnoff, Kutzniisky, and other authors, have described cases of coincident psoriasis of the skin and mucous membrane. In the case cited by Kutzniisky, from the Strassburg clinic, psoriasis of the lip extended to the mucous membrane. Sack has observed psoriasis continue from the eyelid to the conjunctiva. Lang has witnessed an obstinate chronic conjunctivitis associated with a universal psoriasis which involved even the eyelids. Notwithstanding this suggestive array, Schwimmer and Neisser agree with other authorities in looking upon the association as accidental, or, as Mercklen suggests, at most due to a common predisposition rather than to an identity. From this view Schuetz dissents, pointing out that, as psoriasis may produce neuralgia and asthma, it may equally implicate mucous membranes, and concluding that, when leucoplakia occurs in conjunction with hypertrophic proliferation of epithelium, as in psoriasis, tylosa, and chronic squamous eczema, the association depends upon a common origin. In a case mentioned by Du Castel, a man who had never smoked had been the

⁶*Vierteljahrsschrift für Dermatologie und Syphilis*, 1877, iv, p. 511, et seq.

⁷*Revue hebdomadaire de dermatologie, d'otologie et de rhinologie*, July 9, 1898.

⁸*Archiv für Dermatologie und Syphilis*, 1898, p. 433, et seq.

subject of leucoplakia since he was twelve years of age. In eight cases reported by Dr. Marshall, the patients were all men who were habitual smokers, most of them to excess. Dr. Warren cites the case of a lady on whose tongue leucoplakia had existed from youth, but it disappeared in old age.

Neligan was the first to notice, in 1862, the occurrence of cancer as a sequence to leucoplakia. The same termination was observed in Hulke's case of "ichthyosis of the tongue." Debove, in his thesis, in 1873, laid stress upon this eventuality, and wrote: "It is impossible to establish a relationship between the gravity and extent of the squamous lesion and the advent of the epithelioma. It develops sometimes on tongues where the squamous lesion occupies the entire surface of the organ, and again upon those which display but one or two spots." The malignant transformation may occur early or late. Schwimmer has seen one case in which epitheliomatous transformation took place at the end of six months and another at the end of two years. On the contrary, in the first case which I herein describe, there was no malignant degeneration after a duration of forty years; in my second case a suspicious nodule existed independently on the lower lip.

In the male, leucoplakia has also been seen on the glans penis. An interesting case of the kind was reported by Professor Le Dentu to the Academy of Medicine, on behalf of M. Aucher and M. Binaud, of Bordeaux. Two analogous cases have been recorded by Perrin, of Marseilles. The patient, who was forty-four years of age, had a coexisting pediculated epithelioma and a patch of leucoplakia of the balano-preputial groove and glans. Le Dentu believed that the epithelioma had developed from the leucoplakia. He had also observed a case of temporary leucoplakia of the glans, which had been preceded and determined by an attack of balanoposthitis; the same patient was attacked, more than eight years later, by a leucoplastic epithelioma of the tongue, underwent an early operation, and the disease recurred.⁹

Epitheliomatous change is most common on the tongue. It is generally recognized that epithelioma may result from many varieties of persistent irritations of skin or mucous membrane. Indeed, epithelioma is not unknown as a sequence of psoriasis of the integument. In my work upon *Diseases of the Skin*, p. 487, in the description of psoriasis, the following allusion occurs: "Inveterate psoriasis may become complicated with deep and painful fissures of hands and feet, with warty formations, or even epithelioma." Tillaux and Cartaz have observed the change from psoriasis into epithelioma. K. Schuchardt has recorded a case in which epithelial cancer developed from a psoriasis preputialis of six months' standing.

TREATMENT.

The patient should be counselled to give up tobacco and alcoholic drinks, to avoid hot food, acids, and condiments. If a bad tooth seems to be the cause of the trouble, it should be extracted or its cavities filled and its edges rendered smooth. If an ill-fitting plate is worn, it should be discarded and a more nearly perfect article be procured. Antiseptic and alkaline mouth washes are useful. An application consisting of one-half-per-cent. corrosive sublimate and one-per-cent. chromic-acid solution has been recommended by Schwimmer. The same writer has advocated the local use of papaine, one part being dissolved in ten parts each of distilled water and glycerin. In a case affecting the upper lip and tongue, H. Niemeyer, by the application of this solution once every day, obtained complete healing of the tongue and decided improvement of the lip in seventeen days. Sherwell claims speedy improvement after the application, two or three times a day, of undiluted mercuric nitrate, protecting the adjacent parts with absorbent cotton and neutralizing with sodium bicarbonate and glycerin. Zambaco likewise states that he has secured good results in mild cases from applications of the same mercuric solution. By other authorities a two-per-cent. to ten-per-cent. solution of potassium bichromate is employed. The balsam of Peru is considered a beneficial application by some authors. Pure lactic acid in ten-per-cent. solution, a ten-per-cent. to thirty-per-cent. solution of salicylic acid, and a twenty-per-cent. solution of potassium iodide are among other agents which have been employed.

Cauterization of the lesion is advised by some and discountenanced by other authorities. The thermocautery, galvanocautery, and solid stick of silver nitrate have been made use of for this purpose. Dujardin-Beaumetz wrote approvingly of a suggestion put forth by Köbner, of Berlin, who administered belladonna prior to the operation, in order to check supersecretion of the saliva, which will rapidly remove the eschar. Dujardin-Beaumetz refers to cases which have been cured by this method. On account of its tendency to end in epithelioma, however, I am in accord with those who advocate a cautious local therapy and the avoidance of escharotic measures. If the lesion is ulcerated and fissured, if it has resisted mild local treatment, and, above all, if enlarged glands are detected in its vicinity, it is judicious to have recourse to a surgical procedure. The nature of the operation must be governed by the circumstances of the case. In a number of instances, Ransohoff has practised with encouraging results an operation which he terms decortication—i. e., the removal of as much of the cortex of the tongue as is necessary for the radical cure. This writer states that recovery takes place speedily, and,

⁹*Medical Bulletin*, December, 1899, p. 452.

in a few weeks, normal epithelium is reproduced upon the denuded surface. In some cases, which he had the opportunity of examining several years after the operation, it was impossible to determine, by inspection or touch, any cicatricial tissue. The same term, decortication, had been employed by Trillat and Verneuil in 1880.

The general treatment of the disease must be regulated according to the predisposing causes. If the patient is syphilitic, he should be placed upon specific remedies, although these have no influence upon the leucoplakia in the absence of active syphilis. Digestive disorders, lithæmia, etc., should be managed upon general principles. In this class of cases Hertzka saw a cure from a course at Carlsbad.

In the first case of which I have written in this paper, chromic acid was chosen for the topical application, in a solution of ten grains to the ounce. As the patient's urine was highly acid, and of specific gravity 1.026, and as this condition probably had some concurrent influence in producing and maintaining the disease of the cheek and tongue, he was placed upon lithium salicylate, four five-grain capsules to be taken during the twenty-four hours. In addition, he was ordered a pill containing *massa hydrargyri*, *pulvis jalapæ* and *extractum colocynthis compositum*, one or two such pills to be taken every other night. Directions were given that his urine should be examined from time to time.

In the second patient it was decided, on account of the tendency of the disease, to excise the tumor of the lower lip. The operation was performed by Professor William L. Rodman. The wound healed without incident. After recovery the man was given silver nitrate in doses of an eighth of a grain three times a day. When he left the hospital the silver was discontinued on account of our inability to keep him under sufficient observation, as he was a seagoing man. He was ordered, instead, a mixture of dilute nitro-hydrochloric acid with from five- to ten-drop doses of the fluid extract of *hydrastis Canadensis*. This preparation will promote the functional activity of the liver and glandular elements of the alimentary tract, and will be beneficial in so far as it counteracts a predisposing cause of leucoplakia. The use of tobacco was prohibited.

The Tri-state Medical Society has selected Birmingham, Ala., as the place of the next annual meeting. Officers were elected as follows: President, Dr. J. C. Legrand, of Birmingham, Ala.; first vice-president, Dr. Hugh U. Brown, of Troy, Ala.; second vice-president, Dr. William P. Harbin, of Rome, Ga.; third vice-president, Dr. J. C. Wilson, of Rockwood, Tenn.; secretary, Dr. Frank Lester Smith, of Chattanooga, Tenn.; treasurer, Dr. G. R. West, of Chattanooga, Tenn.

PELVIC INFLAMMATION IN THE FEMALE; ITS DIAGNOSIS AND MANAGEMENT BY THE GENERAL PRACTITIONER.*

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In response to the courteous invitation of the chairman of the Committee of Arrangements to write a paper on pelvic inflammation in the female from the standpoint of the general practitioner of medicine, I yielded with the full knowledge that there was very little that I could add to a subject so frequently and thoroughly handled by abler men. The fact, however, of having served for at least a dozen years in the ranks of the general practitioners of medicine, supplemented by unusual opportunities for doing special work in the disease of women, may have broadened my horizon and extended my field of vision in this particular class of diseases.

As a large number of women's complaints either begin or are, sooner or later, associated with pelvic inflammation, it may be well before proceeding further to endeavor to define our subject. What, then, do we mean by pelvic inflammation? Twenty years ago Thomas described it thus: "Let the reader suppose that these pelvic organs were fixed in their place by having a fluid mixture of plaster of Paris poured around, among, and over them, which had afterward become solid." That was the picture of pelvic inflammation in those days and, from contact with elderly medical men whom I meet occasionally taking post-graduate courses in gynæcology, that is very much the prevailing impression of a certain proportion of the medical profession of to-day.

To the specialist the term "pelvic inflammation" is a vague appellation of some pelvic pathological state. It means nothing in particular. Pathologically, the uterine and tubal interior may be the seat of the lesion and constitute the "pelvic inflammation." Or the ovary, the pelvic peritonæum, the pelvic areolar tissue, or the lymphatics of the broad ligament may be involved. Hence writers describe "pelvic inflammation" under these various headings. Freund adds a special variety of parametritis which he calls "parametritis atrophicans," and Schultze calls attention to another special form of parametritis involving the uterosacral ligaments, which he calls "parametritis posterior."

From the standpoint of the clinician Pozzi subdivides pelvic inflammations into four types: 1. Serous perimetrosalpingitis. 2. Pelvic abscess. 3.

*Read before the New York State Medical Association, October 22, 1901.

Phlegmon of the broad ligament. 4. Diffuse pelvic cellulitis. But, as one writer very properly says, "It were just as rational to consider the peritonitis, the cellulitis, and the abscesses complicating an appendicitis as independent of the inflammation of the appendix as to separate these same conditions from the salpingitis." (*American Text-book of Gynecology*.)

Some of the latest writers approach the subject of pelvic inflammation from the bacteriological standpoint. As Howard Kelly puts it, "The first effect of the entrance of the infecting organism into the uterine tube is to set up a reactionary inflammation which, as a rule, tends to close the fimbriated end. In mild cases the inflammatory condition may pass off without the production of a pyosalpinx; when the infection is more severe, pus forms in the tube and may discharge into the uterus, or the fimbriated end may rupture and permit the escape of pus into the pelvis over the ovary, producing peri-oophoritis and pelvic peritonitis, if it is a gonorrhœal infection, or a general peritonitis, if more virulent pus-producing organisms are present."

The routes of infection are as follows: 1. By extension from the uterus to the tubes and general peritoneal cavity. 2. By contiguity of inflamed uterus and tubes, into the connective tissue of the broad ligament. 3. By means of the lymphatics and blood-vessels. While the lymphatic route certainly accounts for some of the most virulent forms of streptococcic infection, the old theory of de Mussy and Championnière, most recently advocated by Pryor, that "broad-ligament cellulitis is broad-ligament lymphangitis" is not sufficiently sustained by demonstrated proofs (Pozzi, Gebhard), and hence the conditions known as "cellulitis" or "parametritis" or "pelvic abscess" are recognized and included by nearly all writers on gynecology under the heading of "pelvic inflammation."

Pelvic inflammation, then, does not mean any one single condition, but refers usually to an infection arising in the uterine interior and resulting in a number of simultaneously existing pathological lesions. In all cases there is or has been a focus or point of origin which may continue to be present and complicate the clinical picture. Thus, frequently an endometritis, purulent salpingitis, or appendicitis will be associated with a localized or general peritonitis, cellulitis, or lymphangitis.

Pus in the pelvis is a common termination of pelvic inflammation. In 86 cases observed by the writer on the operating-table, the pus was present in tubes, ovaries, or both in 57 cases, and in the pelvic connective tissue or pelvic peritonæum in 29. Hence twice as many pus cases were found in the tube-ovarian tract as in the pelvic connective tissue and peritonæum.

The frequency of pelvic inflammation in the female is so great that Bandl tells us that in more than half of the autopsies on child-bearing women remains of circumscribed peritonitis are found.

The aetiology of pelvic inflammation may occasionally be traced to traumatism, to sudden suppression of the menses, to twists or irritations of intra-pelvic tumors, to dysmenorrhœa, to pessaries (Fritsch), to ectopic gestation, etc., but we fall back involuntarily upon the two bacterial causes indicated years ago by Semmelweis and Noeggerath—namely, puerperal and gonorrhœal infection.

The prevalence of gonorrhœal over puerperal forms of pelvic inflammation is not established, even though the writer in 56 pus cases which required operative intervention was able to readily trace 32 to a gonorrhœal origin. The general practitioner will probably find the majority of his cases to be of puerperal origin. Thus, Bandl, in 30 autopsies on prostitutes and sterile women, found evidences of pelvic inflammation in 10. Most of these were probably of gonorrhœal origin.

Pain is the cardinal symptom of pelvic inflammation, and depends upon the involvement of the peritonæum of the pelvis. In the absence of pus, irregular hæmorrhages and leucorrhœa may be the only concomitant symptoms.

In acute conditions the intensity of the pelvic pain may vary from the mildest expression to the greatest possible physical agony. The locality of the pain will naturally depend upon the site of the trouble, although in rare instances I have found a pus-tube or even an ectopic gestation on the side opposite to that to which the pain had been referred. Ordinarily pain referred to one or the other side of the pelvis, to the appendicular region, or to the vicinity of the bladder or rectum (especially when the functions of these viscera are simultaneously disturbed) will sufficiently indicate the location of the active seat of the inflammation.

Of course in acute cases general disturbances will usually be present, such as fever and rapid pulse, but the practitioner experienced in pelvic inflammations will not be misled by the subsidence or absence of these symptoms, as in a respectable minority of cases the inflammatory process may actually go on to pus formation with a normal temperature. Such pus cases without rise of temperature I have repeatedly seen in both the puerperal and gonorrhœal varieties of pelvic inflammation. The rule, however, is that as long as bacterial absorption goes on fever will be present and usually associated with chilliness and sweating. In about one half of the chronic cases, according to Kelly, pus in the pelvis spontaneously becomes sterile through the death of bacteria. This fact was also pointed out by Prudden more than a dozen years ago.

Acute cases of pelvic inflammation ordinarily terminate in complete recovery. Exceptionally do they pass into the chronic state. Very rarely do they terminate fatally when under proper care. Of course we constantly see cases of acute septic infection of the pelvis which by extension to the general peritoneal cavity result in death. Or a rapid intraperitoneal rupture of an active pus sac may set up a general peritonitis and lead to death. Or slow exhaustion and death may follow the rupture of a pus sac in other directions. But if modern gynecology can accomplish anything it is that in many of these cases lives can be saved by timely and proper treatment which formerly were surely doomed.

In the subacute and chronic forms of pelvic inflammation the pelvic pain is, again, the distinguishing clinical feature of the disease. In these cases, however, the pain is of an intermittent character and may be entirely absent for a few days, weeks, and even months at a time. In fact, at autopsies extensive inflammatory changes are frequently found in subjects whose histories showed nothing to attract attention to the pelvis. These are ordinarily walking patients. But every now and then a slight exertion—a sudden movement, walking beyond a certain limit, lifting a baby or bundle, washing, scrubbing, sewing at a machine, or sexual intercourse—will result in relighting the pelvic inflammation and often put the patient to bed. The other symptoms—cystic and rectal tenesmus and disturbances of the menstrual function with leucorrhœa—may again manifest themselves as in the acute cases, but normally in lesser intensity. Fever is not apt to be present in subacute and chronic cases.

The general health, however, suffers in the course of time. The nervous system is rapidly undermined by the constant pelvic irritation. The appetite and digestive functions become more or less disturbed. Dysmenorrhœa, irregular uterine hæmorrhages, leucorrhœa, and dyspareunia are complained of. Finally, it is from this class of patients that the most obstinate cases of sterility are recruited; and, unfortunately, when pregnancy does take place in many of these women, it is of the ectopic variety.

Once pelvic inflammation assumes a chronic form, it is the exception for the patient to regain a perfectly normal condition of her pelvic organs. She may cease to complain of her symptoms, but usually some souvenir of her old inflammation will be left *in situ*. It is not rare for the general practitioner of medicine to meet with pelvic exudates which apparently disappear in the course of months. Fritsch refers to exudates which take from a year to a year and a half to get well, and Bandl records a case which took twelve years to disappear. My own conviction of such cases, founded on observations made on the operating-table, is that nearly all exu-

dates which persist for months or years contain a pus nucleus, and I am also convinced that where the purulent focus is small it may undergo spontaneous absorption. This, however, is the rare exception. Ordinarily, persistent exudates, when not absorbed, become purulent, and Fritsch refers to a case which ran nineteen years before enlargement of the exudate and fever gave indications of pus.

The course of chronic cases of pelvic inflammation, however, is rather of an interrupted character. When not subjected to surgical treatment, these women turn up every few months or years, to be "patched up" by local treatment for a fresh period of relief. I know several women who have followed this plan, chiefly because of fear of the knife, partly because they were so advised by the family physician, and who are apparently content to go through life in this manner. Occasionally, however, the pus collections present in many of these women rupture into the rectum, bladder, peritoneal cavity, or other parts, and these poor sufferers make an unexpectedly hasty departure from this life.

The diagnosis of the general condition known as "pelvic inflammation" is exceedingly simple. With the exception of tuberculosis, the history of the disease will start from a traumatism, from marriage, from a certain miscarriage or labor, from a trifling operation about the genital tract—perhaps from a local examination in a doctor's office or at a clinic. In all of these ways traumatism, plus infection, will usually be the starting-point of the disease. The local examination in very recent and acute cases may be limited to noting the tenderness, tympanitic distention, and rigidity of the suprapubic region. As Skene properly points out, bimanual examination in such cases is apt to reveal nothing, and, if made, should be done with the greatest gentleness. Indeed, frequent local examinations in these patients are apt to aggravate the disease.

In most of these cases, however, sooner or later, the carefully made local examination will detect an inflammatory mass, or tumor, and, with this, tenderness and immobility of the pelvic contents. The mass or exudate at first is hard and may entirely disappear as the patient recovers. Frequently enough, however, it gradually forms a fluctuating soft tumor as pus develops. Persistent hardness of the mass, however, does not exclude a pus focus, and the careful practitioner will either introduce an aseptic aspirating needle or consult an experienced specialist before making the diagnosis of chronic pelvic exudate or chronic cellulitis or chronic parametritis.

As this paper is intended rather for the general practitioner than the specialist, and as the non-surgical treatment of the various conditions included under the term "pelvic inflammation" is practically one and the same thing, no attempt will be made to

enter into the diagnosis of the individual lesions, which is more or less unsatisfactory even by trained specialists. The presence or absence of pus, however, constitutes a sharp line of demarcation between the medical and surgical treatment of these cases—whether the patient is to continue under the care of the family doctor alone or in conjunction with the specialist. The persistence of fever, chills, and sweating, in connection with a pelvic fluctuating mass, leaves no room for doubting the presence of a pelvic abscess. The severe subjective symptoms, with a persistent hard, board-like mass in the pelvis, frequently mean a pyosalpinx. An irregularly hard and soft sensation to the pelvic roof may indicate circumscribed purulent foci which later merge into one single abscess (Gebhard). Or by those practitioners who make frequent use of electricity Massey's modification of Apostoli's diagnostic test may be called into use. According to these authorities, "an intolerance of intra-uterine galvanic application points so unerringly to encysted pus as to become a means of establishing an exact diagnosis."

The simple, non-purulent inflammatory conditions in the female pelvis—salpingitis, oophoritis, cellulitis, pelveoperitonitis—become in their later stages frequently complicated with pus, and the careful practitioner will be on the *qui vive* to determine the transition from the one to the other stage. For all practical purposes it is a good rule to remember that persistent inflammatory tumors usually contain pus and are only amenable to surgical treatment.

Ordinarily an acute pelvic inflammation following childbirth terminates in complete recovery. Too much stress cannot be laid upon this observation, which I am sure will readily be confirmed by every practitioner of even moderate obstetric experience. In these cases, in spite of more or less fever, pelvic pains, and perimetrix exudate, complete recovery is the rule. In a very small proportion of cases permanent lesions giving rise to subsequent invalidism remain. How this can be avoided by treatment in many of these women will be referred to later on.

In pelvic inflammations subsequent to gonorrhœal infection a purulent condition of the tubes may be present very early in the disease. The frequent relapses are characteristic of gonorrhœal tubal disease, so that surgeons are divided among themselves whether in removing such a pus-tube it is not better to remove the opposite tube, or, when both are affected, whether it is not to the patient's interest to remove the uterus at the same time.

If left to Nature, in the absence of pus, the symptoms due to chronic pelvic inflammation gradually subside by the time the menopause is reached. Still I have met with exceptions to this rule, and in one instance was requested by the physician in charge to remove the pelvic organs in a woman past the meno-

pause who had suffered for twenty years from pelvic inflammation.

The treatment is preventive, palliative, or radical. Of course where the husband becomes infected with gonorrhœa—and such cases are not very rare—there is only one course to pursue, irrespective of consequences, and that is to get him to make a clean confession to his bed-fellow with the full explanation of the dangers of gonorrhœal infection in the female. In the case of young men having marriage in view, the attending physician must make sure of the absence of gonococci in the slightest gleet discharge before giving his consent to such marriage. Once the uterus has become infected with the gonorrhœal virus, I cannot agree with those authors who advise immediate curettage. I have seen one fatal case which followed this procedure, and have been told by a colleague of mine of a most violent pelvic inflammation started up under similar circumstances. When the case has become chronic, I know of no objection to curettage for gonorrhœal endometritis.

Preventive treatment in the puerperal state depends entirely upon asepsis in the management of abortion, miscarriage, and childbirth. Once the uterus has become infected and symptoms of sepsis have appeared, the sooner the uterus is cleaned out the better. Simple intra-uterine douching may be sufficient; curettage will usually be necessary. In a large number of infected cases which were admitted during the past year to the Tarnier Clinic in Paris not a single patient was lost by following this plan (Budin). The advice of Henrotin to make vaginal incision and drainage in acute cases of pelvic inflammation has not been generally adopted. It has been rejected after trial by such a skilful gynecologist as Boldt, and, although regarded from an expectant standpoint by Kelly, he does not recommend its use. Pryor, on the other hand, is very enthusiastic in its advocacy. As for myself, I have used the method in one case with temporary relief, the patient dying subsequently.

The presence of pus constitutes the sharp line of division between the medical and surgical treatment of pelvic inflammation. The former line of treatment clearly belongs within the domain of the general practitioner. It is the palliative treatment. Circumstances, however, arise on account of which a certain proportion of these cases fail to be benefited by the measures employed and then these cases, as well as all pus cases, properly go to the surgeon for operative treatment.

As stated elsewhere, for purposes of palliative treatment, it is not essential to distinguish the various lesions present in non-purulent pelvic inflammation. This is the field which properly belongs to the general practitioner, and a few words may be per-

mitted regarding the various therapeutic measures at his command.

In acute inflammatory processes the first essential is absolute rest in bed. By this single measure alone the large majority of cases will be cured. Without it all the other measures combined may be without avail. The rest must be absolute, as the pelvis must be kept as fixed and immobile as though it were a fractured limb. To maintain this rigid horizontal decubitus, the assistance of intelligent trained nurses is requisite to properly look after the smoothness of the bed, to keep the patient's back rubbed regularly with alcohol in order to prevent the formation of bed-sores, and to attend generally to the wants and comforts of the invalid. Examination by the physician must be made only once every few days, and under no circumstances is the use of specula or local vaginal medication permissible.

Ice externally, applied in bags and kept up more or less continuously, ranks next in importance. Its employment requires care, as I have seen extensive sloughing of the integument follow its use. The same accident frequently occurs with the use of hot applications, which sometimes give relief in the subacute and chronic forms of pelvic inflammation.

Although Pozzi in his model gynæcological pavilion at the Hôpital Broca, which I visited several years ago, has a special arrangement for the use of hot baths and hot vaginal irrigations which can be kept up for hours or even days at a time, the use of hot douches in the acute stages of pelvic inflammation may sometimes result in more disturbance than benefit to the inflamed pelvis. In fact, some of our leading specialists dispense with their use altogether.

There is not so much objection to their use in the subacute and chronic stages of pelvic inflammation. But they must be given properly, with the patient on her back, preferably in the warm bath, and must be kept up for fifteen minutes at least. Or the metal bed-pan may be used by walking patients, who, for this purpose, lie on a couch and allow several gallons of hot water (at about 110° F.) to slowly flow into the vaginal canal. I have frequently had such douchings repeated every three to six hours where the patient was more or less incapacitated and a good nurse was at hand.

Local treatment is applicable to subacute and chronic cases, and when it fails, a prospect of ultimate cure will still be possible through surgery. Chief among the local measures is the use of tampons saturated with glycerin, boroglycerin, thiol, ichthyol, etc. As a matter of fact, after many years of work with large dispensary material and private cases, I have come to the conclusion that, when benefit follows the use of tampons, it is not so much because of the nature of the medicament employed as of the support which the tampon gives to the

heavy uterus dragging on inflamed broad or sacrouterine or round ligaments, and the relief given for the same reason to swollen ovaries, inflamed tubes, and intraperitoneal adhesions. Exceptionally, however, I have known tampons to start up a violent pelvic cramp simulating a labor-pain in its intensity, and in such cases, of course, tampons are contraindicated.

Counter irritation to the vaginal vault by means of iodine may be employed at times in cases of salpingitis or pelveoperitonitis, with the object of relieving pelvic pains and perhaps of checking the progress of the disease in subacute cases. I have used blisters in cases of non-purulent exudates, and agree with Mundé that at times they are distinctly beneficial. They are applied over the suprapubic region on one or the other side, according to the location of the exudate.

Massage is seldom used by specialists in this country, and ought never to come into general vogue, in spite of the teachings of Thure Brandt and his followers. Continental authorities like Olshausen and Fritsch are partly or entirely opposed to its employment. Indeed, Fritsch maintains that psychical disturbances may follow its employment in hysterical women. I am inclined to agree with one writer who says that "massage has no place in acute cases, and is too dangerous for the general practitioner to apply in any case."

Similarly, the use of electricity is contraindicated in acute cases of pelvic inflammation. In subacute and chronic forms, in which pain is the chief symptom, I am sure that I have seen benefit follow the use of the galvanic current (of about 15 or 20 milliamperes with the positive vaginal electrode and a large flat abdominal sponge), applied several times weekly during the intermenstrual period. In the absence of a galvanic apparatus or alternately with it, the faradaic current applied with the same electrodes may also prove serviceable. At most, however, electricity is of very doubtful permanent value, and probably often owes its success in great measure to the element of "faith cure."

Medication should be strictly limited to indications. In acute cases the fever may be met by the cold sponge, quinine, or the coal-tar products. The free use of opium for the relief of pain is just as clearly indicated in the acute forms of pelvic inflammation as it is contraindicated in the chronic forms. In this position I am sustained by our lamented and distinguished colleague, the late Dr. Skene. Cases of chronic pelvic inflammation in which the suffering is so intense as to require the frequent use of opiates are clearly not cases for the general practitioner, but pass over to the territory of the gynæcologist for radical procedures.

The indications arising from the patient's digestion, nerve state, blood condition, and general health will be met by the general practitioner as they arise. In fact, the careful family physician will perhaps be better able to cope with the symptoms arising from a disturbance of the general condition of his patient than the specialist.

Although the whole chapter on the subject of the surgical management of pelvic inflammation has not yet been touched in the present paper, only the slightest allusion to it will be made, for the reason that I have only attempted to sketch briefly the management of pelvic inflammations as they are met with in the domain of the general practitioner.

The moment the diagnosis of pus in the pelvis is made, the patient ought to be placed under the care of the gynæcologist, for, as Kelly properly says, "active surgical interference is the rule in 99 out of every 100 cases."

In bringing this concise paper to a conclusion the writer feels that he has only reflected the views of every intelligent general practitioner of medicine. But if he has struck the happy medium between the surgical extremist who finds a laparotomy necessary in every case of pelvic inflammation in the female and the extremist in conservatism who undertakes the cure of every case by non-surgical methods, the valuable time of the association will not have been taken up in vain.

112 EAST SIXTY-FIRST STREET.

CYST OF THE APPENDIX VERMIFORMIS.

By WILLIAM C. WOOD, M. D.,

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GYNÆCOLOGIST NATHAN LITTAUER HOSPITAL.

A report of the following case may be of interest:

On August 16, 1901, I was called by Dr. Burt, of Glenn, to see Miss B. A., aged twenty-five years, whom he considered to be suffering from an acute attack of appendicitis. She gave no history of ever having had a similar attack, but just twenty-four hours previously had been taken with severe pain in the stomach, nausea, and vomiting; the pain soon shifted to the region of McBurney's point, and there was a slight rise of temperature. When I saw her she was acutely tender over the appendix, there was marked rigidity of the right rectus muscle, and the abdomen was somewhat distended, especially on the right side. The pain was severe, but not constant. The bowels were moderately constipated.

I concurred in Dr. Burt's diagnosis and, assisted by Dr. Burt and Dr. Peddie, of Fonda, proceeded to operate.

On opening the abdomen by the usual incision a transparent tumor, dark-colored and filled with fluid, presented in the opening. At first I thought it might be a strangulated intestine, but

on drawing it out of the wound it was found to be attached to the head of the colon, and was, in fact, a cyst of the appendix.

The tumor was removed by clamping its base and cutting close to the bowel, which was secured by inverting the stump into the bowel and overcasting with several interrupted sutures. The cyst contained six ounces of fluid of a light straw color similar to that found in a hydrocele. The patient made a prompt and uneventful recovery.

Correspondence.

LETTER FROM TORONTO.

The Small-pox Situation.—Osteopathy and Christian Science Confronted by the Law.—The Question of the Amalgamation of Toronto Societies.—An Increased Consumption of Alcohol and Tobacco.

TORONTO, November 16, 1901.

The small-pox situation in many sections of the Dominion seems to be becoming quite a serious matter. At the capital, Ottawa, there have been over seventy cases, and at St. John, N. B., over fifty cases have occurred, with seven deaths. Several sections of Manitoba are also infected, while, owing to the proximity of the disease along the borders of British Columbia, fears have been entertained at Rossland and other points necessitating strict precautions on the part of the health authorities. Many cases have appeared in the Province of Quebec, in manufactories and educational institutions, the latest outbreak being at Sorel. The Quebec board of health has issued special orders for compulsory vaccination in these places and also to lumbermen to see that their employees are vaccinated before commencing the winter's work in the woods. In Ontario, several centres for infection have appeared, and the Ontario board of health has deemed it advisable to appoint a special medical inspector for that region. Dr. C. A. Hodgetts, of Toronto, has been appointed permanently to this position and will have oversight of an extensive district which stretches from the Ottawa River to the Province of Manitoba, having 6,000 miles of railway, with lake and river frontage, and a population of 100,000.

Lately, in this city, the osteopaths have been coming in for some attention at the hands of the law. A few weeks ago a young lady was undergoing treatment in the office of one of these irregulars for a very large goitre. A hæmorrhage occurred into the bronchi and lungs, producing suffocation and death. A coroner's court instituted inquiries into the cause of the death, and

the jury brought in a verdict condemning the practices of the osteopaths as dangerous and unskilful, and, further, recorded their opinion that strict laws should be enacted which would put an end to this dangerous practice and others of a kindred nature, which, they had reason to believe, were far too numerous in Toronto. Following upon this the Medical Council of Ontario had two of these "practitioners" brought before the police magistrate. A hearing has not yet been had, but in the mean time the announcement is made that the osteopaths in Toronto are organizing themselves into an association, offensive and defensive, of which any one a member of or recognized by the American Osteopathic Association, may become a member.

Christian Science, too, has had more than its share of free advertising. A case which excited a good deal of interest was the prosecution of a father for manslaughter because he had allowed his son of six or seven years to die from diphtheria without summoning medical aid to him. The Christian Scientists, of course, took an intense interest in the proceedings of the trial, and daily while it was in progress crowded the court room. Remarkable, indeed, was the faith recorded by these people, one going so far as to state in court that by prayer he would be able to deflect a rifle ball shot straight at him. The jury and the court adjudged the father guilty of the crime charged, but the case is to go on to the Court of Appeals, in order to define whether medicine is or is not one of the necessities of life according to our Criminal Code. The presentment of the grand jury, particularly its reference to the Christian Scientists during these assizes, called attention to the fact that as the law now stood the one most culpable, the demonstrator, could not be held liable; and therefore they thought that a change in the law seemed desirable which would prevent any one not a legally qualified physician from acting as a substitute.

Amalgamation of the various medical societies at present existing in this city is again being advocated, especially by a number of the younger men, who desire to see established an Academy of Medicine. There are at present the Toronto Clinical Society, the Toronto Medical Society, the Pathological Society, the Ontario Medical Library Association, some reading clubs, and a post-graduate society of the Toronto General Hospital. While there are some who consider that an amalgamation is advisable for the purpose of becoming a strong unit of the British Medical Association, others would consider it more profitable to become closer affiliated with our own national association. There are five hundred phy-

sicians in Toronto, and none of the societies can average more than twenty or twenty-five at the outside at the regular meetings. If the physicians of this city could organize into a strong body, there are many who believe it would result in much individual and general good to the entire profession.

The consumption of liquor and tobacco increased throughout the Dominion of Canada during the past official year, which ended on the 30th of June last. Beer seems to be the popular beverage among drinkers, as the consumption per capita amounted to 4.737 gallons against 4.364 gallons for the preceding year. Spirits are represented by 0.765 gallon and wines by 0.1, which is also an increase over the previous year represented by 0.701 gallon and 0.085 gallon respectively. The consumption per capita of tobacco was 2.404 pounds, against 2.3 pounds for the previous year. Ontario is the greatest consumer of ardent spirits of all the provinces, surpassing even Nova Scotia, which has a good reputation for "Scotch." Next in order comes Quebec, while New Brunswick is third and Manitoba fourth. As regards tobacco, the warehouse returns show that the Quebec habitant has a fondness for the fragrant weed, and as a matter of fact Quebec consumes more tobacco and cigarettes than any other province, Ontario being second on the list.

Therapeutical Notes.

Cochineal in the Treatment of Whooping-cough.—Dr. Hesse (*Therapie der Gegenwart: Médecine moderne*, October 9th) has treated fifteen children affected with whooping-cough, with a resulting cure in five weeks, and even, in six cases, in three weeks. The following is the author's formula:

R Powdered cochineal. . . from 15 to 30 grains;
Potassium carbonate. . . " 30 " 45 "
Distilled water. 3 ounces;
White sugar. 2½ drachms.

M.

A teaspoonful every two or three hours.

For Otorrhœa.—The *Gaceta medica de Costa Rica* for September 15th ascribes the following to Botey:

R Distilled water. 60 minims;
Alcohol. 60 "
Perchloride of iron. 30 grains.

M.

Three or four drops to be instilled into the external auditory meatus two or three times daily.

Dental Anodyne Applications.—The *Journal de médecine de Paris* for September 1st ascribes the following to Dr. Redier:

I.

℞ Tincture of benzoin. 90 minims;
Tincture of opium, } of each. . . 30 "
Chloroform, }

M.

Or 2.

℞ Tincture of benzoin. 60 minims;
Tincture of opium, } of each. . . 30 "
Chloroform, }
Pure creosote, }

M.

The second formula, in spite of its disagreeable and persistent savor, is said to be specially applicable to rebellious cases with excessive sensibility.

After cleaning and drying the cavity, a small pledget of absorbent cotton soaked in one of these mixtures is inserted into it and covered with another tampon imbued with some resinous substance; the resin being precipitated by the saliva into the cotton forms a consistent, glutinous mass adhering to the walls of the cavity, and more or less impermeable.

The following formula is given for the resinous coating:

℞ Camphor. 30 grains;
Gum mastich. 75 "
Balsam of Peru. 30 "
Gum sandarac. 450 "
Ether, } of each. 600 minims;
Alcohol, }

M.

Dissolve the powdered resins in the mixture of alcohol and ether; shake frequently and let it stand; then decant.

This gives a very hard sealing application. The dressings may be left in place for forty-eight hours and renewed as required.

The Palliative Treatment of Gastroptosis.—Professor Saundby (*Treatment*, September) recommends making the patient lie down for an hour after each meal, and wear a light abdominal bandage. The following prescription is given:

℞ Dilute hydrochloric acid. 15 minims;
Tincture of nux vomica. 10 "
Liquid extract of cascara. 10 "
Infusion of gentian to. 1 ounce.

M.

To be taken immediately after each meal. The amount of cascara may be increased or diminished as required, but these patients are generally constipated. [Dr. Achilles Rose speaks very highly of strapping the abdomen in place of a bandage.]

Hot Saline Irrigations in Gonorrhœa.—Woodruff (*Semaine médicale*, March 27th; *Treatment*, September) recommends, for gonorrhœa, irrigation every two or three hours with saline solution as hot as the patient can bear. The author has treated ninety-eight soldiers by this method, most of them being cured within ten days.

A Local Application in Toothache.—The *Journal des praticiens* for October 12th gives the following:

℞ Tincture of cochlearia,
Tincture of mustard,
Compound tincture of phyllanthus, } equal parts.
Tincture of pellitory,

M.

For Gouty Attacks.—The following formula is given by the *Clinical Review* for October, as designed for use during the actual attack, and not for continued administration:

℞ Acetic extract of colchicum, }
Extract of aloes, } of each. . . 1 grain;
Powdered ipecacuanha, }
Calomel, }
Extract of nux vomica. ¼ grain.

M. ft. pil.

One such pill to be taken every four hours until purgation occurs.

The Treatment of Gastralgia.—Professor Saundby (*Treatment*, September) for therapeutical purposes divides cases of gastralgia into two groups: (1) Those in which the pain occurs independently of eating, and is relieved by a sufficient meal or a small quantity of stimulant; (2) those in which the pain occurs after food and is distinctly referable to the introduction of food into the stomach.

The treatment of the first class consists of a Weir Mitchell course, change of scene, a sea voyage or mountain air, and abundant food at regular intervals. Palliative treatment may consist of iron, quinine, arsenic, nux vomica, and mineral acids, and the following for the relief of pain:

℞ Morphine or heroine hydrochloride, }
 } ⅛ of a grain;
Water. 1 teaspoonful.

M.

The second class of cases is often met with in anæmic girls and resembles organic disease of the stomach. The pain is more constant, however, and excited by ingesta, *e. g.*, a drink of water, that are scarcely sufficient to arouse it in, say gastric ulcer. There is no hæmatemesis in the vomiting set up after food in gastralgia, as there is in gastric ulcer. Hysteria often coexists. Rest in bed, milk and lime-water in small quantities—say an ounce every hour. A nutrient enema of one egg, beaten up in four ounces of milk, to be given every four hours. The amount of milk should be rapidly increased, with improvement, and if milk fails from two to four ounces of lightly cooked minced meat may be substituted. The following mixture is for the anæmia:

℞ Magnesium sulphate. 40 grains;
Ferrous sulphate. 2 "
Dilute sulphuric acid. 3 minims;
Peppermint water to. 1 ounce.

M.

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TETANUS AND VACCINATION IN CAMDEN.

The recent occurrence of a number of cases of tetanus in Camden, New Jersey, "following vaccination," has stirred up unnecessary alarm in the community, and will no doubt be turned to the utmost account by the antivaccination agitators. Their lurid portrayal of the dire results of vaccination and their fervid citation of the Camden cases in support of their contention we must expect, but it is our duty to meet fanaticism with pure reason. Fortunately, one of the particular facts that are reported to be giving rise to widespread apprehension is really a fact that of itself alone ought to suffice to allay fear. The good people of Camden are represented as saying to themselves: "Persons who have been vaccinated are coming down with tetanus two and even three months after the vaccination. When can we feel ourselves safe?" This very lapse of time ought to teach them that the tetanus was, indeed, "following vaccination," but in no wise connected with it. Most of the ills that men suffer from "follow" vaccination, *longo intervallo*, for vaccination does not purport to protect people against anything but small-pox. The period of incubation of tetanus rarely exceeds two weeks, and when tetanus declares itself at a time more remote than that from the vaccination, it may safely be said that the germ of the disease was not inoculated with the vaccine.

Like any other wound, of course, the abrasion made in the operation of vaccination may subsequently be infected with the germ of tetanus. That micro-organism is undoubtedly running riot in Camden at the present time, and we should not

advise anybody living in the vicinity to be vaccinated until the infection has disappeared; we should not advise it even in a case of exposure to small-pox, for the mortality of small-pox, high as it often is, is almost insignificant in comparison with that of tetanus. But this advice we do not base on the slightest apprehension of contamination of the vaccine with the germ of tetanus, but on the fact that any abrasion, cut, or solution of continuity of any sort implicating the integument or a mucous membrane may prove the point of lodgment of the pathogenic organism. The sanitary officials are reported to have forbidden physicians to perform any more vaccinations for the present. Such an order, supposing it to have been issued, may be arbitrary, but it certainly ought to be scrupulously obeyed. Moreover, so long as tetanus is present, there should be a total suspension of surgical operations of every sort save those that are imperative. Even such mild measures as curetting and the raising of a blister it would be well to avoid. When we make these sweeping statements it will be seen how thoroughly we recognize the element of traumatism in the causation of the Camden cases of tetanus and how utterly we deny the agency of vaccination as such, that is, as regards any contamination of the vaccine employed. It came from different sources, and no one purveyor's product was used exclusively in the cases in which tetanus followed. In short, there is not the ghost of a reason for regarding the vaccine as the cause of the disease.

THE TETANUS CASES IN ST. LOUIS.

The report of the committee of bacteriologists who have been engaged in the study of the fourteen deaths from tetanus which occurred in St. Louis recently following the administration of diphtheria antitoxine, while outspoken in placing the blame upon the authorities under whose direction the antitoxine was prepared, is reassuring to those who may have been tempted to doubt our bacteriological methods in view of the lamentable results following the use of diphtheria antitoxine in the St. Louis cases.

This committee, whose conclusions are published in another column, finds that the deaths were caused,

not by germs or spores of tetanus, but by the introduction of tetanus toxine already formed. A careful test of the toxicity of the serum showed that the dose of serum (ten cubic centimetres) contained but little more than a fatal dose of the tetanus toxins for a child weighing fifty pounds. The committee specifically charge the health department with having issued some of the antitoxine drawn on September 30th from a horse which on October 2d showed symptoms of tetanus, and it is further charged that a portion of the serum labeled as having been drawn on August 24th was in fact drawn on September 30th. Serum dated October 23d came into the possession of the committee on November 1st, an interval too brief for any animal experiments to have been made with it, and the committee is of the opinion that the serum drawn on September 30th may have been issued before there was time to perform the simple tests necessary to determine its antitoxic potency.

In all of this there is nothing calculated to shake one's faith in the reliability of our bacteriological methods. The errors charged are errors of carelessness and not of ignorance. No hitherto unforeseen dangers were discovered in the investigation, but the accuracy and reliability of the results obtainable by the modern bacteriologist were admirably illustrated by the character of the work done by the committee. The one lesson taught by the sad occurrence is the need for the use of careful, painstaking, scientific methods in every step in the process of preparing these potent remedies, and, as we have already said, we believe that such work should properly be left to private enterprise and not to public officials.

HEALTH OFFICIALS AND POLITICS.

A public officer whose duties involve either technical work on his own part or the exercise of judgment founded on such work performed by others should be chosen without the slightest regard to his political opinions or his party affiliations. He should, of course, be the best available man for the office, and so long as he continues to answer that requirement he ought to be free from the least chance of supersession for any reason whatever. All medical officials are such officers, and those of them who are in high places, as well as those of subordinate rank, ought to be as se-

cure in their tenure as a civil service appointee or a medical officer of the army or the navy. These remarks, we take it, will incur no opposition or dissent, save such as may be founded on self-interest or rank partisanship. They are called forth by something that is reported to have been said at a recent meeting of physicians held in Buffalo for the purpose of eliciting the feeling of the medical profession of that city concerning the management of the sanitary affairs of the city by Health Commissioner Ernest Wende.

One of the speakers is reported to have said: "When the people of Buffalo elected Erastus C. Knight by over 5,000 majority, they did so with the expectation that Dr. Wende would be removed from office. * * * In view of this fact, I think we ought to centre our energies on procuring the appointment of the best candidate available among the Republican ranks, instead of wasting useless exertion on a forlorn hope." According to the *Buffalo Express*, these words called forth from every corner of the hall cries of "No, it is not so." Doubtless there were many Republicans at that meeting, but almost all of them, so far as we can infer, divested themselves of party feeling, sinking it in loyal devotion to professional honor. It is reported that there were a few votes in the negative on Dr. Stockton's resolutions calling on the mayor-elect to reappoint Dr. Wende, but nobody spoke against them, except the gentleman whose statements we have quoted.

We are not urging the reappointment of Dr. Wende, although we have reason to regard him as an exceptionally intelligent and devoted sanitarian, for we believe that it is not well, as a rule, for a medical journal to advocate the choice of any individual as a public officer, but we have no hesitation about stating our belief that the people of Buffalo did not elect Mr. Knight for the purpose, among others, of terminating Dr. Wende's tenure of office. The incumbency of a health commissionership is not usually a burning question in an election, and, even if it was expected that Dr. Wende's supersession would be one of the results of their electing Mr. Knight, we give the people of Buffalo credit for mingling regret with the expectation. The result of the election was probably brought about by considerations

having nothing at all to do with Dr. Wende's office. We are encouraged by the action of this meeting of Buffalo physicians to hope that the vicious doctrine embodied in the saying "to the victors belong the spoils" is doomed to repudiation before many years, and great will be our satisfaction in reflecting that the medical profession helped powerfully to bring about such a result.

PARATYPHUS.

The disease which has thus been named seems to run the clinical course of true typhoid fever, although in some cases rose spots have been observed on the face and the prognosis is more favorable. The "paratyphus bacilli" found in the blood are much like the *Bacillus typhosus* morphologically, but they behave differently in cultures and are not agglutinated by the serum of typhoid-fever patients; hence Schottmüller (*Zeitschrift für Hygiene und Infektionskrankheiten*, xxxvi, 3; *Wiener klinische Wochenschrift*, August 15th), who reports upon a series of cases observed in a Hamburg hospital, suggests that absence of the Widal reaction in cases that, judged by the symptoms, are examples of typhoid fever should lead the observer to think of paratyphus.

A GERMAN ANALOGUE OF THE TEXAS CATTLE FEVER.

The list of diseases imputed to parasites is now to be swollen, it seems, by a form of hæmoglobinæmia frequently observed in cattle in various marshy districts of Germany and often productive of death. As described by Jackschath (*Centralblatt für Bakteriologie und Parasitenkunde*, xxix, 14; *Wiener klinische Wochenschrift*, July 18th), the parasite is pear-shaped or roundish, and is observed in the red blood corpuscles. He maintains that it is conveyed by the ordinary cattle tick (*Ixodes reticulatus seu reduvius*), so that in this respect the malarial cattle disease of Germany resembles the cattle fever of Texas.

THE CONTAGIOUSNESS OF CANCER.

The communicability of cancer from one person to another is probably feeble and not often exemplified. Perhaps it may be said to be about the same in degree as that of leprosy, as is remarked by Behla (*Deutsche medicinische Wochenschrift*, 1901, No. 26; *Wiener medicinische Blätter*, August 8th), who treats of *cancer à deux* and *cancer à trois*.

News Items.

Marine-Hospital Service:

The following cases of small-pox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending November 16, 1901:

Smallpox—United States.			
California....	San Francisco...	Oct. 27-Nov. 3.	1 case.
Indiana....	Evansville.....	Nov. 2-9.....	2 cases.
Kansas....	Wichita.....	Nov. 2-9.....	1 case.
Louisiana....	New Orleans....	Nov. 2-9.....	7 cases.
Massachusetts....	Boston.....	Nov. 2-9.....	22 cases.
Michigan....	Detroit.....	Oct. 27-Nov. 2.	1 case.
Nebraska....	Omaha.....	Nov. 2-9.....	4 cases.
"	So. Omaha.....	Nov. 1-8.....	2 cases.
New Jersey....	Camden.....	Nov. 2-9.....	3 cases.
"	Newark.....	Nov. 2-9.....	29 cases.
New York....	New York.....	Nov. 2-9.....	10 cases.
Ohio....	Cincinnati.....	Nov. 1-8.....	1 case.
Pennsylvania....	Allegheny City..	Nov. 2-9.....	2 cases.
"	New Castle.....	Oct. 1-31.....	4 cases.
"	Norristown.....	Nov. 2-9.....	10 cases.
"	Philadelphia....	Nov. 2-9.....	72 cases.
"	Pittsburgh.....	Nov. 2-9.....	1 case.
Tennessee....	Memphis.....	Nov. 2-9.....	1 case.
Utah....	Salt Lake City..	Nov. 2-9.....	2 cases.
Vermont....	Burlington.....	Nov. 2-9.....	1 case.
Wisconsin....	Green Bay.....	Nov. 2-9.....	1 case.

Smallpox—Foreign.			
Austria.....	Prague.....	Oct. 19-25.....	2 cases.
Belgium.....	Antwerp.....	Oct. 19-26.....	3 cases.
"	Ghent.....	Oct. 11-18.....	2 deaths.
Brazil.....	Pernambuco....	Sept. 6-30.....	116 deaths.
"	Rio de Janeiro..	Sept. 15-Oct. 4.	205 deaths.
Canada.....	Halifax.....	Nov. 2-9.....	7 cases.
"	Quebec.....	Nov. 2-9.....	25 cases.
Colombia....	Bocas del Toro..	Oct. 22-29.....	3 cases.
"	Panama.....	Oct. 27-Nov. 6.	125 cases.
Egypt.....	Cairo.....	Oct. 7-14.....	1 death.
Gt. Britain....	Liverpool.....	Oct. 19-26.....	1 death.
"	London.....	Oct. 19-26.....	6 deaths.
India.....	Madras.....	Oct. 5-11.....	2 deaths.
Italy.....	Naples.....	Oct. 12-19.....	1 death.
Russia.....	Moscow.....	Oct. 12-19.....	4 deaths.
"	Odessa.....	Oct. 19-26.....	3 cases.
"	St. Petersburg..	Oct. 12-26.....	4 cases.
W. Indies....	Curacao.....	Oct. 19-26.....	4 cases.

Yellow Fever.			
Brazil.....	Rio de Janeiro..	Sept. 15-Oct. 13.	11 deaths.
Mexico.....	Vera Cruz.....	Oct. 26-Nov. 2.	23 cases.
"	"	"	10 deaths.
Cholera.			
India.....	Bombay.....	Oct. 8-15.....	1 death.
"	Calcutta.....	Oct. 5-12.....	20 deaths.
"	Madras.....	Oct. 5-11.....	40 deaths.
Java.....	Batavia.....	Sept. 14-Oct. 5.	286 cases.
"	"	"	183 deaths.

Plague—Insular.			
Philippines..	Manila.....	Sept. 7-28.....	3 deaths.
Plague—Foreign.			
Brazil.....	Rio de Janeiro..	Sept. 15-Oct. 13.	19 deaths.
India.....	Bombay.....	Oct. 8-15.....	179 deaths.
"	Calcutta.....	Nov. 2-9.....	12 deaths.
Russia.....	Odessa.....	Nov. 10.....	Present.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending November 16, 1901:

DISEASES.	Week end'g Nov. 9.		Week end'g Nov. 16.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	60	20	80	18
Scarlet fever.....	141	8	183	13
Cerebro-spinal meningitis.....	0	0	0	2
Measles.....	172	3	277	8
Diphtheria and croup.....	257	44	264	37
Small-pox.....	10	1	8	3
Tuberculosis.....	264	141	210	150

Dr. T. Gaillard Thomas was the recipient of a dinner given in his honor at Sherry's on November 21st, that being the seventieth anniversary of his birthday.

Society Meetings for the Coming Week:

MONDAY, November 25th.—Medical Society of the County of New York; Lawrence, Massachusetts, Medical Club (private); Cambridge, Massachusetts, Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, November 26th.—New York Dermatological Society (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, November 27th.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Auburn, N. Y., City Medical Association; Berkshire, Massachusetts, District Medical Society (Pittsfield); Philadelphia County Medical Society.

THURSDAY, November 28th.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Massachusetts, Society for Medical Improvement (private); Pathological Society of Philadelphia.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending November 16, 1901:

BELL, W. H., Assistant Surgeon. Detached from the *Franklin* and ordered to the Naval Hospital, Norfolk, Virginia.

BISHOP, L. W., Assistant Surgeon. Detached from the *Independence* and ordered to the Naval Hospital, Cavite, Philippine Islands.

BLAKEMAN, R. S., Passed Assistant Surgeon. Detached from the Naval Hospital, Norfolk, and ordered to the *Hartford*.

CURL, H. C., Assistant Surgeon. Detached from the Naval Hospital, Cavite, and ordered home to await orders.

DE VALIN, C. M., Passed Assistant Surgeon. Detached from the Naval Hospital, Portsmouth, New Hampshire, and ordered to the *Rainbow*.

EVANS, S. G., Passed Assistant Surgeon. Ordered to the Naval Hospital, Portsmouth, New Hampshire.

PARKER, E. G., Assistant Surgeon. Detached from the *Hartford*, and ordered home to await orders.

SMITH, G. T., Surgeon. Detached from the *Amphitrite* and ordered to the *Puritan*.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending November 16, 1901:

ASHFORD, BAILEY K., First Lieutenant and Assistant Surgeon. The leave of absence granted him is extended seven days.

BEATTY, WALTER K., Contract Surgeon, will proceed to Fort Huachuca, Arizona Territory, for duty.

BELT, HARRY D., Contract Surgeon, will proceed to Holquin, Cuba, for duty.

CHAMBERLIN, W. P., First Lieutenant and Assistant Surgeon, is granted leave of absence for fourteen days.

GUITTARD, ALVIN M., Contract Surgeon, will proceed to Fort Baker, California, for temporary duty.

GUNN, HERBERT, Contract Surgeon. The leave of absence granted him is extended one month.

IVES, FRANCIS J., Major and Surgeon (promoted from captain and assistant surgeon, subject to examination) will report before the examining board at the Army Medical Museum Building, Washington, for instruction.

JEAN, GEORGE W., First Lieutenant and Assistant Surgeon, will report at the Army Medical Museum Building, Washington, for instruction.

KEMP, FRANKLIN M., First Lieutenant and Assistant Surgeon, will proceed to the Philippine Islands by the first available transport sailing from New York.

KENNEDY, JAMES S., Captain and Assistant Surgeon, is relieved from duty at Fort Sam Houston, Texas, and will proceed to San Francisco for transportation to the Philippine Islands.

KULP, JOHN S., Captain and Assistant Surgeon, is detailed as a member of the examining board at the Army Building, New York, vice **ALLIE W. WILLIAMS**, First Lieutenant and Assistant Surgeon.

O'REILLY, ROBERT M., Lieutenant-Colonel and Deputy Surgeon-General, is relieved from duty at Fort Monroe, Virginia, and will proceed to San Francisco, on January 1, 1902, for duty as chief surgeon, Department of California.

RICH, EDWARD W., First Lieutenant and Assistant Surgeon, will proceed to Fort Totten, N. Y., for duty.

TITUS, FRANK H., Major and Surgeon, will proceed to San Francisco for transportation to the Philippine Islands.

The Woman's Hospital of the State of New York celebrated its forty-sixth anniversary on November 21st at the Berkeley School, Madison Avenue and Forty-ninth Street.

An Indian Princess a Medical Student.—The Princess Sophia Bemba Dhuleep Singh, daughter of the late Maharajah of Lahore, and granddaughter of the last ruler of the great Sikh Empire, registered recently as a medical student at the Northwestern University Women's Medical College, at Chicago.

Juvenile Smokers to be Punished in Cincinnati.—An old law to punish boys under fifteen years of age who are caught smoking is to be revived and again enforced in Cincinnati. This is no question of cigarettes or no cigarettes. The smoking of tobacco in any form is decidedly injurious to boys and growing youths and strenuous efforts should be made to check the practice everywhere.

An Examination for the Position of Police Surgeon will be held by the Civil Service Commission, 346 Broadway, New York, beginning December 9, 1901. The subjects of the examination are technical knowledge and experience. Applications should be filed as soon as possible, in order to secure admission to the examination. For forms for application apply to

LEE PHILLIPS, Secretary.

Damages Awarded for X-ray Burns.—Dr. John Weldon, of Willimantic, Conn., has been awarded damages in the sum of \$6,750 in a suit brought by him against Otis Clapp & Co., of Boston, in the United States District Court, on the ground that he had been injured while experimenting with an x-ray machine purchased from the defendants and warranted by them not to burn. The case will probably be appealed.

A Surgical Instrument Thief has been arrested in Kansas City. He has been making a practice of stealing valuable instruments and apparatus and selling them. As such things are not easily negotiable at pawnshops, it has been difficult to trace his actions; but he was ultimately found to dispose of his stolen goods by representing himself to medical men as a physician in financial straits, and inducing them in all innocence to purchase the instruments. Some instruments that he had sold were identified, and the man himself was also recognized.

Dangerous Soldering of Canned Goods.—Mr. Milton L. Harvey, the city analyst of Montreal, in his recent monthly report, said, among other things, that examination of canned apples, the eating of which had caused illness in a family, showed that the can in which they were originally contained had four leaks, due to incomplete soldering, and analysis of the apples and the juice showed that they contained dissolved tin. Analyses of the solder on various cans containing foods revealed the fact that the cheapest plumbers' and roofers' solder was being used. A sample from a tomato can contained seventy per cent. of lead. In France and other European countries where stringent food laws existed, it would be unfortunate for anybody convicted of using a solder containing over ten per cent. of lead on cans or other receptacles containing food.

A Judicial Decision Favorable to Vaccination.

—The committee on hygiene of the Philadelphia Board of Education suspended a teacher on the ground that she had declined to present a certificate showing that she had been vaccinated within five years as required by the board. The teacher took the matter into court, asking that an injunction be issued restraining the board from suspending her. A decision has been handed down by Judge Arnold refusing to grant the petition, in the course of which he says: "As school directors may, in the exercise of a sound discretion, exclude from the public schools pupils who have not been vaccinated, as was decided by the Supreme Court in the case of *Duffield vs. the Williamsport School District*, 162 Pa., 476 (A. D. 1894), so may they exclude teachers and other employees for the same reason. * * * The law applicable to cases of this kind is the ordinary law of master and servant. If a servant disobeys the reasonable orders of his employer, he may be suspended or discharged. In the present case the plaintiff has refused to comply with a lawful regulation of the board of education, and, therefore, is subject to suspension and dismissal."

The Emergency Hospital, Detroit.—An investigation by a committee of the Detroit Board of Health, consisting of the health officer and the sanitary engineer to the board, visited the Emergency Hospital recently to investigate the charges made against that institution by Dr. Emil Amberg and report thereon. The commissioners' report shows that, while there have been some ground for the criticisms of Dr. Amberg, all the principal objections were already in process of removal, and that the new hospital, which is shortly to be erected, will be up to date in every particular. The report concludes as follows:

"In summing up, your committee submits that while the buildings now occupied by the Emergency Hospital were not constructed for a hospital, the faculty are doing everything in their power to make the place sanitary, and inasmuch as the needed repairs are in process of construction, it seems to us that nothing remains for your board to do.

"The attending physician of the lying-in department of the hospital will make application for a license under Act No. 105, Public Acts of 1901, and that matter may then be acted upon in the proper manner."

Officers of the Medico-Legal Society.—At the November meeting of the Medico-Legal Society, held on November 20th, Dr. W. S. Magill read a paper on Poisoning by Aconite (the Condon case) in Noting Physiological Analyses of Alkaloids. Mr. Clark Bell was nominated for re-election as president and Mr. Samuel Bell Thomas as secretary of the society.

The New Jersey Sanitary Association will hold its twenty-seventh annual meeting at Lakewood, N. J., on December 6th and 7th. The opening session will be on the afternoon of the 6th, and after the reports of committees the association will consider The Legal and Sanitary Status of Garbage Disposal in New Jersey, Edwin B. Goodel speaking on The Legal Status and M. N. Baker on The Sanitary Status. A discussion on the subject will follow, under the direction of Dr. Henry M. Mitchell, secretary of the State Board of Health. At the evening session there will be an address by President Herbert M. Baldwin on Public Water Supply in Camden. Other addresses in the evening will be made by Professor Olin H. Landreth, of Union College, New York, on The Sanitary Aspect of the Reclamation of Meadow Land, and Professor A. B. Poland, Superintendent of Public Schools, Newark, on Compulsory School Attendance in Its Relation to the Public Health.

At the concluding session, on Saturday morning, small-pox will be the chief subject for consideration. Dr. John L. Leal, of Paterson, will conduct the discussion, and the various phases will be presented as follows: Diagnosis, Dr. E. E. Ware, of Newark; Vaccination, Dr. William K. Newton, of Paterson; Isolation, Dr. Frank Agnew, of Paterson; Disinfection, M. O. Leighton, of Montclair; Local Routine, D. D. Chandler, of Newark; State Routine, Dr. A. C. Hunt, of the State Board of Health. Previous to adjournment Dr. William H. Lowe, president of the Veterinary Association, will deliver an address on Progress in Veterinary Medicine in Its Relation to Hygiene.

The Tetanus Epidemic in Camden.—The Camden Board of Health is now carrying on a thorough investigation into the cases of tetanus following vaccination which occurred in that city. The shortest period elapsing between the development of tetanus and vaccination was nineteen days, whereas from five to nine days only are required for the development of tetanus from the time of infection. In each one of the Camden cases the arms of the patient had been neglected, not even the ordinary laws of cleanliness having been observed. All the vaccine employed has been subjected to rigid bacteriological examination, and in not a single instance have tetanus germs been found. During the past five weeks over one million people have been vaccinated within a radius of thirty miles of Philadelphia, and only about ten cases of tetanus have occurred. In so large a number of operations of any character this proportion of tetanus is very low. The board of health is of the opinion that had the wounds of vaccination been treated properly no tetanus would have occurred.

The Coroner's Verdict in the St. Louis Tetanus Cases.—Dr. R. M. Funkhouser, coroner of the city of St. Louis, has made public the verdict reached in the St. Louis tetanus cases. The verdict, signed by the coroner himself and by two deputies, Dr. Frank Boogher and John T. Fitzsimmons, covers fourteen cases and reads as follows:

We find that the deceased came to their deaths upon the dates mentioned from tetanus, following the administration of diphtheria antitoxine containing tetanus toxine, said diphtheria antitoxine having been prepared and issued by the Health Department of the city of St. Louis and bearing dates on labels of August 24, 1901, and September 30, 1901.

The testimony shows that the Health Department owned a horse named Jim, stabled at the Poorhouse Farm, and used in the preparation of diphtheria antitoxine. Said horse Jim developed tetanus on October 2, 1901, and was at once killed. Blood was drawn from said horse Jim on August 24, 1901, the serum of which was non-toxic. Blood was again drawn from said horse Jim, September 30, 1901 (during the period of incubation of tetanus), the serum of which contained tetanus toxine. Serum drawn September 30, 1901, was issued by the Health Department in bottles bearing labels respectively dated August 24, 1901, and September 30, 1901.

That the toxic serum drawn September 30, 1901, was issued is shown by the fact that the toxic serum dated August 24, 1901, and all the serum dated September 30, 1901, are identical in the following particulars:

1. In appearance.
2. Absolute weight.
3. Specific gravity.
4. Freezing point.
5. Chemical reaction.
6. Spectrum analysis.
7. Anti-toxic potency.
8. Toxic value in producing tetanus in lower animals.

The non-toxic serum drawn August 24, 1901, and so labeled, in nowise agrees with the toxic serum in any of the above characteristics.

The presence of tetanus toxine in the diphtheria antitoxine shows negligence upon the part of the Health Department in the preparation of the said diphtheria antitoxine and in the issuance thereof.

This report is based upon the report and conclusions of the special committee of bacteriologists who investigated the matter. This committee, consisting of Dr. C. Fisch, Dr. E. C. Walden and Dr. B. Meade Bolton, submitted to the authorities a detailed report of the work done by them in the case and summarized the conclusions which they drew from their observations as follows:

As the result of our investigations we draw the following conclusions:

The diphtheria antitoxine prepared by the Health Department of the City of St. Louis, and dated September 30, and some of the serum dated August 24, was the cause of the recent deaths from tetanus in the cases where this antitoxine was used.

This antitoxine was sterile, but contained the toxine of the tetanus bacillus in considerable amount.

There were two different sera issued under date of August 24, one portion not containing the tetanus toxine, and characterized by other properties, while the other contained the tetanus toxine and was identical with the serum bearing the date of September 30.

The most important result we have arrived at is the positive demonstration that the toxic serum dated August 24 and that dated September 30 are identical. From this we conclude that the serum of September 30 was issued without having been tested by the proper methods, and that a part of it was filled into bottles bearing the date of August 24, or was furnished with labels having previously been stamped with this date.

We are justified in drawing this conclusion from two observations: First, that the serum of September 30 was issued before there was time to have performed the simple

tests necessary to determine the anti-toxic potency of the serum. Second, in the same way, serum dated October 23, came into our possession on November 1. This serum had been issued to physicians by the Health Department, and by them returned to the coroner. It is obvious from this that no animal experiments could have been made with this antitoxine. As this was the case with the serum of October 23, it is the natural inference that the serum of September 30 was issued in the same way.

It is impossible for latent tetanus to have existed in the horse, Jim, from August 24 to September 30, as no well authenticated cases have been reported in which the incubation period extended over 7 days, in experiments directed to test this point. The period of incubation cannot be determined from clinical observation, from the nature of the case.

It therefore follows from this that the serum drawn on August 24 was free from tetanus, but that the serum of September 30 was drawn during the period of incubation, and had it been tested upon animals it must necessarily have revealed its toxic properties.

From the foregoing facts we are forced to conclude that the diphtheria antitoxine prepared by the city Health Department has been issued before it was possible to have obtained results from the absolutely necessary tests. Had these tests been performed the results upon animals would have been such that the serum would not have been dispensed and the cases of tetanus forming the basis of this report could not have resulted.

Births, Marriages, and Deaths.

Births.

MAY.—In Blenheim, South Carolina, on Saturday, November 16th, to Dr. and Mrs. Charles R. May, a daughter.

Married.

CRAWFORD—MACDERMOTT.—In Boston, on Tuesday, November 19th, Dr. C. Alexander Crawford, United States Navy, and Miss Mary W. Macdermott.

HENRY—TRAIN.—In Wellesley Hills, Massachusetts, on Tuesday, November 5th, Dr. Edward E. Henry and Miss Maude E. Train.

ORVIS—WOLF.—In Washington, on Wednesday, November 6th, Dr. Ralph Thompson Orvis, United States Navy, and Miss Bertie B. Wolf.

PARKER—CALKINS.—In Monroe, Michigan, on Tuesday, November 12th, Dr. Dayton L. Parker and Miss Mabel E. Calkins.

WHITRIDGE—GARY.—In Baltimore, on Thursday, November 14th, Dr. Andrew Henderson Whitridge and Miss Madeline L. Gary.

WEGEFARTH—WIESSNER.—In Baltimore, on Thursday, November 14th, Dr. George C. Wegefarth and Miss Margaret Wiessner.

Died.

ALEXANDER.—In Atlanta, on Thursday, November 14th, Dr. James F. Alexander, in the seventy-seventh year of his age.

ELDRIDGE.—In Yokohama, Japan, on Monday, November 18th, Dr. Stuart Eldridge, Marine-Hospital Service.

GIHON.—In New York, on Sunday, November 17th, Dr. Albert Leary Gihon, United States Navy, in the sixty-eighth year of his age.

MARMION.—In Washington, on Tuesday, November 12th, Dr. George H. Marmion.

NORRIS.—In Philadelphia, on Monday, November 18th, Dr. William Fisher Norris, in the sixty-third year of his age.

REYNOLDS.—In Philadelphia, on Tuesday, November 12th, Dr. David C. Reynolds, in the seventy-first year of his age.

RICE.—In Worcester, Massachusetts, on Monday, November 11th, Dr. J. Marcus Rice, in the seventy-fourth year of his age.

SNELL.—In Brooklyn, on Wednesday, November 13th, Dr. Isaac K. Snell, in the seventy-seventh year of his age.

STONE.—In Louisville, Kentucky, on Tuesday, November 12th, Dr. Barton W. Stone.

TOLMAN.—In East Onondaga, N. Y., on Sunday, November 10th, Dr. Harvey P. Tolman, in the seventy-eighth year of his age.

WIGHT.—In Brooklyn, on Saturday, November 16th, Dr. Jarvis S. Wight, in the sixty-seventh year of his age.

Obituary.

WILLIAM FISHER NORRIS, M. D.,

OF PHILADELPHIA.

Dr. William Fisher Norris, professor of ophthalmology at the University of Pennsylvania, died at his home in Philadelphia, on November 18th, at the age of sixty-three. Death was due to pneumonia, and occurred after an illness of about three weeks. Dr. Norris was born in 1839 in Philadelphia, and graduated at the University of Pennsylvania in 1861. He served during the civil war as an assistant surgeon. Dr. Norris studied ophthalmology in Paris and Vienna, and was for many years visiting surgeon to the Wills Eye Hospital, in Philadelphia. For the four years, 1885 to 1889, he was president of the American Ophthalmological Society. Dr. Norris wrote much and held a high position as an ophthalmologist.

JARVIS S. WIGHT, M. D.

By the death of Dr. Jarvis S. Wight, which took place at his home on November 16th, the medical profession of Brooklyn loses one of its worthiest members. Dr. Wight was descended from an old English family that came to this country in 1635. He graduated at the Long Island College Hospital in 1864, and proceeded to the front during the civil war, remaining in the service until the close of the war. He was attached to his *alma mater* in an official capacity to the close of his life, holding, at the time of his death, the post of professor of operative and clinical surgery there. He was also a consulting surgeon to St. Mary's and the Eastern District hospitals. He was connected with most of the leading medical societies, and contributed to medical art by the invention of some surgical instruments and by medical writings. He was widely respected, not only professionally, but socially. He is survived by his son, Dr. Jarvis S. Wight, Jr.

JAMES F. ALEXANDER, M. D.,

OF ATLANTA, GA.

The death of Dr. James F. Alexander took place at the age of seventy-seven years at his home in Atlanta, on November 14th. Dr. Alexander was born in South Carolina in 1824. He graduated at the Medical College of Georgia in 1849, and practised from that time in Atlanta till the outbreak of the civil war, when he served as surgeon in the Seventh Georgia Infantry. He was next assigned to hospital duty in Atlanta and remained in service there till the close of the war.

Dr. Alexander was for ten years a member of the board of health, and was president for several terms.

During the yellow fever scare, in 1896, Dr. Alexander was of the opinion, on account of the elevation of Atlanta and its very wholesome climate, that the disease would not spread there. He was then president of the board of health and, in consequence of his theory, Atlanta was thrown open to the fever patients, and in no case did the disease spread to others.

The announcement of his death will be received with deep sorrow in many households.

ALBERT L. GIHON, M. D., U. S. N.

Dr. Albert Leary Gihon, senior medical director of the United States Navy, retired, died at Roosevelt Hospital, in New York, on Sunday, November 17th, as the result of a stroke of apoplexy, at the age of seventy years.

Dr. Gihon was born in Philadelphia on September 28, 1833, received the degree of A. B. in 1850, the degree of M. D. from the Philadelphia College of Medicine and Surgery in 1852, and that of A. M. from Princeton in 1854. He was professor of chemistry and toxicology in the Philadelphia College of Medicine and Surgery for the session of 1853-'54. He entered the navy as assistant surgeon in 1855, and served continuously until his retirement, in 1895, on account of the limitations of age. He participated in the engagements resulting in the capture of the barrier forts on the Pearl River, near Canton, China, in 1856, and was in active service in the blockading squadron off Fernandino and South Carolina during the civil war. He was attached to the hospital ship *Idaho* at Nagasaki, Japan, during the typhoon of September 21, 1869, and for services rendered to the Portuguese fleet received from the King of Portugal the decoration of Knight of the Military Order of Christ. He was also the recipient of thanks from the English and French governments for services rendered. He was retired from active service on September 25, 1895, being at that time senior medical director of the navy, with the rank of commodore. Dr. Gihon represented the navy at many of the meetings of medical, sanitary, and climatological associations, and was a member of numerous American and foreign medical and sanitary societies, in several of which he has held important office, having been president of the American Academy of Medicine, of the American Public Health Association, and of the Association of Military Surgeons of the United States.

Dr. Gihon's principal contributions to medical literature are monographs such as *Practical Suggestions on Naval Hygiene*, which appeared in 1871; *Need of Sanitary Reform in Ship Life*, *Sanitary Commonplaces Applied to the Navy*, and *The Prevention of Venereal Diseases by Legislation*. Dr. Gihon will be remembered, among other things, for his earnest efforts during a number of years to obtain contributions sufficient to complete the American Medical Association's Rush Monument Fund. He was energetic in aiding many commendable movements, and he was genial and tactful to an uncommon degree.

Pith of Current Literature.

Philadelphia Medical Journal, November 16, 1901.

The Outbreak of Tetanus in St. Louis. By Dr. A. C. Abbott.

The Present Status of the Bottini Operation as a Method of Treatment in Obstructive Hypertrophy of the Prostate Gland; Derived from a Summary of Eight Hundred and Eighty-eight Operations by Forty-eight Operators. By Dr. Orville Horwitz.—The author notes that the writers who object to the Bottini operation on theoretical grounds are those who have had the least practice with this method of treatment; their knowledge being limited to a few isolated cases, while, on the contrary, those who have performed it repeatedly become more fully impressed with its efficacy as their experience expands. It is essential that the patient be properly prepared for the ordeal, and the employment of faultless instruments, the observance of careful technics, requisite skill, and an educated touch, which is only to be acquired by long experience with the use of genito-urinary instruments, are equally essential. Success or failure will follow the operation regardless of the character of the growth. If there is any distinction, it will be found to be in favor of the fibrous form. The author does not believe that a preliminary suprapubic cystotomy should be resorted to, in order to expedite the employment of the galvano-caustic incisor. Experience has taught him that, in many cases of incurable suprapubic fistula following suprapubic cystotomy and associated with hypertrophy of the prostate gland, the removal of the obstruction caused by the glandular enlargement, by means of the Bottini operation, will not infrequently be followed by a permanent cure of the fistulous tract. (*To be continued.*)

Bovine Tuberculosis and Milk Supplies. By H. L. Russell, Ph. D.—The author points out that, though our knowledge at present is not above controversy, it is desirable that restrictive measures should be maintained with sufficient rigor to insure freedom from all possible danger, even though, in the future, such measures may be found to have been too onerous. There is ample evidence that milk may possess infectious properties for animals and still be derived from cows that show no apparent symptoms of disease. We need, however, many additional data as to the prevalence of the tubercle organism in milk, before the relative distribution of the germ can be at all accurately determined. In this work for accuracy, animal experiments should take precedence over microscopic examination.

Some Points on Intracranial Neoplasms Considered from the Neuronic Standpoint. By Dr. F. Savary Pearce.—While appreciating the value of anatomical, and therefore regular physiological, perversions, as the most exact cause for determining the general and special symptoms of tumor within the brain, still the limitations of knowledge, even of the said anatomico-physiological abnormalities produced by growths, will

not entirely explain our inability to diagnosticate tumors in a large minority of instances of this disease. The author accounts for this inability to determine a cerebral neoplasm, through assuming perversion of function by disturbed neurone physiology; and, with this neurone theory of separation of dendrites, we may account for otherwise unexplained symptoms.

Neurasthenia. By Dr. Jay G. Roberts.—Rest, regulated diet, and exercise are indicated. Bathing is of great value as increasing elimination and for its tonic effect upon the nervous system. The salts of lithia are of service; Vichy or Hunyadi water may be used in some cases. Of tonics, the phosphorus-containing compounds are our mainstays. Strychnine is of value, but must be used with care. Suggestion and psychotherapy often accomplish a great deal. Morphine should not be used.

The Surgery of Pulmonary Abscess, Gangrene, and Bronchiectasis Following Pneumonia. By Dr. Daniel N. Eisendrath.

Journal of the American Medical Association, November 16, 1901.

The Value of Throat Cultures in Diphtheria.—An early accurate diagnosis can be made by the use of cultures and the demonstration of diphtheria bacilli in the culture. It is well to remember that (1) true cases of diphtheria may have few or no clinical symptoms; (2) cases of amygdalitis or pharyngitis may have severe symptoms and be serious, but not true diphtheria, and consequently not able to transmit diphtheria; (3) a diphtheritic exudate may be easily detached and leave no bleeding surface; (4) an exudate due to some other organism may be a true membrane impossible to detach from the mucous membrane. Cases in point are given. The necessary equipment for microscopical diagnosis is (1) a good microscope with an oil-immersion lens; (2) culture tubes of blood-serum; (3) an oven with a thermostat; (4) stains, cover-slips, and slides; (5) ability to recognize diphtheria bacilli when present.

Total Retroflexion of the Iris. By Dr. Alvin A. Hubbell.—The mechanism of retroflexion is very obscure, but in this case it evidently consisted, in part (1), in the destruction of the posterior support of the iris by a laceration of the zonule in a large part of its extent, thus permitting a sinking backward of the lens, whether lacerated or not; (2) in rupturing the pupillary margin of the iris, probably at several points, allowing this membrane to become easily turned back and superimposed over the ciliary body; and (3), after being torn at its pupillary margin, and thrown backward against the ciliary body, the effusion of blood, which attended the lacerations, necessarily filled the space between the iris and cornea, and thus crowded upon the already reflected iris, and held it firmly in its new position till it became so fixed there that it could not replace itself.

Tarsadenitis Meibomica. By Dr. M. F. Weymann.

Suggestions for Lessening the Frequency of Relapses after Treatment of Morphinism. By Dr. A. J. Pressey.—In this paper, read at the Fifty-second Annual Meeting of the American Medical Association, the author expresses his belief that, in carefully selected cases, less than twenty-five per cent. will be found to have relapsed. He advocates the gradual reduction method, administering the reduced doses of the drug four times a day, very gradually reducing the quantity until not more than one one-hundred-and-twentieth of a grain is being taken at a time, when an attempt is made to discontinue it entirely. During the entire period and for a longer or shorter time afterward the patient should be built up with nerve tonics, heart tonics, and general tonics, a liberal diet, and as much sleep as possible. The static current has a quieting effect on the nervous system and is, possibly, one of the most valuable single agents. Once a cure has been effected, tobacco and alcohol should be eschewed, and not even the slightest amount of any form of an opiate should be taken. If a relapse occurs there is no reason why treatment should not be again begun.

Injuries, Feigned and Real, with their Differentiation and Medico-legal Aspect. By Dr. Lambert Ott.—The author considers that, from a medical standpoint, the prevailing methods of trial in injury cases are unscientific and productive of unjust results. He considers it absurd that a butcher, a baker, and a dry-goods merchant, should pass judgment upon traumatic neuroses, such as paraplegia, neuritis, palsies, impaired vision, and the various disturbances of locomotion incident to the graver accidents.

Samuel Fuller—Pilgrim, Doctor, and Deacon. By Dr. I. N. Danforth.

Enforcement of Medical Laws Dependent on an Organized Profession. By Dr. T. J. Happel.—The enforcement of medical laws interests chiefly physicians, not the general public, and, from a common business standpoint, it becomes the duty of the profession to see that the laws do not become nonentities upon our statute books. This end should be accomplished by the county medical society.

Difficulties Met with in Enforcing State Medical Laws. By Dr. Beverly D. Harison.—The author points out that prosecutions started by medical boards or by medical men, are liable to misinterpretation by the great mass of the people, and, therefore, to a greater or less extent, lose their force; usually such prosecutions are unpopular, and the only remedy for this is for the State boards, and medical men generally, to devote their energies toward compelling the prosecuting or district attorney to do their duties under the law.

Boston Medical and Surgical Journal, November 14, 1901.

Medico-legal Examinations of Blood Stains. By Dr. Edward S. Wood.—The author gives a few practical points in this connection. A blood stain exposed to the ordinary action of light and air grows perceptibly darker for a period of about

ten days. Exposed to the action of direct sunlight, it quickly becomes changed to a deep brown, owing to the decomposition of the hæmoglobin to hæmatin. If this exposure is continued sufficiently long, still further decomposition of the blood pigment will occur, and hæmatoporphyrin will be formed. In this case the color is still darker. The form of the blood stain is of importance in determining the direction from which the blood came, with reference to the object upon which the blood stain is situated. Foreign substances which are liable to be of importance in medico-legal cases are: Pieces of hair coming from the victim, or a cloth fibre, which may throw light upon the nature of the body from which the blood came, or particles of tissue, such as adipose tissue, muscular fibre, or pieces of bone with the muscular attachment. The guaiacum test for blood depends upon the fact that when a solution of blood pigment is treated with a little tincture of guaiacum, and then with some solution containing ozone, a bright blue color is produced immediately. This is extremely valuable as a preliminary test. The most important test of all is Teichmann's test for blood crystals. The sodium tungstate test is of great value in cases of washed blood stains, or in cases in which it is necessary to test a liquid for blood. The determination of the size of the red blood cells is of value in enabling us to distinguish as between human blood and blood of the lower animals. The agglutination test depends upon the principle that, if a clear human blood serum is treated with a dilute solution of other human blood, a cloudiness or precipitate appears, a result which will not be witnessed if clear human blood serum is treated in the same way by a solution of animal blood.

The Correction of Old Lateral Displacements of the Nasal Bones.

Cleft Palate. By Dr. J. S. Stone.

Prostatectomy. By Dr. J. W. Elliot.

Two Cases of Chronic Pancreatitis Cured by Cholecystotomy. By Dr. J. W. Elliot.

Myxœdema. By Dr. E. G. Cutler.

Medical Record, November 16, 1901.

Pathology and Treatment of Migraine. By Dr. William H. Thompson.—After considering the pathology of migraine, the author points out that, as the pathological views of the subject do not supply data for practical applications, interest in them is only academic. As for prophylaxis: A mercurial laxative, with a saline in the morning, should be prescribed for months together. Sodium sulphate, one to two drachms, with ten grains of sodium salicylate in a tumbler of hot water, to be sipped down every morning on rising, is also of use. Sodium phosphate is not so effective as the sulphate. Half an hour before each meal, a pill is prescribed of one-twentieth of a grain of potassium bichromate, with three grains of bismuth subcarbonate. Half an hour after meals and at night, full doses of intestinal antiseptics in the form of ten grains of phenol-bismuth or naphthol-bismuth, with ten grains of ammonium benzoate or sodium benzo-

ate, are given in two capsules. Prophylaxis is the main indication. For the attacks themselves, the fluid extract of ergot, given in drachm doses with a drachm of elixir cinchona in water, is the most certain agent to cut the attack short. Proper dieting is of great importance. In severe cases, as a rule, the red meats should be abstained from altogether. However, the digestive abilities and inabilities of each patient must be individually studied.

The Present Position of Ophthalmic Science and Art. By Dr. D. B. St. John Roosa.—Thus far, with advantages much less than those to be obtained on the continent of Europe, we have made a good showing in the progress of the last fifty years. Could there be secured to us in the large cities better facilities for more exact and thorough observations, without regard to the pressing claims of private practice, much more would be achieved in American laboratories, hospitals, and infirmaries.

The Official Relation of the Medical Profession to Private Charitable Institutions. By Dr. Enoch V. Stoddard.—The author calls attention to a field of observation that is now but slightly cultivated, which, under systematic and combined effort, is capable of yielding a most valuable harvest of knowledge; and it is through the medical profession almost exclusively that this can become available.

Nasal Obstruction and Ear Disease. By Dr. A. C. Bardes.—The author demonstrates that the advantages attending the removal of nasal obstructions are so apparent that the correction of the obstruction is warranted if any other condition is present that is likely to be influenced by it. The benefits obtained by securing permanent openings in the nasal passages are manifold; the results are derived, partly by the relief of the catarrhal congestion, and partly from the better supply of air.

Butyric and Acetic Acids in the Contents of the Stomach and Tests for their Detection. By Dr. Mark I. Knapp.—The author gives some tests of interest chiefly to the specialist. He doubts very much if an excess of hydrochloric acid *per se* ever gives any symptoms at all. He believes that the symptoms of organacidia gastrica are due to the presence of the volatile organic acids. The symptoms of hyperacidity are due to the presence of acid combinations, together with volatile media, such as alcohol, aldehyde, and acetone.

Gangrene Following the Use of Carbolic Acid. By Dr. John Glendon Sheldon.—Cases like the one mentioned in the title, while not common, are reported frequently enough, and are of sufficient gravity to warn the surgeon of the danger of using the drug, especially in cases in which the acid is applied in such a manner that evaporation is impossible.

Food as an Ætiological Factor in Disease. By Dr. Georgia Merriman.

American Medicine, November 16, 1901.

Infection in a General Surgical Sense. By Dr. Daniel N. Eisendrath.—The author counsels:

- (1) Ample incisions to lay bare every portion of the infected area, and counter incisions to relieve the collateral œdema; (2) general anæsthesia and a bloodless method of operating whenever possible; (3) the disinfection of an infected wound with strong antiseptics, etc., is of little avail and may do great harm; we should place most dependence upon free drainage and moist dressings, with the use of mild antiseptics; and no powder should be used until granulation is well established; (5) absolute rest and elevation of the infected area; (6) after-treatment by secondary suture and early active and passive motion; (7) general treatment: strychnine, whiskey, and attention to the excretory organs.

The Bacteriology of Otitis Media; a Summary of Recorded Observations, and a Laboratory Study of Seventy-six Cases. By Dr. John Funke.—The author concludes that there is no specific organism of otitis media. The organisms commonly found, are, in order of frequency: The pneumococcus, streptococcus, pyogenic staphylococci, and the bacillus of Friedländer. The author speaks of a definite grippal otitis due primarily to the influenza bacillus, which, however, becomes quickly associated with, or replaced by, other organisms. The *Bacillus diphtheriæ* is more commonly present in otorrhœa than is generally believed; it may (a) be the initial infecting agent, (b) enter with the streptococcus or pneumococcus, or (c), be a secondary infection carried to the already infected ear by the fingers of the patient, or otherwise. The streptococcal infections are more grave than pure pneumococcal infections, but both are usually supplanted by the staphylococci sooner or later. Chronic suppurative otitis media is practically always polymicrobial.

The Vexed Question of Vaccination. What is the Best Method of Securing Immunity from Small-pox? By Dr. Charles Good.—The author suggests that, in view of the differences of opinion that prevail among medical men, it would be well if Congress were to appoint a commission to take evidence and deliberate on the whole subject, with the object of authoritatively answering certain questions and, so far as possible, laying down rules for the guidance of those whose duty it is to conduct vaccinations, or who may be called upon to deal with an epidemic. This commission might be headed by representatives of the medical services of the army and navy, and among its other members should be men selected on account of their special fitness by the leading medical bodies of the country.

Granular Lids. By Dr. J. G. Huizinga.—In the author's practice, having thoroughly cocainized the conjunctiva and cleansed it of all secretions, the lid is everted and a flat copper or silver electrode is pushed up into the upper fornix and the current turned on gradually until it has reached five milliampères. The electrode is made of the pure metal. The electrode must be kept in motion until every part has been touched, and has assumed the peculiar greenish tint which is indicative of the deposition of the salts of copper in the tissues, when the application should cease. This treatment is repeated once or twice

a week, supplemented by the use of a boric-acid wash every hour. The procedure has been found to be followed by very gratifying results.

A Case of Lupus Vulgaris. By Dr. P. R. Egan.—The author reports a case. As to treatment, both the Finsen method and the x rays are still *sub judice*. Neither of them produces scarring, nor is painful, and the x ray, if found to be permanently curative, produces its results in a very short time. The Finsen method is very tedious and very costly. If more extended experience with the x ray demonstrates that it gives permanent results, it will undoubtedly be the future cure for lupus vulgaris.

When should the Oculist be Consulted? By Dr. Frederick D. Lewis.

The Lane Lectures on the Social Aspects of Dermatology—X. By Malcolm Morris, F.R.C.S. Ed.—Published also in the *New York Medical Journal* for November 16th.

British Medical Journal, November 9, 1901.

Prognosis in Relation to Disease of the Nervous System. By Dr. J. S. Bury.—Our knowledge of the various agents that may set up disease of the nervous system is too limited to help us much in making a forecast of particular ailments. Poisons are the commonest cause of nervous disease, and of these we are daily acquiring more knowledge. But even so, our knowledge does not always help us. Syphilitic exudations are more readily removed than non-syphilitic ones, yet the prognosis of syphilis in relation to nervous diseases may be worse than that of any other poison.

The mere size of a lesion appears to have but little influence on the progress of disease. A brain tumor may reach a large size without causing disturbance of function, while in Landry's disease, or myasthenia gravis, terminating in death, no changes may be found in the nervous system after the most careful microscopical examination. Such cases are often called "functional," but the term should mean, not the absence of morbid changes, but only the absence of detectable changes, and it ought not to be taken for granted that a disorder without known structural changes, runs a more favorable course than one where the lesions are apparent.

When the bulbar neurones which preside over the functions of respiration and deglutition are involved, life is seriously endangered. When other cells and fibres are involved, the question of loss of function has to be considered, rather than that of any immediate danger to life. Other things being equal, lesions of the peripheral nerves are more quickly recovered from than lesions of the central nervous system, and lesions of the brain are less serious than those of the cord, so far as impairment of function is concerned.

In considering prognosis in relation to symptoms, it must be noted that symptoms represent both active and passive, or arrested, phases of disease. It is the symptoms that testify to active phases of disease, which, for purposes of prognosis, must be carefully studied.

As poisons are the most common exciting causes of disease of the nervous system, prognosis will vary with knowledge of the proper treatment for elimination of the poison, and of the effects produced by it. In addition, we must learn to stop any further introduction of the poison, and must hope for fresh discoveries regarding the effects of glandular extracts and the nature of toxins and their antitoxines. The influence of one part of the nervous system upon another part must also be studied, and the effects of psychical influences recognized.

Some Thoughts on the Principles of Local Treatment in Diseases of the Upper Air Passages. By Sir F. Semon.—(*Lecture II*).—Of the systemic diseases in which throat and nose complications occur, and which may require local treatment, tuberculosis, syphilis, and diseases of the central nervous system, are the most important. In laryngeal tuberculosis we have to deal with a local manifestation of systemic disease, not with a purely local process, and the word "cure" should be avoided in speaking of the results of treatment. In no disease is there greater need for individualization and for treating each case on its own merits. If there are only one or a few ulcers on the vocal cords, energetic lactic-acid treatment, combined with scraping or removal by double curette, will sometimes yield most gratifying results. Where the ulceration affects the epiglottis, the arytaeno-epiglottidean folds, or the subglottic cavity, local treatment is not so easily applicable. Should intralaryngeal measures fail, external operations may be considered. Thyrectomy, with scraping and application of pure lactic acid, has worked well in a few cases; but the external wound is apt to become infected. Where the whole of the laryngeal mucous membrane is ulcerated, and there is chondritis, caries, necrosis, and exfoliation, local measures are out of the question. In the author's opinion, to deliberately remove a tuberculous larynx is hardly justifiable. Palliative local measures alone are suitable. The patient's general health and pulmonary condition have always to be taken into consideration when deciding upon the question of local treatment. It is useless in the final stage of pulmonary phthisis. As regards syphilis, the author has long ago abandoned local treatment as a routine measure in the treatment of specific affections of the upper air passages.

In functional aphonia due to central nervous disease, nothing restores the voice so quickly and certainly as electricity. Energetic intralaryngeal Faradisation often works wonders; but it must be energetic.

As regards nasal reflex-neuroses, the author is convinced that: (1) The frequency and importance of the influence of the nasal mucous membrane upon nervous phenomena at distant parts has been grossly exaggerated by the adherents of the doctrine; (2) we have no real understanding, as yet, of the mechanism of these reflex processes; (3) it is most difficult to determine whether a neurosis is of nasal origin or not; and (4) it is equally difficult to determine whether, in cases where a nasal origin seems to be likely, treatment directed to the nose will benefit the

patient. The author's experience with asthma, for example, has not been encouraging. In only a few cases has he seen any good results follow intranasal operation. We must not try at any price to find the explanation of every symptom and every sensation experienced in the upper air passages in trivial, or even imaginary, deviations from the normal existing in these parts.

On some Symptoms Produced by Tumors of the Optic Thalamus, with a Case. By Dr. J. M. Clarke.—The author reports a case of tumor of the optic thalamus presenting a group of symptoms, which symptoms were also present in two similar cases previously reported by him. These were: (1) A sensation of heat or burning in the opposite upper extremity; (2) a marked intentional tremor in the same limb, absent during rest, and exactly resembling during movement the tremor of disseminated sclerosis; and (3), hemiplegia of the opposite side, of gradual onset, affecting only the upper extremity for a considerable time, and predominating in this limb throughout. In the case here reported it is remarkable that the three cardinal symptoms of intracranial tumor—severe headache, vomiting, and optic neuritis—were absent from first to last. The diagnosis was confirmed by necropsy.

Enteric Fever Commencing with and Complicated by an Attack of Influenza. By Dr. J. C. Potter.—The author reports a case of typhoid fever, in which the early enteric symptoms were entirely masked by a concurrent attack of influenza, and the disease was not recognized until the eleventh or twelfth day of the illness. The patient died on the nineteenth day, having had violent diarrhoea and hyperpyrexia (107.6° F.). The temperature was markedly intermittent and remittent during the first ten days. There was an entire absence of physical signs in the chest, but the gastric symptoms were marked from the beginning. The patient had been exposed to influenzal infection.

A Case of Recurrence of Laryngeal Papillomata in a Child after Tracheotomy. By Dr. E. M. Symphon.

Lancet, November 9, 1901.

Prognosis in Relation to Disease of the Nervous System. By Dr. J. S. Bury.—The Bradshaw Lecture. (See abstract of the *British Medical Journal* for November 9, 1901, in this number of the *New York Medical Journal*.)

The Personal Factor in Tuberculosis. By Sir D. Duckworth.—The author maintains that there is a class of persons who, by inheritance or acquirement, owing to various debilitating conditions, are frail and delicate, endowed with a specific proclivity to become affected by irritants of all kinds, and especially prone to infection by tubercle bacilli. Such persons are of delicate constitution and are apt to manifest this delicacy in various way throughout life, such developments indicating their scrofulous habits of body. They may never become tuberculous, though always scrofulous. The latter proclivity may blend with other habits of body and seriously modify the ailments induced by them. We have

not to wait for tuberculous invasion to occur before we pronounce them scrofulous, since they carry with them the features and characteristics of the scrofulous condition beforehand. It is a question of tissue or soil-proclivity in the particular host which is to harbor the tuberculous microbe. The ailments of the strumous individual are not necessarily tuberculous. The direct transmission of tuberculosis *in utero* cannot be denied as a possibility, but there is no reason to believe that it is of common occurrence. The liability to tuberculous infection is limited, certain persons are distinctly more prone to fall a prey to it than others, and happily the majority of mankind presents a resistance to it, no doubt varying in degree, but in many cases amounting to practical immunity. The personal factor or the relation of the host toward the intruding and infecting parasite, is of the supremest importance. For instance, the prognosis of tuberculosis in gouty individuals is relatively favorable; there is less tendency to softening, and the products tend to sclerosis, fibrosis, and calcification. Lastly, too, much is heard of the "cure" of tuberculosis; the most favorable termination of tuberculous lesions constitutes nothing more than an arrest of the process.

The Freezing-point of the Blood and Secretions as an Aid to Prognosis. By Dr. A. Ogston.—Normal blood possesses a fixed freezing point of 0.56° C. below that of distilled water. From this point it does not vary more than a hundredth of a degree up or down. But, like all other liquids, when the blood contains impurities, it freezes at a lower temperature according to the amount of impurities it contains. Our present information regarding kidney elimination is most inadequate, and the author suggests that the determination of the freezing-point of the blood (cryoscopy) will furnish us with much valuable information. Beckmann's apparatus is used, of which a careful description is given. From cryoscopy we learn whether the amount of healthy kidney substance is sufficient so to purify the blood that operation wounds heal well; further, whether the lessened kidney elimination after anæsthesia, superadded to the already existing defect, is likely to prove fatal; and, lastly, whether one kidney is sound enough to do the work of two, in case it is desired to remove its fellow. Further, it may prove of value in determining the existence and degree of hepatism, when threatening danger to life or imperilling life. The author cites twelve cases in which operation was decided upon or declined, according to the freezing-point of the patient's blood. In some cases the freezing-point was found to be above normal. The freezing-point of urine fluctuates more than a degree, and the results of cryoscopy are not to be relied on.

The Sanatorium in the Treatment of Phthisis. By Dr. T. C. Allbutt.—In this article the author discusses the various points of different sanatoria for the treatment of phthisis, commending some and deprecating others. For scrofulous children, as a rule, the best climate is the sea; for the adult in the third or fourth decade of life, the climate of the high Alps, less windy than the sea, even more

tonic, and perhaps having some virtue in its dryness and rarity, is often the best; the elderly must be content with a milder and more equable resort, which indeed is to be preferred also for many younger patients whose stomachs are unequal to large demands, and whose heat production is slow. On the robust folk, full feeding may be pressed quickly; with the enfeebled, whose stomachs are often relaxed, large and rich meals best agree when they are vomited. To the febrile and over-wrought, again, that prolonged rest, which, in vigorous and apyretic persons would be lost time, is precious. The most general terms in which climatic conditions can be put is that the coldest air which the individual can tolerate, if it is dry, clear and still, is the best, as it calls for more food and thus stimulates the appetite. The physician of a sanatorium should be something of a cook and much of a gourmet.

Early diagnosis in tuberculosis offers the greatest hope for the future. Let no hæmoptysis, however slight, be set down to a "blood-vessel in the throat"; let no pleurisy, however long ago, be forgotten. In examining the sputum, the absence of bacilli should not be taken as an assurance of safety.

A Further Contribution on Acute Dilatation of the Stomach, with an Account of Two Additional Cases. By Dr. C. R. Box and C. S. Wallace, F. R. C. S.—The authors report two more cases of acute dilatation of the stomach, both ending fatally. The first case was one of lacerated wound of the knee-joint and cellulitis of the leg and thigh, with ultimate amputation of the limb. At the autopsy there was found acute dilatation of the stomach and of part of the duodenum. The second case was one of pleuro-pneumonia with severe toxic symptoms, and acute dilatation of the stomach and duodenum.

As the duodenum was dilated in both cases, it is not possible to assume that the gastric dilatation in these cases is due to gastric spasm. The authors believe that the final tense distention of the stomach is due to actual pressure of the stomach on the part of the duodenum which crosses the third, and ascends by the side of the second, lumbar vertebra, to end in the jejunum. In these cases there is first a paralytic condition of the viscus which leads to distention, and then, at a certain stage, the distended stomach actually produces distention by pressure on the duodenum. The early diagnosis of the affection is a point of great importance. Treatment is futile when the distention becomes extreme. The condition has been mistaken for intestinal obstruction, perforative peritonitis, perforation of the bowel with encysted abscess, pancreatic cyst, uræmia, and postanæsthetic vomiting.

Brief Notes of a Few Exceptional Cases of Cataract Extraction. By Dr. C. B. Taylor.

The Treatment of Ozæna by Cupric Electrolysis. By Dr. E. S. Yonge.—The author has tried the treatment of ozæna by cupric electrolysis in fifteen cases. The details of the method employed are briefly as follows: The nasal cavities were first thoroughly cleansed by a warm alkaline and antiseptic douche. Cocaine was then applied to the nasal cavity to be treated, and after

a few minutes the parts were dried and the electrolysis needles inserted. The copper needle attached to the positive pole was passed into the inferior or middle turbinal, usually the former, and the steel needle into the septum. The strength of the current varied, but it was found that from three to ten milliampères were the most suitable intensities, although currents as strong as twenty milliampères were used on a few occasions. As a general rule the current was allowed to pass for ten minutes. Five séances were the maximum. Of the fifteen cases, two were cured, five were much improved, six were temporarily improved, and two were not improved. One case was lost sight of.

Freedom from symptoms for several months does not insure the patient against a relapse.

Münchener medicinische Wochenschrift, October 8, 1901.

Bacillol and Lysoform. By Dr. Cramer.

Psoriasis Secondary to Tattooing.—Professor Bettmann records the use of a previously healthy man who had never suffered from any skin disease, who developed a typical psoriasis two weeks after an extensive tattooing on the forearm. The lesions first appeared about the site of the tattooing, and subsequently spread over the entire body. The author believes this case to prove the parasitic character of psoriasis.

Subcutaneous Traumatic Abdominal Hæmorrhages. (*Continued article.*) By Dr. Eichel.

Flushing of the Organism in Experimental Tetanus Infection.—Dr. C. Tonzig concludes from his experiments that we cannot hope to effect an absolute cure of tetanus by the injection of a physiological saline solution into the peritoneal cavity. His experiments show, however, that the tetanus virus does not operate by circulating in the body fluids, but by entering the tissues of the organism. When the toxins do not attack the body severely and suddenly, the flushing of the organism by a physiological salt solution delays the appearance of the symptoms of tetanus, and may delay death for some days. When antitoxic serum can not at once be used this method should therefore have a trial.

Treatment of Finger Injuries. By Dr. H. Georgü.

Anomalies of the Nasal Space. By Dr. C. Hopmann.

Retained Consciousness after an Epileptic Attack. By Dr. A. Diehl.

October 22, 1901.

Gall-stones.—Dr. Fiedler believes that the Röntgen rays will, after the further development of their use, be of the greatest service in the diagnosis of gall-stones. Considering the ætiology, he says that disease of the mucous membrane of the bladder may be a factor, while the rôle played by bacteria is not yet clear. Perfectly normal gall-bladders are rarely seen. The pain in an attack of colic may be due to the actual passage of the calculus or to the irritation of an inflamed area, or to both causes. As to operation, the au-

thor is conservative. If internal treatment proves of no avail, and jaundice and emaciation appear and the patient becomes incapacitated, operation is advised.

Difficult Withdrawal of Intubated Tubes. By Dr. von Ranke.

The Future of Surviving Tracheotomized and Intubated Children.—Dr. Trumpp says that many of these children suffer from functional, and even from organic, throat disease. He therefore advises physicians to perform either of the operations only when it is necessary.

Late Disturbances Following Tracheotomy and Intubation.—Dr. Meinhard Pfaundler says that, among the sequelæ of these operations, pulmonary tuberculosis, chronic hoarseness, tracheal stenosis and chronic pneumonia, are not very infrequent. These results are less common after intubation than after tracheotomy.

Infantile Pseudo-bulbar-paralysis.—(*Conclusion.*) By Dr. T. Zahn.

Riforma medica, September 2, 1901.

On the Liberation of Nascent Iodine in the Lungs with a Therapeutic Purpose. By Dr. A. Cavvazani and Dr. O. Spadoni.—It is generally believed that the antiseptic virtue of the iodine compounds is derived from their property of liberating nascent iodine. Indeed, nascent iodine is the only substance that exercises a specific effect against the morbid processes produced by the tubercle bacillus. The introduction of nascent iodine into the lungs is, therefore, desirable as a means of curing pulmonary tuberculosis. This introduction, however, presents serious difficulties, and the authors have tried to solve the latter. Gaglio, knowing that the essence of turpentine, by virtue of its ozone, decomposes iodide of potassium with considerable ease, experimented with these two substances, in order to find a method whereby iodine could be liberated in the tissues, but he only obtained negative results on animals. The authors experimented in the same manner on man, by giving the patients inhalations of turpentine and, at the same time, administering iodides internally, the idea being that that turpentine in the bronchi would liberate the iodine in the iodides which are excreted on the bronchial surface. This finds its analogy in the clinical fact that, if the conjunctiva of a patient who has been taking iodides is touched with calomel, a violent irritation results, due, as is supposed, to the development of iodide of mercury. The authors cite a number of cases of pulmonary tuberculosis treated by this new method, and conclude that it is possible to liberate nascent iodine in the lungs by inhalations of turpentine, and that the iodine thus liberated almost immediately enters into combination with some organic substances with which it comes into contact.

September 3 and 4, 1901.

A Second Case of Suture of the Heart in a large Penetrating Wound of the Right Auricle. By Dr. Giovanni Ninni.—The author reports a case in which he sutured the heart and closed a large

wound of the right auricle. He has collected, moreover, twenty-nine cases in which the heart was sutured after wounds of various kinds. Of these twenty-nine cases, thirteen were wounds of the right ventricle, ten of the left ventricle, three of the apex, one between the two ventricles, one of the anterior interventricular septum, and one only of the left auricle. Wounds of the right auricle are very rare. Fischer considers such wounds absolutely fatal, as no recoveries have been recorded. The wounds of the right auricle are considered by Rehn as more dangerous than those of the left. The author's patient stood the operation, which lasted only thirty minutes, well, but developed a septic pleurisy, and died four days later. The author concludes by saying that, notwithstanding the imperfections in technics, which were due to the hurry of the operation and the consequent lack of asepsis, ten cases out of thirty in which wounds of the heart were sutured, were saved, a recovery of 33 per cent. In statistics of 723 cases of wounds of the heart that were left to themselves, Fischer, Loison, and Salomoni had only 133 recoveries, or 16.55 per cent. It must be remembered, also, that some of these cases probably were not wounds of the heart at all, for such wounds cannot always be diagnosed with certainty without exploration. On the other hand, the published cases of cardiac suture include, in all probability, for the most part those in which there were more or less satisfactory results and not the other cases in which the patient died during the operation, etc., which were probably never published.

September 5 and 6, 1901.

The Treatment of Hepatic Cirrhosis by Diverting the Portal Blood by Surgical Means. By Dr. Luca Annovazi.—The author reports a case in which he performed Talma's operation with success. In a study of the subject from literature, he finds in twenty-five cases a mortality of five—i. e., 20 per cent. These five patients died either during the operation or immediately after. In seven cases—i. e., in 28 per cent., the ascites reappeared; in other words, the operation was a failure, and in thirteen cases—i. e., in 52 per cent., the results were favorable. He believes, on the strength of these figures, that the operation of creating an anastomosis between the portal and the abdominal parietal veins should be considered as a definitely adopted method of treatment in severe cases of cirrhosis of the liver. Talma's operation should be performed early enough, when the disease had not yet made irreparable damage. The best form of this operation is that devised by Schiassi, which gives the most extensive surface of contact between the omentum and the abdominal walls. Grignon's method is an easy one and may be used with cocaine anæsthesia in patients who cannot stand ether or chloroform. It consists in sewing the omentum along the edges of the incision between the detached peritonæum and the abdominal muscles. No drainage must be used, whatever method be employed. The patient must be kept after the operation on a carbohydrate diet, if possible, in order to prevent toxæmia.

September 7, 1901.

The Influence of very Low Temperatures Obtained by the Use of Liquid Air upon the Virulence of Pathogenic Germs. By Dr. C. M. Belli.—The author's experiments lead him to conclude that a temperature of 180° C. to 190° C. does not alter the morphology or influence the virulence of germs of either the spore-bearing or non-spore-bearing varieties. He found, indeed, that the animals inoculated with cultures that had been frozen with liquid air did not die so quickly as those inoculated for check purposes, but this is due to the fact that during the exposure to cold the germs do not multiply. Thus the lowest temperatures of about two hundred centigrade below zero do not produce very marked effects upon the virulence of germs, but only arrest temporarily their multiplication. Cold has therefore no value as a disinfectant.

Vratch, October 6 (October 18, New Style), 1901.

On Catheterization of the Ureters, its Use in Tuberculosis of the Kidneys, and in Pyelitis Caused by the Presence of Renal Calculi. By Dr. I. E. Hagen-Thorn.—The most experienced surgeons find it difficult sometimes to determine which kidney is the seat of the stone in cases of renal colic. In cases accompanied by hæmaturia it is still more difficult to tell whether the blood comes from the bladder or the kidney, and if from the kidneys, from which of the two. In another set of cases the clinical symptoms point to the existence of a hydronephrosis, while in reality there is some intra-abdominal growth which gives physical signs simulating a renal tumor. A number of cases of chronic pyelitis and pyelonephritis, which were treated for years past as cystitis, have been properly diagnosed, thanks to ureteral catheterization. The most perfect instruments for this purpose are the cystoscope of Albarran and that of Nitze, which have attachments permitting the catheterization of ureters in the male as well as in the female, after the openings of the canals have been located with the cystoscope. Israel, Litten, Kuettner, and Wossidlo have entered certain objections against ureteral catheterization. They assert that this method may infect the ureters, and that the quantity of urine obtained from the kidney was so small that one could not judge the work of that organ thereby. The author thinks that further observations are necessary to establish the status of ureteral catheterization.

Popular Medicine in the Monasteries of the Orthodox Russian Church. By Dr. B. Th. Bouschoujeff.—Russia has 691 monasteries of the orthodox Church, in which there are 43,000 inmates, members of religious orders. These monasteries and convents are all well situated, well built, and supplied with food products of all kinds. But few of these institutions have hospitals connected with them. The author pleads for the extension of medical work in these convents, and especially for their utilization as asylums for those affected with chronic diseases.

The Alkalinity of the Blood in Physiological and Pathological Conditions. By Dr. V. F. Or-

lofsky.—The alkalinity of the blood is markedly lowered in the cachexia of cancer, in advanced anæmia, and in severe diabetes. In other diseases it generally remains normal, or, if it is changed, the alteration is insignificant. This lowering of the normal alkalinity of the blood in the diseases mentioned is caused by the accumulation of acids in the blood. The theory of acid self-intoxication has been generally accepted as regards the causation of diabetic coma, and the modern treatment of this condition involves the use of intravenous injections of alkaline solutions. Experiments conducted by the author with a view of determining the influence of alkalis in the diseases in which the alkalinity of the blood is lowered, have shown that, in diabetes, the introduction of alkalis into the body increases the alkalinity of blood more pronouncedly than the same quantity used in a healthy subject. Warm alkaline injections into the colon are more effective in this respect than the internal administration of alkalis, and the effect, which is in all cases temporary, lasts longer in the former method.

The Infantile Mortality in the Moscow Lying-in Asylum. By Dr. S. S. Kholmogoroff.—Fifteen hundred pregnant women who entered the asylum had borne, before entering, 5,139 living children, of whom at the time of admission of the mother only 1,847—i. e., 35.94 per cent., remained alive. The generally accepted rule is that, in order to have a normal increase in the population, every family should have, on the average, four children. According to these statistics, there are only 1.23 children to each mother of the 1,500. The obvious conclusion is the necessity for proper measures to prevent such enormous infantile mortality in the Muscovite capital.

A Few Observations in the Surgical Wards of Novoladoga Rural Hospital, 1896-1900. By Dr. A. V. Martynoff.

A Case of Intestinal Obstruction Treated Successfully with Atropine by Batsch's Method. By Dr. P. M. Kalaboukhoff and Dr. M. V. Savvine.—The patient was a man, forty-two years of age, who presented the symptoms of severe intestinal obstruction for a number of days, but who refused operation. Non-operative treatment was decided upon, and he was given 0.002 (one-tenth of a grain) of atropine sulphate hypodermatically. No change in his condition was noted, and on the following day he was given a hypodermic injection of 0.005 (one-tenth of a grain) of atropine sulphate. The patient became comatose, with muttering delirium, wide and immovable pupils. The vomiting stopped, but there was no movement of the bowels. On the following day the patient's condition improved. He was fully conscious, his pupils were normal, and he complained of a desire to defecate. An enema now brought on an abundant stool, and the patient began to improve rapidly. For two days, enemata were given, but on the third day spontaneous defecation was established. The authors call attention to the efficiency of the treatment in such cases and urge its application where operations are impossible.

Proceedings of Societies.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

Fourteenth Annual Meeting, held in Cleveland, Ohio, Tuesday, Wednesday, and Thursday, September 17, 18, and 19, 1901.

The President, Dr. W. E. B. DAVIS, of Birmingham, Alabama, in the Chair.

(Concluded from page 946.)

Gall-stone in the Common Duct; its Frequency, Symptoms, Diagnosis, and Treatment.—Dr. L. H. DUNNING, of Indianapolis, in a paper with this title quoted from the recent paper of Mosher, whose compilation of the Johns Hopkins Hospital records showed that gall-stones were present in 6.94 per cent. of our population, and that in 13 per cent. of all cases of gall-stones the calculus was arrested in the common duct. For convenience of description, the author adopted the generally accepted classification of cases of gall-stone in the common duct, namely: 1. The acute form, in which there was acute obstruction, with transient jaundice and the typical gall-stone colic. 2. Chronic obstruction of the common duct from lodgment of a stone somewhere in the course of the duct. The first division represented the old, classical form of bilious colic, and the symptoms were so well known that he did not enumerate them in detail. In chronic obstruction from gall-stones the jaundice was more or less intermittent, and there was pain in the hypochondrium, in the epigastrium, and in the back. The pain was not so severe as in acute obstruction, and was very irregular. It might be located in the epigastric or lumbar region. As a rule, there was absence of a tumor in the gall-bladder region, but there was marked soreness. There was decided loss of weight, and frequently there were chills and intermittent fever.

The Carlsbad course, a sojourn at certain French springs, large draughts of oil, the application of hot fomentations to the hypochondrium, and opiates to relieve pain were all of benefit in the acute cases. The chronic cases were amenable only to surgical treatment. The author cited and remarked upon the various methods of surgical procedure. Cholecdochotomy was shown to be the most approved method, when it was applicable. The middle third of the duct was the point of choice for the incision. When the stone was in the duodenal end of the duct, it could usually be crowded back into the middle portion and removed through an incision in that part. An incision through the cystic duct might be carried onward into and through the common duct, if the upper portion was chosen for the line of incision. Duodenocholecdochotomy was applicable to cases of a large fixed stone in the duodenal extremity of the duct. This method caused a higher rate of mortality than simple incision of the cholecdochus. Only soft stones should be crushed, and needling was unsatisfactory. The writer would reserve cholecystenterostomy in common-duct obstruction for those cases in which the patients could not en-

dure the longer operation of cholecdochotomy. Four cases were reported in detail.

Extra-uterine Pregnancy.—Dr. GEORGE S. PECK, of Youngstown, Ohio, reported some cases and presented specimens.

Dr. M. ROSENWASSER detailed a case of tubal pregnancy in which he had operated in the eighth week, immediately before a threatened rupture.

Acute Pancreatitis and Fat Necrosis.—Dr. EDWARD J. ILL, of Newark, N. J., reported a case because of the rarity of the disease and the interest attached to the operations for this ailment. The patient was a woman, forty-three years of age, with the usual history of gall-stone colic. She was taken sick suddenly with excruciating pain in the epigastrium, excessive vomiting, and obstruction of the bowels. In twelve days after the onset of the disease a tumor was made out. The patient was operated on on the twentieth day after the beginning of the disease. The diagnosis was that of perforative inflammation of the gall-bladder, although pancreatitis and fat necrosis were suggested. The patient's urine contained bile, albumin, and granular casts, and had a specific gravity of 1.028. It contained no sugar. The operation consisted of a right lateral abdominal section and an opening between the stomach and the transverse colon through an immensely thickened omentum. Fluid was reached at the head of the pancreas, which was drained through a rubber tube and iodoform gauze. The whole pancreas seemed to be involved in the disease. The omentum, upon section, showed whitish-gray nodules containing brown roundish spots. For a time the patient seemed to do well, but in about seven weeks she had a relapse, from which she died in three weeks. At the post mortem it was shown that there were four gall-stones in the gall-bladder, and only a small mass of gristly substance of the pancreas was left.

Papilloma of the Vulva.—Dr. ILL reported an interesting case.

Early Operations in Appendicitis, and the Method, was the title of a paper by Dr. JOSEPH PRICE, of Philadelphia. In the preceding three months he had operated in about a hundred cases of this disease. Seventy-five per cent. had been managed by open treatment. All of them had been explosive cases, and none of the operations was done on the first or second day. In two ball-players the operations were done on the third day. In both cases he found gangrenous appendicitis with perforation and general peritonitis. Both were recognized and could have been operated on twenty-four hours earlier. He was satisfied that there was but one treatment for this disease—early, clean removal of the appendix. The choice of method should not worry operators. A pair of scissors with needles and fine thread was all that was necessary. The appendix should be cut off level with the cæcum, and the opening closed with fine silk. This summer the operations had been done by him chiefly on patients between the ages of eight and twenty. About seventy-five per cent. were boys—fine, athletic chaps, and about twenty-five per cent. girls. A large number of the latter were menstruating at the time of the operation. In some instances it complicated the diagnosis. The disease had been quite common and fatal at summer resorts. A large

number of operations had been done at Atlantic City, and a few patients had been sent home for operations. The interval operation had done much to mislead the general practitioner, and much to complicate the operation, in which there should be no complications.

Vaginal Hysterectomy with Four-and-a-half-Months' Pregnancy and Closed Cervix.—Dr. J. HENRY CARSTENS, of Detroit, reported the case of a woman, only twenty-six years of age, the mother of three children. She was afflicted with some inflammation and ulceration of the womb. Finally a diagnosis of cauliflower growth was made by a practitioner. The cervix was removed in February, 1900. She recovered and improved very much in health; menstruation continued regularly, but during the summer, about six months later, she again had trouble. On examination, a recurrent growth was found. This was treated by curetting and strong cauterization, the latter being continuously and vigorously applied. Examination revealed a large uterus, such as were found in cases of pregnancy at four months and a half, a well-marked placental bruit, enlargement of the breasts, etc. The upper end of the vagina was absolutely closed by a cicatrix, such as was found after vaginal hysterectomy. There were two nodules, of the size of a hazelnut and of that of a bean. By allowing the pregnancy to continue, the malignant growth would probably have closed up the vagina, a Cæsarean section would have been necessary, and the cancer would have so far advanced that there would be little chance for permanent recovery. Hence a prompt operation seemed necessary, but how? If there had been an opening, he would have had the physician insert a catheter and bring on premature labor a week before and then remove the uterus. Having the patient under chloroform, he plunged a pair of scissors into the place where he thought the os ought to be. By separating the blades and stretching the opening with his finger, he tore the sac. On enlarging the opening, he had no further trouble in extracting the foetus. By pressing the womb the placenta was soon removed, although the hæmorrhage was profuse for a few minutes, but the uterus contracted firmly, and there was no further trouble. In tearing the opening he, fortunately, ruptured into the cul-de-sac. This served as a guide for him to work by, and, although the uterus was very large, he finished the operation and did a vaginal hysterectomy. The patient recovered.

The Indications, Technics, and Remote Results of Salpingostomy and of Resection and Ignipuncture of the Ovaries.—Dr. A. GOLDSPOHN, of Chicago, read a paper on this subject, and presented tables of 104 cases. His conclusions are as follows: 1. In patients who are not near the menopause and who are not tainted by tuberculous or malignant disease, one or a part of one or both ovaries can frequently be preserved, with or without the retention of the corresponding tube, in the following conditions: (a) In follicular cystic degeneration or partially cirrhotic induration due to inflammatory processes or other circulatory disorders; (b) in extirpating parovarian cysts and dermoid and fibroid tumors, with or without the uterus; (c) with great caution, in the extirpation of non-papillary glandular cystomata that are devoid of surface papillomata

and other evidences of malignancy. 2. Necessary for success in the resection of the uterine annexe is the exercise of asepsis of the highest degree, and the use of a minimum amount of fine and readily absorbable suture material exclusively and judiciously, as to tension. 3. A generous median ventral incision provides the best access for the conservative treatment of the annexe in cases in which there are septic accumulations in the parts, and when extreme fixations abound. When these more extreme complications are not present, and a retroversion of the uterus exists, the resection of the annexe is most easily effected by way of the dilated internal inguinal rings, in conjunction with a thorough Alexander operation. 4. Vaginal coeliotomy does not provide a favorable access for conservative surgical treatment of the ovaries and tubes. It does frequently admit of ignipuncture, but is not auspicious for resection of the ovaries. 5. Resection, with the care and technics alluded to, is the more ideal and most conservative measure, and should be preferred when the parts are sufficiently accessible without undue traction upon their lateral supports, and when asepsis in the surrounding wound and in the general execution is reasonably assured; otherwise thermocauterization is probably better.

Dr. C. C. FREDERICK, of Buffalo, read a paper in which he narrated some very rare cases and experiences in pelvic and abdominal surgery, and told of the lessons they had taught him.

Hour-glass Stomach.—Dr. CHARLES GREENE CUMSTON, of Boston, reported two cases of hour-glass stomach, and discussed the pathology and treatment.

Uterine Fibromyomata.—Dr. HENRY D. INGRAHAM, of Buffalo, in a paper on this subject, mentioned a large number of cases which he had treated by various methods during the past sixteen years. Although he had used ergot freely in many cases, it was only in a very few that it had any effect on the hæmorrhage, and possibly hydrastis had done so in some cases. Cotarnine hydrochloride, in his experience, appeared to check the flow better than any other drug. He had not observed any special benefit from the use of the thyroid extract or the desiccated mammary gland, and considered their use dangerous on account of their effects upon the general health of patients. He had formerly used electricity with benefit, but did not use it now, as the results were not satisfactory. He had had seven cases of quite large fibroids complicated with pregnancy. In five, miscarriage had occurred spontaneously. In one it had been induced, and in the other the growth almost completely filled the pelvic cavity, the four-and-a-half-months' foetus being above it, so that hysterectomy was necessary. The patient recovered. In the case of one unmarried woman, she was sixty-four years of age before the fibroid began to show signs of its existence. For some time it was dense and hard and grew slowly, but for the past few months it had become cystic and increased in size rapidly. This patient manifested several cerebral symptoms on three different occasions, which the author believed were due to some particles of the disintegrating tumor becoming detached and being carried to the brain. On one occasion the patient lost sensibility of the right side for over two weeks, and did not know the members

of her own family for the same length of time. During the height of this attack the temperature was 101° F., and the pulse 96. A year later she had a similar attack, and a few months ago another one, but milder, with no rise of pulse or temperature. He believed that fibromyomata, although considered benign in contradistinction to malignant growths, were by no means harmless, but exposed the patient to great and increasing risk. All cases of fibroids should be carefully watched. If they were not giving any trouble or increasing in size, they should be let alone, but the patient should be kept under observation. If they gave rise to trouble, or if the growths increased in size, the proper thing to do was to remove them before dangerous complications occurred. If there were adhesions or necrosis of the tumor or pyosalpinx, the danger of the operation was greatly increased. If cardiac disease or hydronephrosis resulted as a complication, the removal of the tumor would not relieve those conditions. Waiting for the menopause to relieve the diseased condition was often like holding out false hopes to the patient, as the trouble might become worse than before, or it might all develop after that period, as was shown by the recital of the last case reported. If any treatment was necessary, and the patient was in a suitable condition, a radical operation should be done. There was no excuse, in his opinion, for palliative or temporizing treatment at the present day.

Officers.—The following officers were elected for the ensuing year: President, Dr. EDWIN RICKETTS, of Cincinnati; vice-presidents, Dr. CHARLES GREENE CUMSTON, of Boston, and Dr. MILES F. PORTER, of Fort Wayne, Indiana; secretary, Dr. WILLIAM WARREN POTTER, of Buffalo; treasurer, Dr. X. O. WERDER, of Pittsburgh, Pa. Washington, D. C., was selected as the place for holding the next annual meeting, in 1902.

Book Notices.

Practical Surgery for the General Practitioner. By NICHOLAS SENN, M. D., Ph. D., LL. D., Professor of Surgery, Rush Medical College, in affiliation with the University of Chicago, etc. With 650 Illustrations, many of them in colors. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 9 to 1133. (Price, \$6.)

By practical surgery the author means that variety of surgical intervention which consists in instant or prompt action; hence the many surgical affections which might await deliberation, and are commonly dealt with in books on general surgery, will be found unmentioned in these pages. To some extent the author's military experience lends authority to this treatise. It is therefore not surprising that osseous and intra-abdominal lesions have come in for a large share of attention, five chapters being devoted to the former and nine to the latter out of a total of twenty-nine. Furthermore, these are subjects in which the author has done extensive research work.

The introductory chapters deal tersely with the principles of antiseptics and asepsis. In the chapters on fractures, the exposition of fractures of the neck

of the femur and that of Colles's fracture are most elaborate; as to the former, it is vigorously asserted that bony union is more common than is usually taught. In support of this statement a table is offered embracing fifty-five bona fide cases of such union. In harmony with those who have given Colles's fracture special consideration, the author is an ardent supporter of Moore's teaching. Osteomyelitis is considered only in its bearing upon complicated fractures, whereas the acute infectious variety should, we think, have been separately treated. The valuable advice offered as to the treatment of appendicular inflammation is somewhat confusing in the effort to make fine distinctions. All the other chapters on abdominal surgery are written with the hand of a master. The closing chapters of the book include those on amputations, their technics, and the indications calling for them.

The illustrations are very profuse and telling, and throughout the work the author's attitude and conclusions are italicized. This is wisely done, that they may not be lost in the maze of citations. And the opinions quoted are not always consonant with the author's views, and thus an academic and literary character is imparted to the work, aside from its practical value. The book forms, therefore, a valuable treatise on practical surgery, giving the author's well-balanced views, and it can be recommended with confidence as containing *multum non multa*.

The Acute Contagious Diseases of Childhood. By MARCUS P. HATFIELD, A. M., M. D., Professor Emeritus of Diseases of Children, Northwestern University Medical School, etc. Chicago: G. P. Engelhard & Company, 1901. Pp. 5 to 135.

In his preface, the author disclaims any attempt at producing a monograph, saying that the book is a composite and that he aims to present especially the views of the later continental pædiatrists. The unexplained omission of diphtheria is remarkable; certainly it deserves some mention in a book with such a title.

The discussion of each disease, while brief, is systematic and thorough, and much valuable information not easily available elsewhere is given in regard to the history, the distribution, and the percentage morbidity and mortality. Great stress is laid upon the rôle of bacteria in the causation of the lesions, but the attempt to illustrate the various germs has not been a success.

Coming to the special chapters, one is surprised to find such heroic doses of alcohol—twelve ounces a day—advised in bad cases of scarlatina, with no warning as to the added danger to the kidneys; also to find no mention of pharyngeal irrigation or of the prophylactic administration of antitoxine. In the treatment of whooping-cough, an emulsion of bromoform is among the prescriptions advised, regardless of the more recent and probably safer method of having the pure drug measured and diluted just before being administered. The insistence upon the possibility of high mortality in hospital cases of pertussis and varicella is commendable.

Altogether, the book is an admirable little work, and will widen the horizon and deepen the interest of any reader who has depended hitherto on the ordinary text-book of children's diseases.

BOOKS, ETC., RECEIVED.

A Text-book of Surgery. By Dr. Hermann Tillmans, Professor in the University of Leipsic. Translated from the Seventh German Edition by Benjamin T. Tilton, M. D., Instructor in Surgery, Cornell University, and John Rogers, M. D., Instructor in Cornell University. Edited by Lewis A. Stimson, M. D., Professor of Surgery, Cornell University. Volume I. The Principles of Surgery and Surgical Pathology. With Five Hundred and Sixteen Illustrations. New York: D. Appleton & Company, 1901. Pp. viii-841.

Anatomy, Descriptive and Surgical. By Henry Gray, F. R. S., Fellow of the Royal College of Surgeons, etc. Edited by T. Pickering Pick, F. R. C. S., Consulting Surgeon to St. George's Hospital and to the Victoria Hospital for Children, London, and Robert Howden, M. A., M. B., C. M., Professor of Anatomy in the University of Durham, etc. A Revised American, from the Fifteenth English, Edition. With 780 Illustrations, many of which are New. Philadelphia and New York: Lea Brothers & Company, 1901. Pp. 5 to 1257. (Price, \$6.25.)

Diseases of the Intestines: Their Special Pathology, Diagnosis, and Treatment. With Sections on Anatomy and Physiology, Microscopic and Chemic Examination of the Intestinal Contents, Secretions, Fæces, and Urine. Intestinal Bacteria and Parasites; Surgery of the Intestines; Dietetics; Diseases of the Rectum, etc. By John C. Hemmeter, M. D., Philos. D., Professor in the Medical Department of the University of Maryland, etc. In Two Volumes. Volume I. Anatomy, Physiology, Intestinal Bacteria, Methods of Diagnosis, Therapy and Materia Medica of Intestinal Diseases, Diarrhœa, Constipation, Enteralgia and Enterodynia, Meteorism, Dystrypsis, Enteritis, Colitis, Dysentery, Intestinal Ulcers, Intestinal Neoplasms, etc. With many Original Illustrations, some of which are in Colors. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. xvi-17 to 742. (Price, \$5.)

A Text-book on Diseases of the Ear, Nose, and Throat. By Charles H. Burnett, M. D., E. Fletcher Ingals, M. D., and James E. Newcomb, M. D. With Numerous Illustrations. Philadelphia and London: J. B. Lippincott Company, 1901. Pp. xviii-716.

A Text-book of Pharmacology and some Allied Sciences (Therapeutics, Materia Medica, Pharmacy, Prescription-writing, Toxicology, etc.). By Torald Sollmann, M. D., Assistant Professor of Pharmacology and Materia Medica in the Medical Department of Western Reserve University, Cleveland. Illustrated. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 5 to 894. (Price, \$3.75.)

Atlas and Principles of Bacteriology and Text-book of Special Bacteriologic Diagnosis. By Professor Dr. K. B. Lehmann, Director of the Hygienic Institute in Würzburg, and R. O. Neumann, Dr. Phil. and Med., Assistant in the Hygienic Institute in Würzburg. Authorized Translation from the Second Enlarged and Revised German Edition. Edited by George H. Weaver, M. D., Assistant Professor of Pathology, Rush Medical College, Chicago. Philadelphia and London: W. B. Saunders & Company, 1901. Part I. Atlas. With 632 Figures on 69 Lithographic Plates. Part II. Text. Pp. 5 to 511. (Price, \$5.)

A Laboratory Handbook of Urine Analysis and Physiological Chemistry. By Charles G. L. Wolf, B. A., M. D., Instructor in Physiological Chemistry, Cornell University Medical College. Illustrated. Philadelphia and London: W. B. Saunders, 1901. Pp. 5 to 203. (Price, \$1.25.)

First Aid to the Injured and Sick. An Ambulance Handbook. By F. J. Warwick, B. A., M. B. Cantab., M. R. C. S., Associate of King's College, London, etc., and A. C. Tunstall, M. D., F. R. C. S. Ed., Surgeon-Captain, East London Volunteer Brigade Bearer Company, etc. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. xiii-232. (Price, \$1.)

A Text-book of Physiological Chemistry for Students of Medicine and Physicians. By Charles E. Simon, M. D., Baltimore. Philadelphia and New York: Lea Brothers & Company, 1901. Pp. xix-17 to 453.

The Surgical Treatment of Disfigurements and Deformities of the Face. By John B. Roberts, A. M., M. D., Professor of Surgery in the Philadelphia Polyclinic, etc. Second Edition, with a Chapter on the Reconstruction of Syphilitic Noses. Illustrated with 62 Figures. Philadelphia: The Philadelphia Medical Publishing Company, 1901. Pp. 72.

Die Sterblichkeit der Haupt- und Residenzstadt Budapest in den Jahren 1891-1895, und deren Ursachen. Von Dr.

Josef von Körösy Director des Communalstatistischen Bureaus. Berlin: Puttkammer und Mühlbrecht, 1901. Pp. viii-216.

Experimentelle und kritische Beiträge zur Händedesinfektionsfrage. Von Dr. Richard Schaeffer, in Berlin. Mit 12 Tabellen und 4 Abbildungen auf 2 Tafeln. Berlin: S. Karger, 1902. Pp. 7 to 110.

Beiträge zur pathologischen Anatomie der graviden Tube. Von Dr. med. August Petersen, Kopenhagen. Berlin: S. Karger, 1902. Pp. 84.

Thirty-seventh Annual Report of the Trustees of the Boston City Hospital. February 1, 1900, to January 31, 1901.

Transactions of the Medical Society of the State of West Virginia, held in Grafton on May 22, 23, and 24, 1901.

The History of the Development of Medical Science in America as recorded in the *American Journal of the Medical Sciences*. An Historical Study. By H. R. M. Landis, M. D. Philadelphia and New York: Lea Brothers & Company, 1901. Pp. 24.

Annual Report of the Medical Officer to the Health and Sanitary Committee of the County Council of Nottinghamshire, for the Year, 1900.

Quarterly Report of the Medical Officer of Health of Islington. First Quarter, 1901.

Miscellany.

Blindness from Congenital Deformity of the Occiput.—At a recent meeting of the Section in Ophthalmology of the College of Physicians of Philadelphia Dr. Charles A. Oliver gave the clinical history of a case. He considered it an extremely rare example of what might with propriety be termed the occipital or occipitoparietal type of cranial malformation, in which the configuration of the posterior portion of the head was that of a flattened but slightly curved surface extending irregularly in an upward and forward plane to meet the frontal protuberance. The most marked ocular signs were almost wholly sensory in character. Vision in each eye in such cases was nearly or entirely lost; the orbits were shallow, particularly at their postero-mesial parts; the eyeballs were but slightly protruded, were somewhat enlarged, and enjoyed full freedom of movement; the entire motor apparatus of the exterior of the eyes, with the exception of a few minor discrepancies of probably improper nuclear action, was in proper working order; the pupils were but slightly, if at all, oversized; the irides responded promptly to light stimulus; the ciliary muscles were active; the fundus in every detail of neuronc, vascular, and lymph structure appeared normal; in fact, the eyeballs with their entire annexa were healthy and performed their functions properly. This complexus of symptoms, with its absolute blindness and concomitants of slight globular protrusion, divergence, and rotary nystagmus as the only ocular signs, he believed, constituted a most remarkable clinical picture. In it was seen a blindness the proving of which required a careful study of every possible direct and indirect ocular detail; a blindness that from the ocular signs and associated conditions might be safely assumed as intracranial in type, and most probably, until an autopsy proved to the contrary, cortical in character. In such cases, he thought, it was fairly certain that there was a healthy receiving material which was properly performing its function—all the ethereal wave vibrations that ordinarily gave rise to the perception of color being duly received and transmitted to an in-

tracranial position that was intended for use in ultimate perception. This lower cerebral centre—known as the visual cortex—was, unfortunately, in such cases as the one detailed, of such imperfect development, and of so feeble a functional and resisting power, that it early lost much of its physiological activity, and sooner or later degenerated into a functionless and at times a useless organ.

The Bacteriological Diagnosis of Typhoid Fever.—Dr. John P. D. Leahy (*New Zealand Medical Journal*, July 31st), in a well-illustrated article, records his very satisfactory, though limited, experiences with Piorkowski's method.

"The necessary culture medium is prepared as follows: Normal urine, of a specific gravity of about 1.020, is allowed to stand until the reaction has become alkaline. It is then treated with 0.5 per cent. of peptone and 3.3 per cent. of gelatin, boiled for one hour, and filtered immediately into test-tubes without any further application of heat. The test-tubes are closed with cotton-wool, sterilized for fifteen minutes in a steam-sterilizer at 100° C., and again sterilized after twenty-four hours for ten minutes. To examine the fæces, one tube is inoculated with two loopfuls of the fæcal material, which should be as fresh as possible. From this tube four loopfuls are transferred to a second tube, and a third is inoculated with from six to eight loopfuls from the one preceding. Plates are finally prepared and kept at a temperature of 22° C., as the presence of so small an amount of gelatin does not permit of exposure to higher temperatures. After sixteen to twenty-four hours an examination is made with a low power. At the expiration of this time the colonies of the colon bacillus appear as round, yellowish-brown, and finely granular specks with well-defined borders, while the typhoid colonies show a peculiar flagellate appearance, from two to four fine colorless radicles usually starting from a light highly refractive central focus. After forty-eight hours the radicles have greatly extended, and after fifty-six hours the colonies are perfectly developed, and present a picture which strongly suggests the appearance of radishes, minute interweaving branches being given off in every direction, while no difference can be observed at this time between typhoid and colon bacilli, which have been grown for control in ten-per-cent. normal or bouillon gelatin."

Dr. Leahy concludes as follows:

1. Piorkowski's is an extremely valuable method of diagnosticating (or perhaps, in the meantime, I should say presuming) a case to be typhoid.

2. The earlier it is done in the course of the disease the more likely it is to be successful, and therefore a valuable supplement to Widal's reaction, which is so useful later on.

3. The technique is very simple.

4. The higher the temperature at which the plates are kept without melting the better. Piorkowski says 22° C., but my experience is that it is too risky, and I think 20° C. is safer and does not interfere appreciably with the appearance of the phenomena. I have had growing colonies "run" so often that I prefer a temperature of 68° F. to one above it. It is also advisable to cool down the plates considerably before examining them, as they melt very readily, which spoils them for examination purposes, and also renders infection more possible.

5. Not every typhoid colony develops marked outgrowths, as I have proved by a control plate of pure typhoid. The nearer the temperature can be safely kept to 22° F. the more numerous are the colonies showing the outgrowths, and the more marked the outgrowths.

6. The typhoid colonies are often grouped in the vicinity of each other in patches, so that often where there is one in the field of the microscope there are one or two more close by. A two-thirds objective and No. 4 eye-piece is a suitable combination for examining the plates.

7. *Bacillus coli* in pure culture as a control never shows anything like these phenomena of outgrowths.

A Clinical Classification of Insanity.—Dr. F. X. Dercum (*Journal of Nervous and Mental Disease*, September), in a paper read before the American Neurological Association, draws the following important deductions:

1. All of the mental disorders which result from the infections, the intoxications, the diatheses, the visceral diseases, the diseases of the nervous system, pregnancy, the puerperium, and lactation—in short, from all of the diseases and morbid physiological states—belong to the symptom-group of delirium-confusion-stupor-dementia. How closely related the various forms of this group are, we have already seen. Indeed, delirium, confusion, and stupor are largely interchangeable terms possessing a certain degree of equivalence, and it must depend largely upon the activity of the morbid process, as well as upon its character, as to which of these forms is present in a given case. That secondary differences of symptoms, dependent upon the nature of the infection or the special poison that has been ingested, are present, goes without saying, but these differences in no way affect the truth of the general statement.

2. The melancholia-mania syndrome bears no relation to the various infections, intoxications, or visceral diseases. Neither mania nor melancholia ever results from them. Mania and melancholia are diseases primarily of the nervous system—*neuroses*, so to speak—and are largely hereditary.

Much confusion has arisen from the loose and unscientific use of the words mania and melancholia, and in this respect alienists, neurologists, and general practitioners have alike been guilty. To speak of a delirium as a mania because it happens to be attended by excitement, is certainly a gross misuse of terms and cannot be too strongly condemned. To designate a confusional insanity as a melancholia, merely because the delusions are distressing or painful, is equally unscientific and reprehensible. To say that a melancholia is caused by typhoid fever or that acute mania is caused by the abuse of alcohol, is to utter nonsense. Mania and melancholia are phases of a special syndrome which bears no relation to such causes. When a mania or melancholia actually occurs in a person who has suffered from such causes, the relation is to be regarded as accidental, or at most that the antecedent disease allowed the neurosis to become manifest, but was not itself a cause. I venture further to say that such coincidences are of the utmost rarity. Again, the relation of the internal medical diseases to paranoia is of like nature. Thus, we often speak of an alcoholic paranoia. The truth doubtless is that alcohol of itself

can never cause paranoia; but, on the other hand, it is probable that, in persons already paranoiac by organization, the alcohol causing mental degeneration brings the paranoiac weakness to the surface; and this is no doubt also true of the action of other poisons. To conclude, melancholia-mania and paranoia—as well as the neurasthenic-neuropathic insanities—bear no relation to internal diseases. All causes, however, that are attended by persistent depression of nutrition or by degenerative changes in the nervous system, may favor their onset. The rarity of a clinical history of a case of melancholia-mania even presenting such a relationship, is of sufficient significance.

3. The delirium-confusion-stupor syndrome may occur at all ages. Melancholia-mania and paranoia, on the other hand, are related to definite periods of life.

4. The delirium-confusion-stupor syndrome usually occurs independently; its forms may, however, occur as complications or episodes in any of the other affections.

Arrested Pulsation in the Cord Not Necessarily an Indication of Foetal Death.—Dr. G. Balfour Marshall (*Glasgow Medical Journal*, May), at a meeting of the Obstetrical and Gynaecological Society at Glasgow, while speaking on Dr. MacLennan's paper on Auscultation in the Management of Labor, said:

"Absence of cord pulsation during labor should not be taken as an indication that the child is dead. Over a year ago I attended a case of premature labor at the seventh month, the presentation being transverse, the cervix well dilated, and the cord prolapsed. No foetal heart sounds were heard, and the cord was pulseless, although in no way compressed. After version, which was at once performed, a convulsive movement of the child's body, twice repeated, showed that the foetus was alive, so I delivered rapidly with forceps, the foetal head being high up owing to a flat pelvis with a three-inch conjugata vera. After delivery, I found the foetal heart feeble and below 100, the child in a state of asphyxia pallida. It was, however, resuscitated by artificial respiration continued for forty minutes, and the child is alive to-day."

What is Intellectual Culture?—Professor J. T. Wilson, of Sydney University (*Intercolonial Medical Journal of Australasia*, October), in a thoughtful address to the Melbourne Medical Students' Association on Ideals in Medical Education, after summing up the general idea of a university under the two heads of Character and Culture, makes the following trenchant remarks:

"But it may be asked, What is meant by intellectual culture as distinct from courses of university study? Is not all study intellectual culture? It may, or it may not be. All intellectual exertion is not intellectual culture, any more than all physical exertion is physical culture. The cyclist scorchers, with huge nether limbs and a hypertrophied heart, is not the exponent of true physical culture.

"Neither does intellectual culture consist in familiarity with any specific kind of subject-matter, such as classical literature, ancient or modern, or science, or philosophy. Rather, it seems to me, to con-

sist in an attitude of mind toward any subject, a point of view which may be reached by very diverse avenues of approach. It is not the mere acquisition of the facts of knowledge, but the response of thought and feeling it calls forth, which marks the truly cultured intellect. Knowledge may come, and yet wisdom may linger, and the result is not the man of culture, but the pedant, whether in literature or in science. And the characteristic of this attitude, what is that? I think its keynote, in so far as we can lay the accent on one note in a harmony, is sympathy—not, of course, sympathy in the cheap sentimental sense, but in the sense of appreciation of the human spirit and of Nature in all their manifold variety; a sympathy giving to the mind breadth, toleration, understanding, even of the alien and the remote."

Hæmaturia Following the Use of Urotropine.—Dr. J. Albert Goldsmid (*Australasian Medical Gazette*, September 20th) reports two cases which are of general interest:

CASE I.—A boilermaker, fifty-three years of age, corpulent and of gouty diathesis, was troubled with headache, dyspnoea, and vomiting. His pulse was of high tension and his urine deposited considerable quantities of uric-acid crystals (about a saltspoonful in the twenty-four hours). He was put on urotropine, seven grains and a half t. d. s. Four days later he complained of uneasiness above the pubes and his urine was bloody. The uric acid had decreased in quantity and his symptoms were alleviated. The urotropine was stopped, but at the end of forty-eight hours the uric acid was present in his urine in the same amount as at first, and his general symptoms (headache, dyspnoea, etc.) were worse than they had been since the urotropine was used. This drug was therefore resumed in doses of five grains t. d. s., and in the less amount was well borne and was followed by abolition both of the uric acid in his urine and his general symptoms (headache, etc.).

In the second case the patient began with three grains three times a day, which was well borne. When the dose was increased to nine grains three times a day, hæmaturia ensued, but ceased on the cessation of the drug.

The author recommends beginning with a small dose and increasing gradually. A diminution of the dose, he says, without entire cessation, will suffice to stop any consequent hæmaturia.

Traumatic Scarlatina.—Some twenty years ago we used to hear a good deal about scarlatina as the result of operation and traumatism. Lippmanar (*Giornale internazionale delle scienze mediche*, August 15th) recently communicated to the Berlin Society of Internal Medicine the case of a lad eight years old attacked for the third time in six years by scarlatina. The last attack occurred after the child had received a box on the ear. The preceding attacks had left glandular enlargements in the neck and a predisposition to angina. The author sees in this case a confirmation of a theory already advanced by him, namely, that returns of the infectious diseases are not usually the result of fresh contamination, but rather the evidence of a re-excitation of the morbid germs left in the organism after the preceding attack or of an endogenous reinfection.

Original Communications.

STATE AND INDIVIDUAL PROPHYLAXIS OF TUBERCULOSIS DURING CHILDHOOD, AND THE NEED OF CHILDREN'S SANATORIA.*

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NEW YORK.

Although the preliminary official programme of this congress only provided for a discussion of the prevention of tuberculosis in adults, I believe there is no need for me to apologize for having selected for my theme the prophylaxis of tuberculosis during childhood and the need of children's sanatoria. I desire to thank the general secretary of the congress for having finally arranged a division for this subject. The child of to-day is the man of to-morrow, and in our eagerness to stamp out tuberculosis among adults we must not forget that, to prevent a child in tuberculous environments or with an hereditary tendency from becoming affected with the disease, means the saving of a life and the preservation of a perhaps very useful future citizen. Equally gratifying and important should it be to us to treat and cure as many tuberculous and scrofulous children as possible by timely and judicious intervention.

Before entering into the details of the means at our disposal to prevent the propagation of tuberculosis in childhood, we will discuss for a few moments our present knowledge of a direct hereditary tuberculous disease.

Bacillary transmission, coming directly from the paternal side through the sperm, has been experimentally demonstrated. Clinically, however, the cases are exceedingly rare. According to Lartigau (1), there are only four reported cases, and even in these it was possible that there was hereditary predisposition with subsequent bacterial infection. Benda thinks spermatozooids incapable of transporting immotile bacilli. Walter (2) examined microscopically 230 different preparations from testicles and 63 from the prostate glands, coming from 21 patients who had died of pulmonary tuberculosis, and could not find a single bacillus in any one of them.

The extreme rarity of primary genital tuberculosis in the vagina or uterus seems the best clinical evidence that direct paternal bacillary transmission of tuberculosis practically does not exist. Maternal bacillary transmission, on the other hand, can take

place through the ovum or by way of the placenta. Forty such cases of indisputable congenital tuberculosis traceable to maternal origin are now on record. This number, however, is infinitesimally small compared with the number of authentic cases where the foetus or child of a tuberculous mother has been carefully examined without finding the slightest trace of tuberculous disease, either clinically, bacteriologically, or pathologically.

Straus (3), who has made extensive experiments in this direction, repeatedly transplanted portions of the various organs of a foetus from a mother in the last stages of consumption into guinea-pigs, and never succeeded in producing tuberculosis in these animals. Von Leyden (4) failed likewise in his experiments to inoculate tuberculosis by means of organs taken from a child which had died a few minutes after birth and which had a consumptive mother. Nocard (5), who only experimented with animals, took the organs of 32 foetuses from four tuberculous rabbits and 8 tuberculous guinea-pigs, and inoculated 32 guinea-pigs, all with negative results.

Thus it seems to us that we might consider bacillary transmission, even from the maternal side, so exceedingly rare as to leave it out of consideration in studying how to prevent tuberculosis in childhood. Let us rather assume two cardinal points: First, that tuberculous infection, contracted in whatever way, during infancy or childhood comes from without and not from within. Secondly, that there may, however, exist an hereditary predisposition to tuberculosis. How this predisposition is brought about I should not wish to attempt positively to explain. It is, however, I believe, reasonable to suppose that the toxines secreted by the bacilli in the lungs of a tuberculous mother and the general debility caused by them impair often quite seriously the development of the child *in utero*.

As to the frequency of tuberculosis in childhood, I will not burden this address with many statistics. Permit me only to quote a few of the more interesting ones. Bollinger (6), in 500 autopsies of children of all ages up to the fifteenth year, found lesions of tuberculosis in 218 cases. In 150 of these the lesions were active, and in 68 latent.

As to the time when children manifest the symptoms of tuberculosis most frequently, Küss's (7), Heubner's (8), and Naegeli's (9) statistics are instructive. According to Küss (8), the maximum death rate from tuberculous lesions in childhood is reached between the second and fourth years. According to Heubner, of 844 infants of which none suffered from tuberculosis at the time of their reception into the hospital, the development of the disease took place in 3.6 per cent. at the age of from 3 to 6 months, in 11.8 per cent. at the age of

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9 months, in 26.6 per cent. at the age of one year. Of 458 children, 14.2 per cent. were found tuberculous at the age of 2 years; of 376, 13.4 per cent. were found tuberculous at the age of 3 years; of 306, 11.1 per cent. were found tuberculous at the age of 4 years; of 470, 7.4 per cent. were found tuberculous at the age of 5 to 6 years; of 682, 5 per cent. were found tuberculous at the age of 7 to 10 years.

Let me incidentally remark that even these statistics seem to prove that children are very rarely born tuberculous. We know from animal experiments that the grosser pathological changes brought about by the bacillus of tuberculosis, such as enlargement of the glands, are not produced before two or three months after the penetration of this micro-organism into the system.

Naegeli's careful macroscopical and microscopical researches for tuberculosis in a series of 500 consecutive autopsies, made in Ribbert's Pathological Institute (Zurich), have revealed, not only the astonishing fact that 97 per cent. of all adults over eighteen years of age that died in the Cantonian Hospital at Zurich were found tuberculous, but also that in the first year tuberculosis is exceedingly rare; from the first to the fifth year it is still rare, but it is nearly always fatal; from the fifth to the fourteenth year it is found in a third of all bodies examined and causes the death of three fourths of those it attacks; while, in the remainder, the process is latent in some, active in others. Between the fourteenth and eighteenth years, half the population has been infected with tuberculosis. The process is then always active and progressive and is but rarely arrested. One third of all deaths at this period is due to tuberculosis.

As to the *modus operandi* of the infection of children, we have, of course, no statistics. To ascribe the very frequent intestinal tuberculosis found in childhood exclusively to a tuberculous milk supply would be unscientific. There is no doubt that many a child has been rendered tuberculous because of taking tuberculous food coming from diseased cows, but in as many, perhaps even in more, cases intestinal tuberculosis is secondary and has resulted from the ingestion of pulmonary secretions, since small children never expectorate. Autopsies seem to show that a very large percentage of children have contracted tuberculosis by inhalation, since the bronchial glands harbor the oldest foci and seem thus to represent the point of entry of the bacilli. The presence of bronchial and pulmonary foci and tuberculosis of the mesentery glands, when all lesions seem to be of the same duration, may well be explained by a double infection of the respiratory and alimentary tracts of the child.

Latham (10) explains the frequent presence of tuberculosis in the bronchial glands as being prob-

ably due to ingestion of tuberculous milk. According to this author, the bacilli pass from the intestinal mucous membrane, by way of the lymphatics, to the bronchial glands. From these glands the process spreads to the lung tissue: 1. By direct continuity. 2. By means of the lymphatics, but against the supposed lymphatic stream. 3. By ulcerating into a blood-vessel and in this way disseminating the bacilli all over the body. 4. By ulcerating into a bronchus. The right set of glands is more commonly affected than the left. Latham, whose observations cover more than 3,000 cases, admits, however, the very frequently infected air supply as a cause of tuberculosis in childhood. Thus we see that, in young as well as old, tuberculous infection can take place in three ways—namely, by inhalation, ingestion, and inoculation.

Wherever there is a consumptive, ignorant or careless with his expectoration, there is danger to the life of a child, and it is not at all necessary that the child should come in close contact with this individual. Cases have been reported where children given into a family to board became tuberculous owing to the presence of a consumptive in that family. Excluding the infection from pulverized tuberculous sputum or from tuberculous saliva during the act of kissing, it is not unlikely that drop infection was in such cases sufficient to render the susceptible organism of a child tuberculous. Thus it would seem best that in all cases the consumptive should be kept away as much as possible from the child, and the greatest care should be exercised in selecting a home or attendant.

The infection of an infant from tuberculous sputum can happen in various ways. At the moment of the child's birth, if it should happen to be asphyxiated, the physician or midwife may apply his or her mouth to that of the infant and inflate its chest to bring the respiratory organs into play. If the operator is consumptive, the danger of imparting the disease to the infant is evident. In my recent book on tuberculosis (11) I quoted the remarkable case of Reich, which I believe will bear repeating here as an illustration: A midwife in the village of Neuenberg became consumptive in 1874, and died of this disease in July, 1876. Ten children, without hereditary predisposition, attended by this midwife between April, 1875, and May, 1876, died before reaching the age of seventeen months. This consumptive midwife was in the habit of sucking the mucus from the mouths of new-born children, and blowing air into their mouths, when there was the slightest sign of asphyxia. To avoid such accidents, the mouth-to-mouth respiration should be replaced by the safer method of using the catheter, as recommended by Tarnier and Lusk. Laborde's method of rhythmical traction of the tongue will also suffice

to cause the child to breathe if the obstructing mucus has been removed. A simple swab suffices to remove this mucus, and to do this by mouth-to-mouth suction is to be condemned.

Tuberculous mothers and fathers are, as a rule, taught not to kiss their children on the mouth; but this injunction is not always obeyed, because it had not been accompanied by an explanation that not only the secretions from the lungs, but also the saliva, may be bacilliferous. Tuberculous mothers will sometimes refrain from kissing their children, but owing to insufficient knowledge they will often feed the children with spoons which they have just put into their own mouths to taste the food. Again, the tuberculous mother, since she is forbidden to give the child the breast, may frequently taste the milk through the child's rubber nipple and, without cleaning it, insert it into the baby's mouth.

Inoculation during early infancy has been observed in Jewish children as a result of ritual circumcision by a tuberculous operator. I have been able to collect about twenty authentic cases, and in one case the presence of the bacilli had been demonstrated in the saliva of the operator and in the wound of the child. The surgical literature of all countries where Israelites practise this rite according to the orthodox way continues to contain reports now and then of cases of tuberculous infection through this mode of circumcision. The tuberculous inoculation following this operation manifests itself first as a local disease of the genital organs, from whence it becomes generalized in a great number of cases. The operation of circumcision, when skillfully and carefully performed, is in itself trifling, but the sucking of the prepuce afterward makes it dangerous, for it is evident that, if the operating rabbi should be a consumptive, inoculation is made very probable. Cases of syphilis and diphtheria have also thus been transmitted. It has even happened that, owing to the lack of skill and care of the operator, secondary hæmorrhage, erysipelas, or gangrene, has ensued.

A most reliable prophylactic measure against the possibility of inoculating the child when the parents insist upon the orthodox rite of circumcision is the suction of the blood by the aid of a glass tube, as practised in France and Germany. However, no matter what method may be employed for this part of the operation, only a man free from communicable diseases and skillful in the art of surgery should be permitted to perform circumcision.

So much for the dangers to which the infant is exposed. When the child becomes old enough to creep about and play on the floor, it is exposed to all three methods of infection at once. If there is a consumptive in the family and he is careless, ignorant, or helpless, there will be ample opportunity for

the little one playing on the floor to inhale the dust laden with bacilli, coming from the dried and pulverized expectoration. Like all children, it will touch everything on or near the floor and then put its fingers into its mouth. To conceive of a more certain method of ingesting and inhaling tuberculosis is hardly possible. In order to test the possibility of such transmission of the bacilli Dieudonné (12) made cultures from the hands and noses of fifteen children, one or both of whose parents were tuberculous. In two instances the tubercle bacilli were found. If the child's nails are not clean and closely cut, it will inoculate itself with tuberculous substances. This method of infection happens quite often, particularly when the child is suffering from eczematous or other skin troubles. The result may be a local tuberculosis, or, perhaps, more frequently a lymphatic infection. To relieve the itching sensations produced by the irritating nasal secretions or a coryza, the child will poke its fingers into its nose, and we may have here the starting-point of a facial lupus. To prevent such inoculation, the mothers and nurses should see that the children's fingers are kept as clean as possible and their nails cut. As long as the child is too small to clean its nose, regular nasal toilets with some mild borated solution or warm, previously boiled water should be instituted. Eczemas and other skin eruptions should receive immediate medical attention, for, as has been said, left to themselves, they may give entrance to tuberculous infection.

To assure a rigorous prophylaxis against tuberculosis from the very earliest day of childhood, I do not know of any better plan than to have printed directions issued by the boards of health, which should be placed in the hands of every physician and midwife to give to the future mother, to the nurse, or to the immediate members of the family. These instruction leaflets should contain everything relating to prophylaxis, general cleanliness, ventilation, nutrition, etc., and should be printed in plain, comprehensible language.

While separating a child from the tuberculous mother and giving it the best sanitary and hygienic environments elsewhere would be the ideal way of solving the problem, it is but rarely practicable. We must find means to protect a child in its own home. To avoid the inhalation of tuberculous matter, the greatest care should be exercised on the part of parents, relatives, or friends with whom the child lives. The well-known precautions concerning the tuberculous expectoration, and also drop infection, should be rigorously adhered to by every one who may come in contact with a child. The child should not sleep with a tuberculous mother. It should have its own little bed from the day of its birth. The child should never be taken on visits to consumptive

friends or relatives. Day nurseries or infant-shelters where working-women leave their children should be subject to thorough sanitary supervision, and no tuberculous individual should be engaged as an employee in such an establishment.

To combat the danger from ingestion of tuberculous milk is, of course, primarily a duty which devolves upon sanitary authorities, the State, county, or city boards of health respectively. It is the duty of these authorities to make the sale of tuberculous milk practically impossible. But to all mothers who do not nurse their children, to boil or sterilize the child's milk should become a religious duty, particularly in cities, where one is never certain of the absolute purity of the milk. Whenever it is possible, cow's milk should be replaced by goats' milk, which, as is well known, is never tuberculous. When the child grows older and eats meat, all that is of doubtful origin should, of course, be thoroughly cooked.

To kiss the child on the mouth should not be allowed in any case, and as the child grows older it should be taught not to kiss strangers at all and relatives and friends only on the cheek. Caressing and kissing domestic pets, such as parrots, canary birds, dogs, cats, etc., should be discouraged. The remnants of food left by a tuberculous invalid should not be eaten by any one, but more particularly not by a child; neither should the latter eat any food handled by a consumptive.

The floor of the rooms where the child lives and on which it may play should not be carpeted. It should be kept scrupulously clean, and, if desirable, a clean mat may replace the carpet. To keep the ordinary wooden floor clean and as far as possible aseptic, the use of petroleum wax, as recommended by R. Petit (13), should be endorsed. Experiments have demonstrated that the various pathogenic microbes, such as the bacillus of diphtheria, of typhoid fever, the streptococci and staphylococci, and the bacterium coli, cannot live in this substance, and the tubercle bacillus loses its virulence when in contact with it. The cracks in the floors should be filled and also covered with this substance. Water and even antiseptic substances do not alter this wax. To take a clean mattress and enclose it by a light wooden railing of about two feet high, so as to make an artificial hedge for the child to play in, is a safe means to protect the little ones from coming in contact with the floor. Another very simple, but perhaps also somewhat less secure measure to avoid this kind of infection, is always to place a clean sheet on the floor before the child is set down to play.

Dry sweeping should not be permitted in children's rooms; if wiping the floor is not practicable, it should be swept with moistened sawdust. All these precautions recommended for the children's rooms in the private home should, of course, be practised,

if possible even with more rigor, in public nurseries, kindergartens, asylums, orphanages, etc.

Expectorating on or near public or private playgrounds should be considered a misdemeanor and punished accordingly. These grounds should be kept specially clean and from time to time be strewn with clean gravel.

The greatly loved visits of little ones to menageries must be of concern to the sanitarian who desires to protect the children from tuberculosis. To visit the ape-house in the zoological gardens and to remain there as long as possible is the delight of children, and yet, perhaps, next to cattle, there are no animals so subject to tuberculosis as apes. Add to this the commotion, dust, and impure air in the average ape-house at the usual time of the children's visits, and one cannot help thinking of an absolute danger. The managers of menageries and zoological gardens should do their very best to reduce this source of infection to the least possible minimum. A tuberculous keeper might very easily infect the animals under his care, especially since their confinement makes them particularly susceptible to the invasion of the bacilli. The law which authorizes the killing of tuberculous cattle should be extended to all other animals as well. There seems no reason why an ape-house containing numerous consumptive animals should not be as much a source of infection as a tenement house where ignorant and careless tuberculous individuals have expectorated indiscriminately. Expectorating on the floor or anywhere else in these menageries should be strictly prohibited to keepers as well as to visitors, and the floor should always be strewn with moistened sawdust during visiting hours.

The same hygiene which should prevail in the kindergarten and play-room should, of course, also be universal in the school-house. School-children should be taught the use of spittoons and handkerchiefs. Expectorating anywhere except into a proper receptacle should be punished in the same way as any violation of class rules. The elevated non-breakable spittoon should be given the preference to the ordinary porcelain or glass cuspidor placed on the floor. I have often wondered if the individual pocket flask in the public school would not also tend to decrease epidemics of whooping-cough, measles, and grippe, besides being one of the best means of preventing the contraction of tuberculosis through indiscriminate expectoration. Each child should have a cupboard, where he should keep his own towel and drinking-cup.

To avoid drop infection—that is to say, the ejection of small particles of bacilliferous saliva during the so-called dry cough or sneezing, children should be taught to always hold a handkerchief before their mouth while coughing or sneezing.

Obligatory periodical disinfection of the school-room by formaldehyde gas may also be advantageously instituted. To make the disinfecting and cleansing of the class-room as thorough as possible, I would suggest that desks and chairs be so constructed that they can easily be folded together after school hours. As another sanitary measure, I would insist that lady school-teachers and the grown-up girl pupils should not, under penalty of discharge, be allowed to wear trailing dresses. The short, rainy-day skirt is certainly far more sanitary than the trailing skirt, which so often is made to do the scavenger's dirty work.

While children suffering simply from scrofulous manifestations might be permitted in public schools, no pupils suffering from pulmonary tuberculosis, or teachers afflicted with the same disease, should be allowed there.

The early recognition of pulmonary tuberculosis, which is so essential in the solution of the tuberculosis problem in the adult, is equally important in regard to the contact with this disease in childhood. Here comes in a function of the school physician (and no school should be without one) which I believe has not yet been sufficiently appreciated or exercised. The chest of every child attending the public school and of every teacher teaching there should be carefully examined at least twice or three times a year, if owing to a large number of pupils this cannot be done every three months. Through the early discovery of tuberculosis in a pupil, immediate warning to the parents, and timely and judicious treatment, many a young life will be saved.

We come now to the portion of our discourse which treats of the hereditary disposition which the child of tuberculous parentage possesses at birth. We may define this hereditary disposition in two ways. As bacteriologists, we should probably say an hereditary predisposition was that peculiar condition whereby the various organs, and in particular the respiratory and next to it the intestinal tract, offered a very favorable soil or culture medium for the development and multiplication of the bacilli. As clinicians, we might say hereditary predisposition of tuberculosis meant a physiological poverty, brought as an inheritance into this world, whereby the system was minus the phagocytic and bactericidal powers inherent in strong and healthy organisms.

It is well known that the transmission of a tuberculous tendency comes most frequently from the maternal side. The most radical means of preventing a progeny subject to tuberculosis would, of course, be the interdiction of marriage to all tuberculous individuals. Our present state of society and our conception of individual liberty will scarcely make it possible, for the time being, to inaugurate

legislative means to counteract marriages between tuberculous individuals. General education and enlightenment on this question may be helpful as a prophylactic means, but the family physician will have to do the bulk of the work in preventing such dangerous unions. Even the cured consumptive should not think of marrying until a considerable time after his complete restoration to health. Gerhardt (14) counsels to wait at least one year, but I consider this hardly enough and would much rather make it two years.

To bring about abortion when a probably tuberculous conception has taken place I consider useless. Instead of saving one life, there is danger of sacrificing two; but in view of our present knowledge of tuberculosis, I have no hesitation in declaring that I do not consider it a sin, either before God or man, to teach a tuberculous mother or father how not to procreate a tuberculous issue. If, in spite of the warning of the family physician, a tuberculous mother has conceived, what are we to do? Shall we leave the mother and child to their fate? Surely not! Though the mother may be suffering from tuberculosis and the child seemingly be doomed to become a candidate for consumption, modern phthisiotherapy has taught us not to despair, and we may save the lives of both; but we must begin by treating the child *in utero*, and with this, of course, begin a thorough treatment of the mother's condition.

A woman who is to give birth to a child should abandon the corset and tight clothing in time to allow a continued, free abdominal and thoracic respiration. Better yet is it if she has never been addicted to the habit of tight lacing, for the experiments of Kellogg (15) and Mays have demonstrated that the so-called female, or costal, type of respiration which prevails among civilized women is the result of their restricting and unhygienic mode of dress, and is not due to the influence of gestation or to a natural difference in the anatomy and physiological growth of man and woman. If a support for an unusually large breast must be worn, let the corset be replaced by a comfortable waist which permits free and deep respiratory movements. In short, the whole dress of the mother should be so arranged that there are no restrictions, and no organ in the body should be hindered in its free physiological function. For the future mother to live as much as possible in pure, fresh air, to take frequent breathing exercises, to avoid crowded assemblies where the air is vitiated, to live, in short, as hygienic a life as the family's social condition will permit, will have a most salutary effect on the child's future health. If the circumstances are such that you can induce this family with a tuberculous mother, living in the city, to move to the country or

to a smaller town where modern hygienic conveniences can be had, but where the crowded and noisy conditions of city life are absent, so much the better for the prospects of mother and child.

The new-born child is in need of pure, fresh air as much as the mother, and the lying-in room and the nursery should always be well ventilated. When in due time the child is taken for an airing, the thick, almost impermeable veil should be abandoned. These veils, often tightened around the little face, press against the nose and make it difficult for the child to breathe naturally; yet the mother wonders how the baby got into the habit of breathing through the mouth.

Frequently also mouth-breathing in children, and sometimes in adults, must be attributed to adenoid vegetations in the retropharynx or to enlarged tonsils. These, as well as all other causes of obstruction to a free, natural respiration, such as a deviated septum, enlarged turbinated bones, hypertrophied mucous membrane, polypi, etc., must be removed if we desire to protect the child or adult from chronic nasal, pharyngeal, or laryngeal catarrhs, so often the forerunners of pulmonary disease. Only after the removal of all possible causes of obstruction in the upper air-passages is a natural physiological respiratory function possible, and only under such conditions can we hope for real benefit from breathing exercises.

The proper bringing up of children that have a tendency to become tuberculous is of the greatest importance. Many are poor eaters from the day of their birth. Discipline, not to allow too many sweets, to observe regular meal-times, and to keep the bowels in good condition, are the best means to combat a dislike for eating. As early as possible children should be taught to clean their teeth thoroughly after each meal, for a good digestion is dependent upon the condition of the teeth. The dislike for outdoor play, which is so characteristic of the little candidates for tuberculous disease, can also only be overcome by discipline. To dress them too warmly and bundle them up all the time is as injurious as having them remain most of the time indoors. This hardening of the constitution will be the best method to counteract a disposition to take cold easily, which in children predisposed to tuberculosis has often a tendency to develop chronic catarrhs of the respiratory tract.

I consider the air-bath and sun-bath for children at the earliest age most beneficial. Let the little ones toddle around naked every day for a short time; in cold weather in well-warmed rooms, and in summer in a room bathed by the rays of the sun, but always on a clean floor or clean Japanese matting. With their growing intelligence, children

should be taught by practice and example the value and the love of pure fresh air. As soon as the age and intelligence of the child will permit, breathing exercises should be taught him. He should learn to like them as the average child does general gymnastics.

Public as well as private schools and colleges should be model houses in regard to cleanliness, hygiene, and constant ventilation. The classrooms should be well ventilated, not only when the children have left, but all the time, and, as Emmert (16) says, since windows and doors alone do not suffice properly to ventilate rooms when occupied by a mass of human beings, mechanical devices should be resorted to to assure always a plentiful supply of fresh air.

Instruction in elementary hygiene should form a part of the curriculum of all schools; this course might be advantageously given by the school physician. Overwork during school life is often an indirect cause of furthering a tuberculous tendency in children, and, indeed, it is injurious even in a healthy child. It is in such cases that the school physician's intervention may indeed prove the saving of a child's life. The physician should work in common with the teachers for more outdoor instruction and more outdoor play, and whenever possible the school physician should even supervise the breathing exercises. Botanizing tours and geological excursions should be frequent for all school children, and singing and recitation in the open air during the warmer season be made a part of the daily curriculum. Such measures must be preventive of disease, and particularly of tuberculosis. Lungs and vocal organs will develop and the general health of the children improve; in short, let us exercise the same diligence for the development of a sound body in the child at school as we have been in the habit of exercising to develop his intellectual capacity. The love for outdoor sports, breathing exercises, and pure, fresh air must be kept up throughout life by the young men and women of tuberculous tendency.

In choosing his future career the young man born with that peculiar susceptibility which Peter describes so aptly as "*tuberculisable*" should seek professions which will demand outdoor life. Farming, gardening, and forestry will assure him the longest and most useful existence.

Hydrotherapeutics as a measure to prevent pulmonary tuberculosis tends to develop to more rigorous action the vasomotor system; it also should be instituted at an early age. A child a few months old can support with impunity a rapid sponging off with cold water after its warm bath, followed by a relatively vigorous friction with a soft Turkish towel. As the child grows older, he should not only be taught this use of cold water after his semi-

weekly or weekly warm bath, but he should wash at least the face, neck, and chest every morning with cold water. Better yet if he can accustom himself early to a daily cold douche. The utility of the all-the-year-round swimming bath, where old and young of all classes can, gratuitously or for a moderate price, enjoy the salutary effects on body and mind of a good swim, is too well known to need insisting upon.

There should be many small parks and playgrounds and public baths for old and young in the densely crowded districts of our large cities. City parks have justly been called the lungs of great centres of population. Here mothers and children of the poor can breathe purer and fresher air, which is one of the best means of preventing tuberculosis.

I have thus far but slightly touched upon the sociological side of the prophylaxis of tuberculosis during childhood. I have made no distinction between scrofulous and tuberculous disease, for the former is but a lighter form of tuberculosis. The same sociological conditions which further tuberculosis in the pulmonary form further also scrofulous diseases. Unsanitary, overcrowded tenements, houses built on damp soil, etc., are some of them. Children of syphilitic and alcoholic parents are particularly prone to tuberculous and scrofulous affections. In seeking to prevent tuberculous and scrofulous disease in childhood, we must combat our two great social evils, syphilis and alcoholism, and improve the housing of the poor.

Here I cannot help denouncing also very strongly the employment of children under fourteen years of age for labor in various industries, requiring often from six to ten hours of continued manual labor, or in factories where work even taxes the healthy organs of a full-grown man.

As to what is best to do for the underfed pupils, the children of poor parents, so often irregular in attendance at school because of tuberculous or scrofulous disease, I would suggest a philanthropic enterprise which would cost little and which would do a world of good. Provide them with a luncheon of a few good meat sandwiches and one or two glasses of good milk, and I am convinced that fewer will become affected with tuberculosis and scrofulosis, and they will do better work at school and at home.

To avoid a pauperizing tendency, a few pennies may be charged for these luncheons. This practice is in vogue in the city of Boston (Massachusetts), and works most satisfactorily. After a few weeks of such persistent administration of good luncheons the previously underfed children improve in appearance and often gain from two to three pounds in weight.

For children suffering from either tuberculous or scrofulous manifestations the medicinal treatment

is well known. Cod-liver oil, arsenic, iron, but above all the hygienic and dietetic measures, aërotherapy and solar therapy, under constant medical supervision, in a good, healthy locality, preferably in sanatoria erected for that purpose in the country or on the seashore, have proved to be the most efficacious means of treating these diseases during childhood. The results obtained in Dutch, French, German, Italian, and Scandinavian seaside sanatoria for tuberculous and scrofulous children have been most gratifying. They vary from 50 to 75 per cent. of complete cures. Nearly all these institutions provide for the intellectual development of these children, which, of course, is equally essential.

The prophylaxis of tuberculosis during infancy and childhood should engage the attention of physician, sanitarian, statesman, and philanthropist alike. I repeat, let us in our eagerness to combat consumption in man and woman not forget that the prophylaxis and treatment of tuberculous diseases in children constitute one of the most essential factors in the solution of the tuberculosis problem.

May every one of us, when returning to our respective fields of labor, exert his influence in inaugurating an intelligent and rigorous prophylaxis of tuberculosis during childhood and advocate the establishment of special school sanatoria for the little ones suffering from this disease.

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THE

BLOOD IN INFANCY AND CHILDHOOD.*

By GERTRUDE UNDERHILL LIGHT, B. S., M. D.,

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A consideration of the blood findings in infancy and childhood involves much that is well enough known, to be dull in review, and more, so ill-known that diagnosis becomes a liberal art.

Certainly no view of the blood picture in disease can be complete which does not include the fundamental differences between infant and adult blood in health, as these so largely modify the changes intervening in the morbid state. Three specific and characteristic factors may be noted:

1. The blood of an infant tends constantly to resume embryonal characteristics when the clinical balance is disturbed. 2. Such disturbances produce blood changes out of proportion to the exciting cause, as measured by the standard of later life. 3. Lymphocytosis is pronounced. Clinically, moreover, the spleen in the various anæmias of infancy, in rickets, syphilis, and chronic intestinal affections, so tends to enlargement, that the single factor, splenomegaly, has not the significance of later life, and the diagnosis must be made on the microscopic findings in the blood and viscera.

Stengel and White (1) have recently reported from the Pepper laboratory a very complete résumé of the characteristics of child and infant blood in health, together with the minute study in forty-seven clinical cases. From the results of eight investigators, it appears that, at birth, the red cells average 5,742,080 to the cubic millimetre; there is an accompanying excess of from 25 to 30 per cent. in the hæmoglobin with a corresponding increase in the specific gravity; and the white cells in the "physiological leucocytosis of the new-born" average 15,000 to the same cubic volume.

Stengel and White further state that the red count decreases to the end of the first year, and then rises to the twelfth when the adult balance is acquired,

and that, in this period, the count of the sexes is approximately equal; that considerable variation in the size and outline of the red cells in the new-born is normal; but that nucleated red cells, which are so constant in foetal blood, and still persist at birth in the blood of the umbilical vein in a proportion varying from one in twenty to one in eight non-nucleated red cells, should not appear in health after the first day. Their significance in disease is likewise not so grave as in adult blood, on account of the readiness with which the younger organism acquires marked anæmia, and they are plentiful in primary and secondary anæmias, in syphilis and rickets, in pseudo-leucæmia, and even in the blood of osteomyelitis. Karyokinesis in the circulating red cells is, however, rare, and of grave significance.

The birth leucocytosis is sustained by a leucocytic count higher than in adult blood to the end of the second year, after which time the number gradually sinks and, by the twelfth, the absolute count of white cells, and the differential count, have reached the adult type. Digestion leucocytosis is relatively higher in the early years.

Much interest attaches to the differential count. Gundobin gives the uninuclear form a preponderance of from 50 to 66 per cent., while the polymorphonuclear cell reaches only 28 per cent., a lymphatic content, therefore, three times greater than in the adult blood, at the expense of the "over-ripe" elements.

The exact age at which lymphæmia ceases is problematical. The blood picture is undoubtedly modified by rickets and inherited lues or tuberculosis, all of which tend to prolong the infantile characteristics. C. S. Engel reports that the polymorphonuclear elements are present in the early months of the first year, in a percentage varying from 12 to 20, that they reach 40 to 50 per cent. toward the end of this year, and average 60 per cent. in normal children of the twelfth year.

The eosinophilia of childhood has been much debated. Reports as to its occurrence are vague, the number being stated variously at from 1 to 20 per cent. From 2 to 10 per cent. is doubtless normal in the early years, and an increase in the number of acid-staining cells has not the significance of later life.

The clinical determination of abnormal states in infancy and childhood, from the examination of the blood, must proceed, therefore, with the ill-balance and the exaggeration of the normal type in mind. Frank poverty of the blood from slight disorders of nutrition, from hæmorrhage, from gastro-enteric disease, from rickets, syphilis, and tuberculosis, the reaction of the child organism to improper hygiene, the susceptibility to metallic poisons, as in the remarkable case recently reported by Morse (2), when

*Read before the Pediatric Section of the New York Academy of Medicine, October 10, 1901.

a child of seven months exhibited grave anæmia and hæmaturia with a demonstrable quantity of arsenic in the urine, through absorption from the blue lining of the basinette, make it essential that the estimation of a blood count appropriate to the age and condition, should be based, not only on the calendar, but on the development of the child. The diagnosis of an idiopathic blood affection in a rhachitic child must eliminate the blood modification of this condition—namely, the predominance of the “young” leucocyte, a total leucocytosis varying from 15,000 to 40,000 (Cabot), the marked anæmia with splenic enlargement, the presence of nucleated red cells in the blood stream with changes in the size and shape of the red cells, and polychromatophilic staining. One million red cells to the cubic millimetre does not appear to be an uncommonly low count in the graver cases, and rapid decrease to an even lower level has been noted.

In chronic gastro-intestinal disorders the anæmia is progressive, and a moderate leucocytosis is stated to be the rule. Japha's (3) studies indicate that, in enteritis, this leucocytosis is marked by a small relative increase in the polymorphonuclear cells, and he maintains that the lymphocytosis described in such cases does not exist, or is normal to the child at that age. In two cases of cholera infantum reported by Weiss (4), however, the lymphocytosis strongly suggested lymphatic leucæmia.

Typhoid fever and grippe in childhood, as in the adult, are distinguished by an impoverished red count, and by the absence of leucocytosis, or actual hypoleucocytosis, except in the presence of inflammatory complications.

In pneumonia the significance of leucocytosis follows the adult rule. It is absent in the very mild or in the fatal cases. It is usually high, but, where the reaction of the white cells is extreme, the prognosis is grave.

Tuberculosis without cavity formation or mixed infection, the military type, and uncomplicated tuberculous meningitis, are unattended by leucocytosis, which fact is of service in the diagnosis.

Most observers are agreed that leucocytosis in scarlet fever is the rule, and that eosinophilia is constant and persistent, so that the disease may thus be distinguished from measles in which there is no increase in the white cells, except with severe complicating bronchitis, and where the acid-staining cells are inconspicuous.

In 1894 Morse (5) collected twenty cases of leucæmia in infancy, most of which were probably not genuine. In 1896 (6) the same author states that seven cases only of acute leucæmia in childhood—the disease running its course within nine weeks—are on record, and Cabot (7), in the first edition of his book published in 1897, writes, “It seems to be

actually the case, therefore, that we have only two genuine cases of leucæmia in infancy from which to generalize, both occurring in the practice of Boston physicians,” *i. e.* Dr. Morse and Dr. F. C. Shattuck. Happily, the curse has since been lifted, for of the ten later cases only one, Dr. Morse's second case, proceeds out of Boston, while three (8, 9, 10) are German, two (11, 12) French, and of the native cases, three (13, 14, 15) are from Philadelphia and one (16) from the Johns Hopkins Hospital.

The inference appears to be either that New York cannot count blood or does not produce leucæmia in her children.

According to Ewing (17) there is no specific connection between leucæmia and the lymphatic diathesis.

The onset is often sudden and the progress is febrile and downward to a fatal termination, the condition being marked by severe anæmia with frequent multiple hæmorrhages, constant enlargement of the spleen, and frequent enlargement of the liver, in some cases general glandular enlargement, but in others cervical only. The frequent clinical resemblance of this disease to certain cases of infectious purpura, and to scorbutus, makes the blood examination imperative for diagnosis. The findings do not differ essentially from those of the disease in adults, except for the greater abundance of nucleated red cells and of megaloblasts. The myelogenous is the rarer form.

The classification of the anæmias of infancy offers many difficulties and favors debate. Practically, the subject has hardly advanced beyond the very simple order introduced by Monti, that primary anæmia is the pernicious form, that secondary anæmias are mild and severe, and that a leucocytosis may or may not be present. Indeed, the occurrence of idiopathic pernicious anæmia in infants is very strenuously denied, and the diagnosis made under protest.

Rotch (18) states that, among 2,068 infants treated in the wards of the Infants' Hospital in Boston in the last ten years, no case of idiopathic pernicious anæmia has been observed, though he defines the state as a clinical entity—“A severe and usually progressive affection of the blood, ending fatally in the great majority of cases, and for which no cause can be found even after the employment of all the resources of the most advanced clinical investigation”—in other words the diagnosis of primary pernicious anæmia is made by exclusion.

The vexed questions involved in the morbid state known as von Jaksch's anæmia, called by him “anæmia infantum pseudo-leucæmia” are, if reports are to be trusted, being quietly settled by failure to make the diagnosis. It seems probable

that some three or four blood conditions have been reported under this head, that the condition is a severe secondary anæmia simply, and that many of the cases reported as von Jaksch's disease have been grave anæmias with leucocytosis, as in rhachitis, or have been pernicious anæmia or leucæmia. The disease is said to resemble clinically leucæmia, but to fail to give the visceral lesions of leucæmia at section.

Such leading authorities as von Limbeck, Ebstein, and Fischl do not regard it as a clinical entity, but Rotch makes the diagnosis and Ewing (19) holds it to be specific, and distinguished anatomically by a resumption by the liver of the foetal function of blood cell-formation.

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THE DAILY MEDICAL INSPECTION OF SCHOOLS.

By D. S. LAMB, M. D.,

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(Continued from page 925.)

Dr. A. W. W. Lea,¹⁴ in a paper advocating the medical inspection of schools as it is in Boston, etc., stated that in Manchester, England, forty schools had to be closed in 1897 because of the prevalence of measles, and twenty-four in 1898 for the same reason. Of course this closure of schools meant much hindrance to educational work. In some schools 70 per cent. of the children had lice and other parasitic diseases. In Liverpool certain schools had a nurse come daily to examine the children who seemed to be ailing, and those who were thought by the nurse to be unfit to remain in school were sent home and the parents notified. Some school boards, as for instance the Salford School Board, had already reached the point of appointing a physician to make inspection of the schools of that district; but of course one physician could not be expected to do so much work efficiently.

In the United States the subject of the hygienic inspection of scholars became a matter of special interest about the same time as abroad. Thus, at a meeting of the American Social Science Association, May 11 to 13, 1875, at Detroit, Mich.,¹⁵ the subject of the medical inspection of schools was considered. It was opened by the reading of a brief of a State law, proposed by Joseph Willard, Esq., of Boston, Mass.

The history of the movement in Boston is as follows:

At a session of the Committee on Rules and Regulations, Boston, held November 23, 1876,¹⁶ a hearing was given on the subject of the appointment of a medical inspector of public schools. It was urged that the inspector should, 1st, take cognizance of the interests of health among the teachers and scholars; 2d, make sanitary investigations regarding school hours and grounds, and all circumstances connected with the management and instruction of schools that would appear to influence the health of scholars and teachers; 3d, acquaint himself with the means used in other States for preserving the health of scholars and teachers; 4th, seek to trace the origin and mode of extension of epidemic or other diseases among the inmates of schools, and to indicate measures for the arrest or prevention of such diseases; 5th, from time to time inform the Department of Public Instruction of the

¹⁴*Journal of State Medicine*, London, 1900, viii, pp. 184-191.

¹⁵See reprint from the *Journal of Social Science*, No. viii.

¹⁶Hearing on the Appointment, etc., Boston, 1877, 8vo.

results of his investigations and make such suggestions as he believed conducive to the improvement of the health of teachers and scholars; 6th, make an annual report; and, 7th, collect and forward to the department such information in regard to the interests of the public schools as he believed proper for diffusion among the people.

Dr. E. H. Clarke wrote as follows, March 19, 1877:¹⁷ "I write chiefly to say that my professional experience has long since convinced me that the sanitary supervision and inspection of the children, schoolhouses, and surroundings of our public schools, by a competent inspector, would do a great deal toward improving the health, strengthening the physique, and diminishing the diseases of our school children. Teachers and pupils would both be benefited and the result would be one of incalculable advantage to the community."

An editorial in the *Boston Medical and Surgical Journal* for April 6, 1882, p. 330, after stating that an earnest effort had been made for some years to have appointed a medical inspector or supervisor of the public schools of Boston, but so far without result, urged anew the creation of the office, advocating particularly that such an officer should give a course of lectures on practical hygiene to the teachers and advanced classes in higher schools.

After many years the legislature provided for the desired inspection, and Dr. S. H. Durgin, of the Boston Board of Health,¹⁸ reported the results of one year's experience. The board had begun its efforts in this direction in December, 1890, and for four years had alternate successes and defeats from those who controlled the finances of the city and public schools. The first setback was in 1891. Under the influence of a severe epidemic of diphtheria, the board finally succeeded, and on November 1, 1894, began work with the consent of the mayor and tacit consent of the school board.

The board of health divided the city into fifty districts, giving an average of about four schoolhouses and 1,400 pupils to each district. Well-qualified and discreet physicians were readily found to undertake the duties prescribed. The board selected and appointed without interference from any source, one physician for each district, with a salary of \$200 a year, plus the honor and satisfaction of serving in a good cause. His duty was to make a visit daily to each master's school, soon after the beginning of the morning session. The master received from each teacher in his district early reports as to the appearance of symptoms of illness in any pupil in his charge. These reports were given to the visiting physician, who at once examined the reported children, and made a record of his diagnosis and

action in books furnished by the board for this purpose, and kept in the custody of the master. If the visiting physician found the child too ill to remain in the school, he advised the teacher to send it home for the observation and care of its parents and family physician. If the illness was a contagious disease, the child was ordered home and the case reported to the board. If the child thus sent home returned next day with continued illness, the same action by physician and teacher was repeated and sustained by both the health and school boards. The disposition of the sick child while at home, and the possibilities of neglect in cases where contagious diseases developed in such children, as well as giving them a warrant for returning to school, had not yet been fully provided for, but were in contemplation, and the truant officers might be brought into this service in making the system complete.

In the examination of the children in school every facility was extended to the doctor, and he, in turn, reached a satisfactory conclusion with the least possible delay or annoyance to any one. There being frequent need for looking into the children's throats, the inspector used a little piece of wood like those used by florists for labelling plants. These little pieces of wood were made for the Boston Board of Health out of clean pine, at a saw mill in New Hampshire, and cost the board one eighteenth of a cent each. One was used for each child and it was then burned. The thermometer was rarely needed. The medical inspector never undertook to give professional treatment in any case.

The total number of children examined in the year from November 1, 1894, to October 31, 1895, was 14,666; of these, 9,188 were found to be sick, 1,745 were sick enough to be sent home; of these, 437 had some infectious or contagious disease—diphtheria, 70; scarlet fever, 26; measles, 110; whooping-cough, 28; mumps, 43; lice, 66; itch, 42; congenital syphilis, 8; chicken-pox, 34.

These children were in their seats spreading contagious diseases among other children. The number of children saved from these diseases and possible death by timely discovery and isolation of the sick was, of course, beyond computation. The other diseases discovered, and for which the necessity for treatment was pointed out, were as follows: Abscesses, 33; adenoids, 116; anæmia, 41; bronchitis, 226; catarrh, 195; cellulitis, 13; chorea, 18; colds, 93; coughs, 26; coryza, 70; debility, 80; dermatitis, 31; diseases of the ear, 62; diseases of the eye, 592; eczema, 200; enlarged tonsils, 691; enlarged uvula, 11; epilepsy, 11; headache, 326; indigestion, 105; influenza, 15; laryngitis, 132; malaria, 20; nausea, 63; Pott's disease, 3; pharyngitis, 1,196; ringworm, 61; sore throat, 765; swollen glands, 111; tineæ, 28; amygdalitis, 2,269; ulcer, 16;

¹⁷*Boston Medical and Surgical Journal*, cvi, 1882, p. 331.

¹⁸*Boston Medical and Surgical Journal*, cxxiv, 1896, pp. 360-1.

wounds, 53; vaccination needed, 582; miscellaneous, 496.

Some of these diseases might be induced by, and aggravated and perpetuated by, the faulty method of seating children. The most striking thing, however, was the large number of acute or chronic diseases of the throat, 5,689; partly due to grave defects in school ventilation, heating, and cleanliness. If cultures had been made in all these cases many of them would probably have been found to show diphtheria bacilli.

There were 71,495 pupils and about 1,500 teachers in the Boston public schools, and 11,808 in the parochial schools. Under the stimulus of the daily medical attention, every teacher became more and more expert and desirous of detecting any existing illness among the children. Every parent felt that his child was less exposed to disease in school and less likely to be ill, without immediate and proper attention from teacher and physician, than at any previous time. It would be hard to find a field for medical inspection and supervision which presented equal facilities for detecting diseases among congregated bodies, or offering more encouraging results.

The same inspectors served as agents for the board of health in the control of contagious diseases treated at home. The board sent each morning to each medical inspector a list of cases of diphtheria and scarlet fever which had been reported during the previous twenty-four hours. Each medical officer selected the cases reported in his district, visited them to see that they were properly isolated at home, left a card for the attending physician, politely informing him of the official visit, and at once reported approval or disapproval of the isolation to the board of health for its action. If the patient was properly isolated, the officer placed a card on the door of the room to indicate the official designation of the room for the isolation of the patient. If the case was not properly isolated and such isolation could not be commanded at home, he reported such fact to the board, and the patient was at once ordered to the hospital. He made another visit to the patient in the question of discharge from isolation and again reported his conclusions to the board. If it was a case of diphtheria, a negative report from the laboratory to the board was necessary; and if it was a case of scarlet fever, desquamation must have ceased and the fact been certified to by the school inspector before such a patient could lawfully be released from isolation. The school inspector and agent of the board of health was indirectly responsible for the proper isolation of the patient at home, for causing the patient's removal to the hospital when necessary, and for the patient's release from isolation; in other words, the board was thus pro-

vided with trustworthy information upon which it could act for the best protection of the schools and the public against the spread of contagious diseases.

In the discussion of Dr. Durgin's paper, Dr. H. E. Marion said that one of the strongest arguments for the establishment of inspectors was the confidence and assurance it had given the public since its establishment. We had only to contrast the condition one year before, when every one was clamoring to have his child taken from school or to have the schools closed, with the present time when one heard nothing about it, although the number of cases of diphtheria was nearly as large as the year before, a fact, however, due to more exact diagnosis.

Mr. A. H. Kelly, master of the Lyman School, said that he thought this establishment of confidence in the community had led parents to send their children more readily to school now that they understood so fully the action which had been taken and was being daily taken by the board of health. The confidence which came to the masters and teachers was equally helpful to them. Just before the establishment of the medical inspectors there was much fear of contagion in the schools. There was unrest among the teachers. Whenever any sickness was reported among the classes the fear of spreading contagion was expressed. There was now a feeling of security on the part of teachers, principal, children, and parents. He remembered cases in which the prompt action of the medical inspector had prevented contagion from spreading to any degree. He was sorry to say that some families in his school district had no physician on whom to call; and in these cases the medical inspector had been very helpful to those families.

The *Report of the State Board of Health of Massachusetts* for 1896 (pages 870 and 871) states that the medical inspection of schools had been continued during the year with the same encouraging and satisfactory results as during the previous fourteen months. All pupils who had complained or who appeared to their teachers to be ill were examined by the visiting physicians and the teachers advised as to what should be done with such pupils. The teachers and visiting physicians had entered upon and pursued this work with surprising harmony. The search for infectious diseases in the schools during the year had been even greater, while the number of cases in this class found in 1896 was less than that of 1895. The same was true also of the other miscellaneous diseases. Considerable inquiry had been made by officials of other cities as to the methods and results of the work, and several cities, including New York, were preparing to adopt a similar system of inspection in their schools.

"The number of cases of diphtheria reported during the year was largely increased on account of the

larger number discovered among the pupils in the public schools by the medical inspectors of schools, and the bacteriological tests in the otherwise unrecognized cases. For the year ending December 31, 1896, the whole number of pupils examined was 8,964, and of this number, 1,156 were found to be too ill to remain in school. There were 267 cases of specific infectious diseases, 3,934 of oral and respiratory diseases, 66 of diseases of ear, 382 of eye, 628 of the skin, and 3,687 miscellaneous."

The city of Brookline, Mass. (*Ibid.*, p. 873) had been divided into six school districts, the number of schools in a district varying from five to seven, depending on the distance to be covered by the inspector in his daily round and upon the number of scholars in the schools visited. The following instructions were sent to each inspector and indicate the lines on which the inspections were conducted. The physician should examine only such children as were indicated to him by the teacher as having complained or appeared to be sick. He should recommend to the principal to send home immediately any child whom he might suspect of having any infectious disease. The physician should not recommend the employment of any particular physician or mode of treatment in any particular case. In case of near-sightedness or other trouble with the eyes, or deafness or other ear trouble, to which attention might be directed by the teacher, the physician-inspector should suggest that the principal recommend to the parents that the eyes or ears of the pupils be examined.

The number of cases of infectious diseases found in the Boston schools during 1897 was less than in previous years, as would be expected in the falling off in the total cases in the city. The attention and watchfulness of the inspectors, however, had continued, and with marked effect, not only in pointing out a number of cases and causes of sickness, but in creating a larger interest in the physical welfare of the school children. A very marked instance of the relief and comfort which this inspection service brought to the school children was shown where a wholesale inspection of the children's heads was made. Ten per cent. of the heads in some schools, up to over 80 per cent. in others, were found to be in need of treatment for lice or nits or both. Cards indicating the necessary treatment and care were issued to each one who needed them and the examinations were followed up.

The principal of one school wrote that the inspector who examined the children had done his work faithfully, patiently, and with tact. The examination was very popular with the parents. He had not found one parent who objected to having other children's heads examined. His judgment was that, except a very small minority indeed, the parents

wanted the examinations continued at proper intervals. Many children had felt mortified when found infected, but the movement was one of education. The children were much cleaner in other ways, and looked and felt better.

The number of examinations in 1897 was 12,777; number recommended to be sent home, 2,781; specific infectious diseases, 495; oral and respiratory diseases, 3,638; diseases of the ear, 91; of the eye, 489; of the skin, 2,775; miscellaneous diseases, 5,289. The specific infectious diseases were as follows: Diphtheria, 30; scarlet fever, 31; measles, 100; whooping-cough, 33; mumps, 207; chicken-pox, 62; influenza, 19; erysipelas, 1; syphilis, 3; tuberculosis, 5; malaria, 4. Of the skin diseases: lice, 2,197. (From *Twenty-sixth Annual Report of the Health Department*, Boston, for 1897, p. 38.)

The *Twenty-seventh Annual Report of the Health Department*, Boston, for 1898 (p. 53), stated that the number of pupils examined was 50,991; number recommended to be sent home, 7,896; specific infectious diseases, 275; oral and respiratory diseases, 2,722; diseases of the ear, 102; of the eye, 402; of the skin, 16,709; miscellaneous diseases, 2,912. The specific infectious diseases were: diphtheria, 8; scarlet fever, 16; measles, 26; whooping-cough, 96; mumps, 31; chicken-pox, 65; influenza, 20; syphilis, 1; tuberculosis, 9; malaria, 5; meningitis, 1.

The twenty-eighth annual report, for 1899 (p. 51), stated that the number of pupils examined was 17,449; recommended to be sent home, 2,583; specific infectious diseases, 468; oral and respiratory, 2,738; diseases of the ear, 144; of the eye, 434; of the skin, 3,252. Specific infectious diseases were: diphtheria, 13; scarlet fever, 5; measles, 85; whooping-cough, 134; mumps, 77; chicken-pox, 82; influenza, 61; erysipelas, 1; tuberculosis, 5; miscellaneous, 5.

Dr. Durgin, chairman of the board,¹⁹ remarked that the teacher knew her little flock; any abnormal condition in the child would readily be seen by her. Diseases were in our schools and existed to a degree that should engage the attention of school and health boards, and citizens who had the welfare of schools at heart. . . . He had had a mother come to his office with a certificate in her hand, while her child, who was with her, was actually peeling with small-pox; and she wanted to have it returned to school. There were doctors who gave certificates to children for readmission to school when the children were still in a condition to spread the disease. . . . In diphtheria cases two negative cultures were required before the child could return, and then in not less than two weeks after the second negative.

¹⁹The Sanitarian, New York, xlvii, 1901, p. 137.

Dr. E. M. Green, one of the medical inspectors of schools of Boston,²⁰ states that the inspectors are generally selected from the younger men in general practice, as they have more time to devote to the work. Many of them have been hospital internes. They should be tactful, discreet, interested in the work, and live near the schools assigned to them. As they have nothing to do with therapeutics, the homœopathic physician has his place here also. Women physicians ought to make good inspectors, especially in the schools for girls. A monthly report is required from each inspector; blank forms are issued for this purpose. The inspectors have formed an association which meets from time to time, and is presided over by the chairman of the board of health. The objects of the association are to make the members acquainted with each other, to establish an *esprit de corps*, to secure uniformity of decision on questions, and to discuss methods. Questions of drainage, plumbing, heating, and ventilation are not considered by these inspectors, but are referred for investigation to special experts of the board of health.

The inspector should always have with him a diphtheria culture outfit. If more than one contagious disease is found in a room, every child in the room should be examined by the inspector. The pine wood depressor is used, and each one only in the case of the one child. He advises to exclude children with tuberculosis. He states that in his inspection he has detected many cases of hitherto unsuspected chronic enlargement of the tonsils, or adenoids, and has had the teacher write a note to the parents urging treatment.

(To be continued.)

FROST-BITE OF THE CORNEA, DUE TO EXCESSIVE APPLICATION OF COLD IN THE TREATMENT OF MILD MUCOPURULENT CONJUNCTIVITIS IN THE NEW-BORN.

By E. L. MEIERHOF, M. D.,

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Two cases of clouding of the cornea have been observed by me, in infants of less than two weeks old, evidently due to the excessive application of cold where there was only a mild catarrhal conjunctivitis.

The first patient, an infant ten days old, had had a slight discharge on the fifth or sixth day after birth, and the family physician, fearing he had to deal with an incipient blennorrhagic ophthalmia, lost no time in applying the usual meas-

ures for combating the disease, among which was the constant application of ice-cold pledgets.

After the third day of the cold applications, both corneæ were observed to be slightly cloudy. At this time I was called in by the physician to see the case.

The child was small and well formed; its nourishment, however, had not as yet been satisfactory. The eyelids were closed, but not swollen, and were easily parted, exposing each eyeball freely; there was some thin mucopurulent secretion, but it was not very abundant. The inner surfaces of the lids were red, but not thickened; the bulbar portion of the conjunctiva was quite free from swelling or redness; but there was a slight clouding of the cornea.

How to account for the clouding, with such a mild inflammation, and in such a short time, was at first difficult, until it occurred to me that the nutrition of the corneal tissue might have been interfered with by the active application of cold, day and night, through lids that were not thickened.

Acting upon this idea, I ordered the suspension of the cold applications, and in place thereof advised a gentle heat applied at regular intervals by means of warm, moist cotton pads. In a few days I had the satisfaction of seeing the clouding disappear.

I assume that the heat gave the necessary support for the proper restoration of nutrition, and aided in the absorption of the necrotic exudate from the superficial layer of the cornea.

The observation of the second case was practically a repetition of the first one, except that the amount of the secretion seemed to be even less.

The value of ice in the early stages of ophthalmia neonatorum is universally recognized, but the experience with these two patients, where the over-zealous application of cold in cases of mild mucopurulent conjunctivitis in the new-born gave rise to such disturbances, should make one cautious, especially where there is little or no swelling of the lids to protect the cornea.

1140 MADISON AVENUE.

The Campaign against Mosquitoes in New Orleans.—The New Orleans Board of Health has apparently abandoned its efforts to destroy mosquitoes in the private cisterns of the city by keeping them covered with a layer of kerosene and has issued instructions that all private cisterns shall be covered with mosquito netting so as to prevent their being used as breeding places by mosquitoes. The water in the open gutters will be kept covered with oil.

²⁰Philadelphia Medical Journal, 1901, vii, pp. 350-2.

CHOLECYSTECTOMY FOR GALL STONES.*

By C. L. GIBSON, M. D.,

NEW YORK,

ATTENDING SURGEON TO ST. LUKE'S AND THE GENERAL MEMORIAL HOSPITALS.

The removal of the gall-bladder has been one of the resources of surgical therapeutics for twenty years, but it has only recently become a recognized method in the treatment of cholelithiasis. Even now its employment is not general, though its use is increasing among the surgeons with an extensive experience in this branch of surgery.

In this country it has been but little employed in the treatment of cholelithiasis, except as a matter of expediency. I think one reason for this infrequency is to be found in the class of cases of biliary surgery that come to operation; they are generally advanced, and the patients in wretched condition, permitting only the simplest measures of relief.

In asking for a consideration of the advantages of removing the gall-bladder, under certain favorable conditions, for the relief of cholelithiasis, I assume that the weight of evidence is in favor of these elementary propositions:

1. Gall-stones are the products of disease of the biliary passages, principally cholecystitis, and not their cause.

2. The mechanical disturbances produced by the impaction of gall-stones in the bile-ducts are almost invariably due to the presence of stones originating in the gall-bladder. It is granted that stones may occasionally be found in the hepatic and other ducts; but it is held that, with rare exceptions, they give rise to no disturbances, owing to their very small size.

If the foregoing is true, an individual with a predisposition to cholelithiasis should be the better for getting rid of his gall-bladder, provided this form of treatment is not attended with drawbacks disproportionate to the advantages to be gained, and provided, also, that this method can be proved to possess possibilities unattainable by any lesser means.

The specific claim, therefore, that I would make for cholecystectomy is that it should be considered as a *curative* operation, as it removes the cause of the disease. Certainly, it is in accordance with the line of treatment we consider the best for certain other conditions, such as pyosalpinx, and more especially appendicitis, which is not without a certain analogy to cholelithiasis.

It is not denied that simple drainage of the gall-bladder is a perfectly good operation, which fulfils the demands of the majority of cases. It has also been proved definitely that drainage readily tends to

sterilization of the gall-bladder. It is also acknowledged that the actual reformation of stones in the drained gall-bladder is exceedingly rare, and is usually due to some definite accident, such as a silk suture becoming the nucleus of a calculus. There is no guarantee, however, that the sterilization by drainage will persist, and that recurrence of the cholecystitis,—the essential disturbing element,—can be eliminated. Such disturbances do take place, and the consequent inflammatory reaction results in renewed adhesions to neighboring organs, provoking pain and secondary disturbances. Such, at least, is the belief of Hans Kehr, of Halberstadt, founded on an experience surpassing that of any other surgeon. He is a comparatively recent convert to the value of cholecystectomy, which he has performed considerably over one hundred times. He found remote disturbances in over seventeen per cent. of his drainage cases, but in only one per cent. after the removal of the offending organ. I feel quite sure that if our own cases in this country were followed more thoroughly we could increase the proportion.

The second important disadvantage overcome by cholecystectomy is the avoidance of long-continued biliary or mucous fistulæ following cholecystotomy. It has been held almost as an axiom that a persistent fistula after drainage means an incomplete operation, the path of the bile to the duodenum remaining obstructed. And while all this is quite true, very exceptionally a fistula does remain after irreproachable operative conditions; but what is more common, the fistula, while eventually closing, does so only after a period of time which brings discomfort to the patient and discomfiture to the surgeon.

There is a third and essential point in favor of extirpation which is of no less importance. The present time sees everywhere the trend of prophylaxis, the development of preventive medicine. The scientific world recognizes the steady increase of the ravages of malignant disease. It also acknowledges the influence of chronic tissue irritation as a predisposing element. The frequent inter-relation of gall-stones to cancer of the biliary passages is sufficiently established. One observer puts the proportion of patients, the subjects of biliary lithiasis, who subsequently have cancer, as high as fourteen per cent. May I not, therefore, justly assert that the removal of the gall-bladder as a prophylactic measure is a desirable addition?

These, then, are the main advantages upon which I would confidently rest my plea in favor of this operation. There are also minor points of usefulness, whose sum total considerably extends the indication for its performance. Among these may be mentioned:

*Read before the Medical Society of the State of New York, Oct. 15, 1901.

Obliteration of the cystic duct. In this condition cholecystectomy, rather than drainage, is certainly the logical operation.

Impaction of a calculus in the cystic duct, which cannot be dislodged into the gall-bladder. Excision of the gall-bladder and ligation of the duct after removal of the gall-bladder seems preferable to suture or separate drainage of the duct.

Hæmorrhagic conditions of the mucous membrane of the gall-bladder. The removal of the gall-bladder will act as a prophylaxis of the hæmorrhage, which sometimes occurs as a dangerous, usually fatal, post-operative complication.

As a matter of expediency, when the gall-bladder is so situated or so shrunken as to render satisfactory drainage impossible.

In phlegmonous, ulcerative, or gangrenous conditions, it is the only satisfactory operative treatment.

Notwithstanding the several advantages that I believe extirpation of the gall-bladder to possess, I would not wish to convey any impression that it may or should be used as a routine measure, nor will it ever displace simple cholecystotomy.

In general terms I would say that it is indicated when the anatomical and pathological conditions allow of its easy and speedy performance—that is, if it does not materially add to the technical difficulties or dangers of the operation.

The pathological gall-bladder, particularly the distended variety, is usually easier to remove than the normal, as the line of cleavage in the cellular tissue between it and the liver becomes better defined. In cases in which I have performed it, it has been a matter of the greatest simplicity and one requiring only a minute or two for its successful separation. When the gall-bladder is buried in adhesions, when inaccessibly situated, and the structures at its neck cannot be well defined, it is better left alone, unless there are special pressing indications for its removal.

My practice is usually to ligate the cystic duct *en masse*, applying, however, a separate ligature, if possible, to the cystic artery. The edges of the stump are brought in apposition by sutures. If a stone is to be extracted from the cystic duct, the latter is simply well anchored by clamps or fixation sutures before the gall-bladder is cut away. Gauze drainage is applied down to the stump.

This operation, however, is not to be undertaken if a complex or obscure condition of the biliary tract exists. It is so easy to overlook some of the complicating conditions, a stone in the retroduodenal portion of the duct, a tumor of the duodenal papilla, interstitial pancreatitis, or tumor of the pancreas, that one will abstain from employing it unless the situation is particularly favorable for thorough examination and there is no obstructive jaundice.

Occasionally one may be forced, as I have been, to remove the gall-bladder after extraction of a stone in the common duct. In such a case the duct should be drained, not sutured, or drained by anastomosing the common duct to the intestine, a procedure which I believe will come to be recognized as feasible and proper. Performed under the conditions stated and with a proper realization of its indications and limitations, the operation should not have any greater mortality than the older method of cholecystotomy. In Kehr's series of over one hundred cases, the mortality was only 3 + per cent.

The various objections to this procedure, with the possible exception that it is somewhat more of an operation, I do not entertain very seriously. The reservoir functions of the gall-bladder seem of doubtful value, and, according to comparative anatomy, somewhat accidental.

I entirely reject the opinion that the gall-bladder should be saved for fear, a second operation becoming necessary, a valuable or necessary guide to the common duct would thus be sacrificed. Actual experience has shown that the previously drained gall bladder is practically obliterated in a mass of adhesions. In a recent post mortem of one of my colleague's cases, the gall-bladder was unrecognizable, and was found only after a most prolonged search.

To sum up my position in regard to cholecystectomy for cholecystitis and cholelithiasis, I would say:

In properly selected cases it is an extremely simple and safe operation.

It is a curative operation, doing away with subsequent attacks of cholecystitis, and, more remotely, of renewed stone formation.

It eliminates the disagreeable possibilities of long-continued biliary and mucous fistulæ.

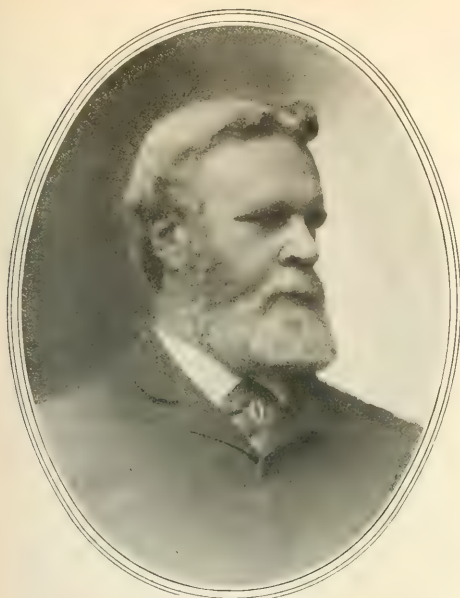
It is indicated in certain technical conditions, such as atrophic or (for drainage) inaccessible bladder, obliteration of the cystic duct, or impacted stone in the cystic duct, and in hæmorrhagic conditions of the gall-bladder.

It is a prophylactic measure against the development of carcinoma on the site of long-standing irritation.

It offers the prospect of a shorter and easier wound-healing and convalescence.

It is not to be employed indiscriminately, but has its proper limitations and contraindications.

The Homestead Physicians' Protective and Scientific Association held a meeting recently at which the annual election of officers resulted as follows: President, Dr. A. M. Barton; vice-president, Dr. C. C. Rinard; secretary, Dr. J. A. Doyle, and treasurer, Dr. J. M. McNeeley. Dr. Andrew Graydon and Dr. J. M. Bair were admitted to membership. The association now contains all the physicians in the borough but one.



DR. T. GAILLARD THOMAS.

FIFTY YEARS OF MEDICINE:
A RETROSPECT OF PROGRESS DURING
THE PAST HALF-CENTURY.*

By T. GAILLARD THOMAS, M. D., LL.D.,

NEW YORK.

DR. McLANE AND GENTLEMEN:

Some men are born egotists; some achieve egotism; and upon some egotism is thrust! In the name of simple justice I declare that if I score a record in this line to-night, the surpassing kindness of those who surround these tables is entirely to blame!

You entertain me at a most charming banquet, invite gentlemen whom princes would be proud to own as sponsors, to speak kindly of my past, and you make me happy by friendly glances which shall be forever engraved upon the tablets of my heart! Even this is by no means the full measure of your kindness to me. Deep down in the depths of the heart of every man of proper feeling there lurks the desire to have at the close of his career the approval of the fellows of his guild, be that guild a common trade or one of polite learning. You who have borne to me the relation of brother practitioners and have striven beside me shoulder to shoulder in the keen battle of life; and you, who as students have judged me as teacher, writer, and clinical lecturer, have to-night sealed my past career with the im-

primatur of your approval! Than this no act of yours could have conferred upon me more real pride and pleasure. Through the whole length of a laborious career which has now reached a half-century; in bright periods and in dark ones, in fair weather and in tempestuous, this approval has ever been the beacon light upon which mine eyes have rested, the prize for which I have striven. Without it all other success would have been like Dead Sea fruit in my hands, and distinction would have been like dross. Thanks to you, this night will, with its pleasant memories, be ever cherished as the proudest era of my existence!

To-night I feel like an old man who looks into the eyes of his sons and thrills with satisfaction and joy that he has still a hold upon their affections. As I look from face to face I see no strangers here; I see the faces of those whose presence in the college halls has filled me with ambition and urged me on to effort, whose attendance in the hospital wards has brought forth by their manifest interest the best that was in me.

As I stand here I look backward down the dim vista of fifty years and see the disembarkation of a young physician of twenty-one from a coasting schooner from South Carolina, without one acquaintance in this great city and with a purse no more plethoric than that which usually falls to the lot of the son of a clergyman of the Episcopal Church. It is he who now thanks you for celebrating his arrival at three score years and ten.

As I look I see dimly, like giants enveloped in a mist, the great physicians of the past—the tall, fine figure of the great Valentine Mott, with his classic features and beautiful face; the learned and eccentric John W. Francis; the courteous Delafield and the erratic Martyn Paine; later, the striking and attractive Willard Parker, John Murray Carnochan, and Alonzo Clark; and, later still, Van Buren, Markoe, Barker, Austin Flint, and the brilliant and accomplished John T. Metcalfe. All gone except the last, who, at the age of eighty-three years, lives in dignified retirement, surrounded by every blessing for which man can ask in his declining years!

And then my thoughts turn to men of my own period of life. Of these, there were ten young men who clustered as aspirants for place around the College of Physicians and Surgeons and the University Medical College. They were George T. Elliott, Donaghe, Sands, Draper, Bumstead, Agnew, Otis, Loomis, Budd, and myself. Of these ten, nine are gone, and I only remain to recall their names. Truly a half-century appears like a long time when estimated by those who have fallen during its passage.

But as I continue my retrospective glance more cheerful reminiscences come to my mind in connec-

*Spoken before a company of physicians assembled at a dinner given on Dr. Thomas's seventieth birthday, November 27, 1901.

tion with the wonderful changes which this period has wrought in the science and art of medicine. The science of medicine founded by Hippocrates in the little Greek island of Cos, 400 years before Christ, is now 2,300 years old! Did it ever occur to you that during the last half-century, the fifty years in which you and I have been vouchsafed the great privilege of living, there has been done for the advancement and growth of medicine more than was done in the 2,250 years which had preceded them? Think for a moment of the wonders which we have seen effected in and for medicine in that time! We have seen the "cellular pathology" of that most eminent of living physicians, Rudolf Virchow, proved true beyond question and made the basis of a grand and imposing superstructure. We have seen pain annihilated by anæsthesia, so that the human body could lend itself without sensation to the perfection of the surgeon's art; we have seen the vision of the physician so magnified in power as to penetrate the opaque walls of the body; and we have seen surgery, thus aided, lifted up from its lowly estate as a mechanic art and placed almost upon the level of an exact science. We have seen the primordial elements of disease, that bacterial host, invisible to the men of old, brought face to face with us by the miracle-working microscope; and by preventing their agency in the production of sepsis we have minimized the death-rate of surgical operations and almost stamped out puerperal fever. Working upon the same lines, we have succeeded in rendering impossible forever those appalling epidemics of the plague, yellow fever, and cholera—those pestilences which for our fathers "walked by darkness" in their gruesome work of decimating the nations of the earth! We have seen the entire field of gynecological surgery, the world over, revolutionized by the eminent labors of Marion Sims, our late associate; and we have seen practical medicine elevated and freed from previous doubt and uncertainty by the wonderful influence of clinical thermometry.

We have detected the true pathology of those obscure cases of so-called idiopathic peritonitis, which from the very dawn of time until our day have filled year by year, throughout the world, not thousands, but millions of graves, and we have experienced an honest pride in seeing a surgical remedy for appendicitis, their true cause, placed upon an enduring basis by McBurney, a son of New York.

Toward the close of the career of the great Napoleon, his followers designated three months "the hundred days of glory." Well may the votaries of medicine, in surveying the results of the last half-century, designate it our "fifty years of glory!" Remember that I have not been enumerating the great advances made in our noble art in modern times, but only giving examples of those which have

made glorious these last fifty years. Will you not, then, join me in grateful thanks that our destinies have been cast in the most glorious and productive half-century for medicine that the world has ever known?

The man who has devoted fifty years of his life to any one subject must have had fixed in his mind some deductions which, upon such an occasion as this, should be worthy of mention. I venture to cite only two. First, as I have grown old in the ranks of medicine the conviction has been borne in upon me with yearly increasing force that the noble art of healing, that art which the Saviour of the World delighted to practise, is destined to become in its full development, in spite of the flood of superstition and credulity which on all sides now assails it, one of the chief bulwarks of society; that the wonderful development which has marked the last half-century is a reliable harbinger of the future; and that the improved and developed medicine of that future will constitute one of the chief factors in shaping the progress and civilization of the world.

Do you ask me "What shall be the sign when these things shall be fulfilled?" I answer when in the Cabinet of the President of the United States there shall be a Secretary of Hygiene, whose function it shall be to avail his country of all that concerns the public health! Then will a vigorous quarantine guard every harbor of our land, an active police hunt down those who adulterate our food, and well-appointed laboratories in every State keep careful watch over the water and milk supplies which are now annually responsible for millions of deaths!

Second, my respect for my brethren of the medical profession throughout the world, from the prosperous professor whose home is a metropolis to the obscure practitioner who plies his arduous calling trudging the highways with much of labor and little of profit, has grown with my growth and strengthened with my strength. And the world at large would share my feelings if it knew, as I do, that any one of these men who was willing to barter honor for gold could by so doing exchange a life of labor and of small means for one of leisure and of luxury. In medicine the diploma imposes honor upon the physician, even as the gown does upon the priest; and glory be to God, the degradation of the one is as rare as is that of the other!

I must not detain you longer except for the purpose of thanking you for your exceeding kindness. But how am I to thank you for it, when its very magnitude makes me bankrupt in thanks? In a few moments I shall leave this brilliantly lighted hall and emerge into the darker streets below. When I do so, I shall take the initial steps that lead into that

decade of man's life which an inspired writer declares will surely be attended by "labor and sorrow!" Whether my journey in it be long or short, be assured that the memories of this night will serve to lighten that labor and give surcease to that sorrow!

My kind, good friends, my dear brothers, from the depths of my heart I thank you!

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the subsequent questions are as follows:

VII.—What is your method of preventing laceration of the perineum in labor? (Answers due not later than December 9, 1901.)

VIII.—In fractures of the upper third of the femur, how do you manage the tendency of the upper fragment to tilt forward? (Answers due not later than January 10, 1902.)

IX.—How do you treat gall-stone colic? (Answers due not later than February 10, 1902.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested that the answers be short, no one answer to contain more than six hundred words. We shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers as original communications.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted this month has been awarded to Dr. W. P. McIntosh, of the Marine-Hospital Service (stationed at Mobile, Ala.), whose paper appears below.

PRIZE ESSAY NO. VI.

HOW DO YOU USE QUININE FOR THE PREVENTION AND CURE OF MALARIAL DISEASE, AND WHAT OTHER TREATMENT DO YOU EMPLOY?

By W. P. MCINTOSH, M. D.,

MOBILE, ALABAMA.

SURGEON, UNITED STATES MARINE-HOSPITAL SERVICE.

Before speaking of the use of quinine in the prevention or cure of malaria it is necessary to say a few words about the cause and diagnosis, for these are intimately connected, as we shall find, with the treatment.

Malaria (bad air) is not a happy selection of a name for three forms of fever—tertian, quartan, and æstivo-autumnal—that we meet with in this

country. (The pernicious and congestive types are most often malignant infections with the tertian parasite.) Thayer¹ is of the opinion, however, that "clinical observations would lead us strongly to believe that the most frequent method of infection is through the respiratory tract"; this would certainly be from bad air. Most recent observers agree with Ross that certain insects are conveyors of the malarial parasite. Bignami,² in a review of an article by Manson, points out that almost all the conditions that are known to be conducive to malaria are at the same time favorable to the presence of certain suctorial insects, particularly the mosquito.

The prevention of malaria by drainage of the land and the use of wire screens and mosquito-bars is not germane to the subject of quinine, and must be omitted. "If every full-grown malarial parasite underwent segmentation and each new segment attacked a new red corpuscle, the infection would soon become pernicious and fatal; such is not the case, however, for many of the grown parasites do not reach the segmenting stage, and the segmenting bodies themselves are often taken up by the phagocytes." Many of the free spores die in the blood plasma, some of the parasites become crescents and ovoid bodies, and, unless taken up by the mosquito to undergo further development, or "complete their cycle in other organisms," are eliminated.

The use of the microscope in the diagnosis of malarial disease is certainly of the greatest assistance, and in arriving at the reason for giving the specific remedy, quinine, more successfully at one stage of the disease than at another, an intelligent study of the blood is almost absolutely necessary.

Spontaneous recovery from malarial infection occurs occasionally, but since such spontaneous cures do not give immunity from future attacks and are in themselves seldom complete, and as quinine would effect the same result much quicker, there can be no valid reason for withholding the specific remedy.

Marchiafava and Bignami³ have made some excellent observations regarding the prophylaxis of malarial disease. In speaking of quinine they say: "It is our belief that the method of giving quinine two or three times a week is the most efficacious. * * * But the prophylactic doses of quinine should vary according as the prevailing malaria is mild or grave."

In the opinion of the writer, quinine should be administered only when required, and then given in sufficient doses to destroy the parasites in the blood. Now, the incubative period of malaria is certainly not less than five days; therefore a person visiting a malarious district should take from seven to fifteen

¹Lectures on the Malarial Fevers, p. 93.

²Lancet, 1896.

³Thayer, loc. cit.

grains of quinine at bedtime on the fourth day, and he should repeat this every fourth or fifth day during his stay in the place or until cold weather puts a stop to the liability to infection; he should also sleep under a mosquito-bar and stay indoors after sundown.

Small daily doses of quinine, one to two grains, simply habituate the parasites to the presence of the drug in the blood, and they continue their evolution in its presence.⁴

I have had no experience with serum therapy in this disease. Celli and Santori tried many experiments with the blood of immune animals, as well as the blood of a horse subjected for a long period to intravenous injections of quinine. In both cases the serum was inert for human malaria. We must bear in mind the relative frequency of spontaneous cures when we wish to judge impartially of the effects of a remedy.

Treatment.—In quinine we possess one of the few specifics in medicine; properly administered, it will always cause the disappearance of the malarial hæmatozoa from the blood. It is known that the salts of quinine are absorbed by the blood and eliminated by the kidneys. According to Binz, this elimination begins in from fifteen to seventeen minutes after ingestion by the mouth, in from ten to fifteen minutes after hypodermic injections, and in ten minutes when introduced into a vein. Since Laveran's discovery of the malarial parasite, much study has been given to the action of quinine upon the hæmatozoa. Golgi, Antolisei, and Romanowski have all done valuable work.

Golgi's conclusions "that in tertian and quartan fevers quinine acts most markedly on the free young segments and sporulating bodies, less upon the more advanced forms, and least upon the young endoglobular forms" has been proved to be correct. If quinine is given several hours before a paroxysm, it will not prevent segmentation, but it will destroy the new parasites, the fresh set of segments. The new group of organisms being destroyed, the parasite disappears from the circulation (Thayer, *loc. cit.*).

In æstivo-autumnal fever, Marchiafava and Big-nami reached the conclusion that the maximum and most rapid action of the remedy was exercised on that phase of the extraglobular life which follows the complete segmentation. Quinine, they say, acts on the amœba during those phases of its life in which it absorbs nourishment and develops. The writer has observed an extraglobular parasite in the blood in persons suffering from malarial disease, particularly the tertian or irregular tertian type. The parasites alluded to are motile and have a dancing motion entirely independent of any Brownian move-

ments. They resemble nothing so much as chicken "mites." They are refractive, appearing at first dark-brown, but focusing gives them the appearance of hyaline bodies; occasionally they appear partly hyaline and partly brown. Sometimes two of these bodies are joined together and suddenly break apart and go dancing in different directions. Occasionally small clumps of these bodies are found, also a small clump with little branches like a small chain running from it. In the last case observed there was a large pigmented parasite with these bodies dancing near it; in other parts of the field the tertian parasite appeared in groups. I have observed these extracorporeal bodies in blood taken during the time the fever was light and during apyrexia, though they are more common in subacute cases. I have never found them except in malarial blood, and have never seen them described. Quinine causes their rapid disappearance from the blood. These bodies are *not* the so-called "blood dust."

From the foregoing observations it would appear to be proved that quinine exerts its parasiticide action most effectively at the time of segmentation and sporulation, and such is the fact. It is rational, then, to give the remedy so that the blood will contain the greatest percentage at this time. The chill generally occurs at the time of segmentation, but the writer finds that the disease is so modified that the chill is less severe when proper doses of quinine have been used; there is generally some fever, with a feeling of lassitude and aching of muscles and head, but the chill is modified and the next paroxysm which would follow is entirely prevented. Quinine should be preceded by a purgative, and one, too, which will unload the portal circulation. I often use sodium sulphate for this purpose, but my preference is for the following:

R Calomel..... 3 grains;
Powdered ipecac..... 1 grain;
Sodium bicarbonate, } each.... 6 grains.
Sodium phosphate, }

M. Divide into three powders.

S. One every hour, followed six hours after the last dose with a saline.

Then I begin with an acid solution of quinine, for I do not think quinine acts half so well in any other way as in solution, and the acid itself has a beneficial influence on the secreting organs as well as on the blood. In the treatment of severe types of malarial disease met with in the summer and fall, my practice is to give thirty grains of quinine a day for the first three days, then fifteen grains a day for the next three days. This I use in the tertian and quartan fevers:

⁴ *Essentials of Clinical Practice*, Vol. XIX.

℞ Quinine sulphate, } each.. 8 parts;
 Aromatic sulphuric acid, }
 Distilled water.....60 "

M.

S. Two teaspoonfuls three times a day for the first three days, and one teaspoonful three times a day for the next three days.

The bromides should be used in thirty-grain doses once or twice a day in case the patient complains of ringing in the ears or headache. This treatment cures malarial disease. After the sixth day the patient is put on the use of a tonic of iron, quinine, and glycerin:

℞ Quinine sulphate..... 2 parts;
 Tincture of chloride of iron..... 8 "
 Glycerin, enough to make.....100 "

M.

S. A teaspoonful three times a day.

I know of no better tonic for anæmic conditions, and the blood changes in malarial disease are profound. Six days after the last full dose of quinine was given, I administer two teaspoonfuls of the acid solution, and repeat this every sixth day for a month. Under this treatment relapses are extremely rare. I have seen none.

Quinine, when combined with camphor and capsicum, will cause the disappearance of the malarial parasite from the blood more quickly than quinine alone. When the solution of quinine is objectionable I prescribe:

℞ Quinine sulphate.....60 grains;
 Powdered camphor.....15 "
 Powdered capsicum.....30 "

M. Divide into fifteen capsules.

S. One or two capsules every four hours.

In the continued or remittent æstivo-autumnal fevers I put the patient on a prescription which I obtained from the *New York Medical Journal* some years ago. It was written by an English army surgeon while on duty in India. This gentleman stated that he had cured 90,000 cases, if I remember, and I can say that it is excellent. We have used it so long and so successfully that we call it the "malarial mixture." One thing, however, it must be compounded exactly as written and *not filtered*. When properly made, it looks like butter-milk, and must be shaken each time before using:

℞ Magnesium sulphate.....½ ounce;
 Solution of ammonium acetate... 1 "
 Quinine sulphate..... 4 grains;
 Camphor water, enough to make...11 ounces.

M.

S. Two tablespoonfuls every four hours, fever or no fever.

This prescription is good in any form of acute malarial disease, but I prefer it in cases in which the fever is continued or in which the patient cannot take full doses of quinine, on account of head symptoms. It produces a gentle perspiration, keeps the bowels open, reduces the fever, and nearly always effects a cure. It also has the decided advantage that it can be used with benefit when the physician, not having the means of exact diagnosis, is in doubt, at first, as to whether he is treating typhoid or malarial fever.

In the pernicious forms of malarial fever I use quinine hypodermically as follows:

℞ Quinine sulphate..... 8 grains;
 Aromatic sulphuric acid..... 8 drops;
 Distilled water.....30 "

M. Filter and inject deep into the muscles, having first boiled the syringe and needle and cleansed the parts. Repeat every four hours. I have never seen an abscess from this, and I prefer it to any other preparation of quinine.

I am at present treating a case of malarial hæmoglobinuria (ictero-hæmaturic fever) with the acid quinine solution, administered by the mouth, and the man is getting well. This is not a case in which quinine caused the hæmoglobinuria; on the contrary, it cured it; the hæmoglobin disappearing as soon as the patient was fully under the influence of the quinine solution.

The following application is a sure preventive of the bites of mosquitoes:

℞ Oil of citronella.....1 drachm;
 Alcohol.....1 ounce.

M. Shake. To be applied to exposed parts every hour or two.

THE VALUE OF OPIUM AS AN ADJUVANT.

Dr. P. M. Ashburn, first lieutenant and assistant surgeon in the army (stationed at Fort Assiniboine, Montana), writes as follows:

In order to contain the answer to this query within six hundred words⁵ I shall have to make most of my statements rather general and brief. Inasmuch as the question asks "What other remedies do you employ?" I take it to mean, as a whole, "What is your treatment of malarial disease?"

Prevention.—I have had very little experience in the use of quinine as a preventive of malarial disease, as my malarial practice has been almost entirely among soldiers, and with them it is a difficult matter, and almost impossible, to have medicine taken before the sickness comes on, and even after-

⁵It is requested, not required, that competing essays shall not exceed six hundred words, as well be seen by the printed instructions. —THE EDITOR.

ward if the medicine tastes bad and the patient is not under constant observation as in hospital. I have known a number of cases, though, in which it has been taken regularly, generally by officers, in doses of from two to four grains three times daily, and no malarial disease followed, though it was in highly malarious districts. As these takers used mosquito-nets at night, however, and I also used a mosquito-net and took no quinine, but still had no malarial infection, I do not attach much weight to the cases. At times, if in a highly malarious country and unable to procure protection from mosquitoes, I have used quinine as a prophylactic, but I should always consider protection from mosquitoes and such general hygienic measures as good food, good bedding, regular hours, avoidance of chilling, wetting, worry, etc., as of much greater importance. I will consider these hygienic features again in the treatment.

A competent observer and good medical officer who has used the prophylactic doses under the conditions of which I have just spoken, has informed me that, in his opinion, the quinine, so administered, did not so much prevent as mask the malarial infection, and that instead of well-marked paroxysms of chill, fever, and sweat he got low continued fevers, enlarged spleens, and symptoms of beginning cachexia in men previously well.

Persons who have had one paroxysm of ague are very apt to have others, *i. e.*, recurrences, if quinine is not taken. It is true that this may happen when quinine is taken, but it is certainly much less common. So often have I seen recurrences after long periods of freedom from them, from one to three months, coming on within a few days after the cessation of the use of quinine that I am personally convinced of its preventive power over the paroxysm. The cessation of the use of quinine for a day or two, combined with weakening from exposure, overwork, drunkenness, etc., will cause a recurrence nearly every time, at least in the tropical infections.

Cure.—My experience with simple tertians and quartans is not nearly so large as with the æstivo-autumnal, or tropical, form, but the cases seen since the beginning of 1898 probably number a few hundreds. These cases are usually very easily managed. The preliminary treatment is in nearly all cases the same. The patient should, for the best results, be put to bed; the bowels, if they are not loose, lightly cleared out with calomel; the stomach put at rest by a light or fluid diet. The blood examination should, if possible, be made within twenty-four hours of the first chill, the nearer to it the better, and before the administration of quinine, unless the symptoms are urgent. This will frequently, but not always, show the type of infection, but does not materially influence the first treatment,

if organisms are found and the type is not determined. If the organisms are not found, wait to get the temperature curve and determine the length of time to the next paroxysm. In simple tertian and quartan cases the rest in bed, light diet, and mild purgation will at times give the patient the chance to overcome the attack, and without quinine he will get well. It is not safe to trust to this, however, particularly in a soldier, for as soon as he returns to duty he may have a tour of guard in the rain, may go on a hard march, or may do something else to weaken him and bring on a recurrence. If the malarial organisms are found, begin treatment at once.

I think I have tried almost every method of administering quinine that is used: large doses, medium doses, small doses at regular intervals, large doses in anticipation of the chill, and large doses after the chill and in the interval by the mouth, by the rectum, and hypodermically. Each of these methods is useful, and I would use every one of them again if I thought it specially indicated. In my experience, the hypodermic injection of quinine is more disappointing than any other method of administration, in view of the claims made for it, principally because of the pain and swelling and the impossibility of getting in any considerable amount of the drug at one injection. In my opinion, a hypodermic injection of morphine is, as a rule, more valuable than one of quinine, even in pernicious malarial disease.

Taking into consideration the convenience of administration, the amount of quinine ingested, the good results, etc., I have come to make it the ordinary practice to administer five grains every four hours, by the mouth, in tablet, capsule, or solution, preferably the latter, with soldiers.

In mild cases, *i. e.*, simple tertians or quartans, this treatment will often cure the trouble at once and for all. At times one more paroxysm will occur, or in double infections two more, but after a week's treatment the patient is usually definitely cured.

In æstivo-autumnal, or tropical, malarial fever this is not so. It is true, the patient may have no more paroxysms or only one or two more at the time, but unless the treatment is continued for at least six months a paroxysm is apt to occur when the drug is withdrawn. Time and again I have seen this occur. The patient may continue the use of the drug for six weeks or two months, feel that he is well, and neglect it. Within a varying period, at times as long as a month, often within a week, and at times within a day or two, he will have a paroxysm which quickly shows him his mistake. This may even occur, though much less frequently, after six months' faithful and continuous treatment, but my rule is to inform the patient beginning treatment that he must continue it for *at least* six months,

though after the first month or two the administration may be reduced to three doses daily, to be increased with any return of symptoms.

I neglected to mention that I do not keep the patient cinchonized. Most soldiers do not notice any of the physiological symptoms from the doses I have mentioned. In case one does, I reduce the dose. A word as to other drugs. I have used quinine in combination with opium, alcohol, ipecac, arsenic, iron, strychnine, ginger, mercury, etc. I have used Warburg's tincture in place of it. As for the drugs used in conjunction with it, I think they have a value in combating special symptoms, or as tonics. As adjuvants in any other sense, I think they are almost if not quite useless.

As for Warburg's tincture, I have never seen a case in which it had more influence than quinine, or even as much, while quinine is, as a rule, more easily borne than this mixture, particularly in acid solution. My use of adjuvants has practically narrowed down to two drugs—opium and arsenic. Opium is of use in the beginning of the examination, preferably as Dover's powder in ten-grain doses for a man. It undoubtedly shortens the paroxysm and lessens the severity of all its manifestations, possibly excepting the sweat, which is a relief at any rate.

Morphine hypodermically has about the same effect and has it more promptly, but here the patient nearly always knows what he is taking, while with the Dover's powder he does not.

Antipyrine, acetanilide, and kindred products have much the same effect, but less constantly and in a less satisfactory manner and degree.

Opium is the most valuable of all adjuvants in the pernicious attacks, where it is best used hypodermically. These cases, comatose, algid, congestive, etc., must be treated symptomatically and specifically. The specific treatment consists in the introduction of large amounts of quinine, at least sixty grains and at times much more, by the best or by all routes, by the mouth, by the rectum, and hypodermically.

The symptomatic treatment will, of course, vary, but we must have in mind morphine, alcohol, ammonia, strychnine, ice-caps, ice-water enemata, hot-water bottles, hot baths, cold baths, and, rarely, venesection. Arsenic finds its valuable place in the treatment of what may well be called the chronic forms, the æstivo-autumnal, and cachexia. Here it is undoubtedly of great value, though a mistake is often made in considering it of more value than quinine. Its true and greatest value is as a tonic adjuvant to quinine. It is the best maker of red blood cells that we have, and as such is particularly indicated in these conditions where the red cells are the greatest sufferers. That it has any more specific value in malarial disease I greatly doubt. It may,

of course, appear to be the curative agent in some cases where quinine is not given. But iron, good food, rest, cod-liver oil, sea trips, etc., may be curative in the same way, *i. e.*, indirectly, through this tonic or alterative effects, enabling the body to collect its forces and direct a part of them to the combating of disease. Strychnine is also of great value at times, but probably in the same way.

Sea trips have a value so peculiar as to merit mention. In the first place, a short trip, of a week or ten days, is of hardly any value, but at times the reverse. In the second place, quinine should always be taken.

The fact that almost uniformly sea trips, even in tropical waters, bring on malarial paroxysms, considered in connection with the good later effects, if quinine is taken, would seem to justify the soldier's dictum that "salt air works it out." I regard the sea trip as the most effective test of the completeness of a cure that we have. Months after a chill and after any organisms have been found in the blood, a long sea trip may bring on a recurrence. If a patient can cross the Pacific without taking quinine and without having a chill, I regard him as definitively cured of malarial disease.

Of even greater value than arsenic and of almost as great value as quinine is the strict maintenance of hygienic conditions. These cannot be observed so well by soldiers campaigning as by civilians, but this very fact enables us to appreciate their importance. Anything that weakens or depresses a malarial patient greatly interferes with his cure. A forced march, an attack of indigestion or diarrhœa, alcoholic intoxication, exposure to wet or cold, insufficient food, bad news from home, etc., will in the majority of cases be found where a patient has a chill while taking quinine. So much is this true that I have known a company to get in from a two weeks' campaign with over half the men having chills, notwithstanding they all were taking quinine. Yet a few days' rest, particularly in hospital, would set them up again.

(To be continued.)

Therapeutical Notes.

Sulphur in Dysentery.—According to the *Gazzetta medica lombarda* for October 13th, Riehmann prescribes one of the following powders every four hours:

R Sublimated sulphur. 18 grains;
Dover's powder. 5 "
M. For one powder.

The action is said to be very prompt, and to be free from tendency to relapse or chronicity. The dejections speedily become normal and the number of powders must be decreased *pari passu* with the cessation of diarrhœa.

auscultation and percussion recognize how we forecast for him at that early stage of his progress a brilliant future. When he had earned for himself the reputation of excellence in general practice, he went on to win fame in the field of obstetrics, culminating in the device of laparo-elytrotomy. It is true that he had been anticipated in the conception, and it is also true that the operation has been superseded, but the world can never forget that he was the first to put it into execution, that he had planned it independently of any previous thinker, and that it played, during the brief period of its prominence, a conspicuous part in that evolution that has led up to the perfected Cæsarean operation of the present day.

But such an Alexander as Gaillard Thomas could not be bound down to obstetrics. He took his next step in surgical gynecology, and that proved so broad a domain that he has since adhered to it. He is right in according to Marion Sims the leading part in founding and building up the gynecology of our times, but his own work as an expounder has been so clear-cut that he must ever figure as among the foremost of its exponents. Many have differed with him on one point or another of doctrine or practice, but nobody has failed to feel his originality of thought or his precision of procedure. It is safe to say that the name of Gaillard Thomas will live in men's memories so long as medicine continues to be cultivated, and we are confident that, so long as he may be spared to us, he will never cease to feel a lively interest in the calling to which he devoted his life.

MEDICAL SKILL IN THE PHILIPPINES.

We learn from the *Army and Navy Journal* for November 9th that "officers in the Philippines needing surgical or other treatment which would come under the care of an experienced specialist in the United States are surprised at the splendid service of the medical department in the Philippines."

It seems that, among other things, General Funston, not recovering promptly from his third attack of appendicular inflammation, was taken to the First Reserve Hospital, at Manila, and there operated on. Some kidney complication ensued, but in spite of it, the general was safely tided over a successful operation. Moreover, "the surgical service of the First Reserve Hospital, Manila, is now in most excellent condition; in fact, better than it ever has been. Since July 1, 1901, there have been per-

formed 120 major operations, besides many minor cases, without a death. This record includes 16 appendicitis cases, 3 large aneurysms, 8 liver abscesses, and 24 hernia operations. It will thus be seen that as good results are obtained in the army service in the Philippines as in our most modern civil hospitals in the United States."

This is very gratifying, and quite as it should be. But we fail to understand why any surprise should be occasioned by these facts. The sooner the tendency to decry the powers and capacity of the military medical officers, and to compare them, not to their credit, with the civil practitioners, gives way before a fuller knowledge of the merits of a body of men who do honor to the profession to a degree fully recognized by their brethren in civil life, the better.

OUR SUBSCRIBERS' DISCUSSIONS.

We regret that we can give space, even in two consecutive numbers, to only about one fifth of the essays sent to us in the sixth competition. Many of those that we are unable to insert are well worthy of publication, and we must again ask contributors to be brief. A few of them have interpreted our standing request to that effect as one of the requirements of the competition. We are quite aware that it cannot always be complied with consistently with adequate treatment of the subject, and we have had no intention of positively restricting our essayists to six hundred words each, but we think that ordinarily that number of words will suffice if the writers will confine themselves strictly to their own experience and opinions and refrain from citing authors. Some of the essays we have had to cut down, but there have been others that did not readily admit of that treatment, and we have omitted to prune where continuity of statement would have had to be sacrificed in the pruning process. We ask for brevity, but no essay of real excellence will be thrown out on account of any reasonable degree of prolixity.

THE NEW VOLUME OF THE INDEX-CATALOGUE.

We have just received the sixth volume of the second series of the *Index-Catalogue of the Library of the Surgeon-General's Office, United States Army*. The portion of the vocabulary embraced in the volume begins with the letter G and ends with the name Hernette. The librarian, Major and Surgeon James C. Merrill, under whose supervision it has been prepared, is entitled to great praise for the continued excellence of the work. As time goes on, this great index is growing more and more indispensable to medical writers.

News Items.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending November 23, 1901:

Smallpox—United States.				
California.....	San Francisco.....	Nov. 3-10.....	1 case.	
Illinois.....	Chicago.....	Nov. 9-16.....	1 case.	
Indiana.....	Evansville.....	Nov. 9-16.....	2 cases.	
Kansas.....	Wichita.....	Nov. 9-16.....	5 cases.	
Kentucky.....	Lexington.....	Nov. 9-16.....	2 cases.	
Louisiana.....	New Orleans.....	Nov. 9-16.....	4 cases.	1 death.
Massachusetts.....	Boston.....	Nov. 9-16.....	28 cases.	3 deaths.
Michigan.....	Grand Rapids.....	Nov. 9-16.....	1 case.	
Nebraska.....	Omaha.....	Nov. 9-16.....	4 cases.	
New Jersey.....	Camden.....	Nov. 9-16.....	1 case.	
"	Newark.....	Nov. 9-16.....	18 cases.	1 death.
"	Passaic.....	Nov. 9-16.....	3 cases.	
New York.....	New York.....	Nov. 9-16.....	8 cases.	3 deaths.
Ohio.....	Cincinnati.....	Nov. 8-15.....	1 case.	
"	Zanesville.....	Sept. 3-Oct. 3.....	1 case.	
Pennsylvania.....	Lebanon.....	Nov. 3-17.....	6 cases.	
"	Norristown.....	Nov. 9-16.....	16 cases.	
"	Philadelphia.....	Nov. 9-16.....	50 cases.	12 deaths.
Rhode Island.....	Providence.....	Nov. 9-16.....	2 cases.	
Vermont.....	Burlington.....	Nov. 9-16.....	1 case.	

Smallpox—Foreign.				
Austria.....	Prague.....	Oct. 26-Nov. 2.....	2 cases.	
Belgium.....	Ghent.....	Oct. 19-Nov. 2.....		7 deaths.
Brazil.....	Rio de Janeiro.....	Oct. 12-19.....		50 deaths.
Canada.....	Quebec.....	Nov. 9-16.....	41 cases.	
"	St. John.....	Nov. 9-16.....	4 cases.	
Colombia.....	Cartagena.....	Oct. 19-Nov. 2.....	7 cases.	7 deaths.
"	Panama.....	Oct. 29-Nov. 5.....	100 cases.	
France.....	Paris.....	Oct. 19-Nov. 2.....		9 deaths.
Gt. Britain.....	Glasgow.....	Nov. 1-8.....	1 case.	
"	Liverpool.....	Oct. 19-26.....		1 death.
"	London.....	Oct. 26-Nov. 2.....	464 cases.	14 deaths.
India.....	Madras.....	Oct. 12-18.....		1 death.
Italy.....	Naples.....	Oct. 26-Nov. 2.....	28 cases.	1 death.
Nova Scotia.....	Halifax.....	Nov. 9-16.....	6 cases.	
Russia.....	Moscow.....	Oct. 19-26.....	2 cases.	2 deaths.
"	Odessa.....	Oct. 26-Nov. 2.....		2 deaths.
"	Warsaw.....	Oct. 12-19.....		2 deaths.
Spain.....	Corunna.....	Oct. 26-Nov. 2.....		1 death.

Yellow Fever.				
Brazil.....	Rio de Janeiro.....	Oct. 13-20.....		3 deaths.
Mexico.....	Vera Cruz.....	Nov. 2-9.....	24 cases.	10 deaths.
West Indies.....	Curacao.....	Oct. 26-Nov. 2.....	2 cases.	1 death.

Cholera.				
India.....	Bombay.....	Oct. 18-22.....		4 deaths.
"	Karachi.....	Oct. 12-18.....		60 deaths.
Straits Settlements.....	Singapore.....	Sept. 28-Oct. 5.....		2 deaths.

Plague—United States.				
California.....	San Francisco.....	Nov. 4.....	1 case.	1 death.

Plague—Insular.				
Philippine Islands.....	Manila.....	Sept. 14.....	3 cases.	

Plague—Foreign.				
Africa.....	Cape Colony.....	Oct. 12-19.....		4 deaths.
Brazil.....	Rio de Janeiro.....	Oct. 13-20.....		15 deaths.
China.....	Hongkong.....	Oct. 7.....	3 cases.	2 deaths.
Gt. Britain.....	Glasgow.....	Nov. 8.....	3 cases.	2 deaths.
"	Liverpool.....	Oct. 19-26.....	5 cases.	2 deaths.
India.....	Bombay.....	Oct. 15-22.....		179 deaths.
"	Karachi.....	Oct. 13-23.....	23 cases.	15 deaths.
Mauritius.....		Oct. 24.....	71 cases.	37 deaths.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending November 23, 1901:

DISEASES.	Week end'g Nov. 16		Week end'g Nov. 23	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	89	18	75	16
Scarlet fever.....	183	13	184	12
Cerebro-spinal meningitis.....	0	2	■	3
Measles.....	277	8	316	11
Diphtheria and croup.....	269	37	269	46
Small-pox.....	8	3	6	1
Tuberculosis.....	219	156	241	131

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending November 23, 1901:

- HENEBERGER, L. G., Medical Inspector. Commissioned medical inspector from October 28, 1901.
- LAW, H. L., Surgeon. Ordered to additional duty as examining surgeon at the Marine Recruiting Station, Buffalo.
- ROSS, JOHN W., Surgeon, retired. The leave of absence granted him is extended one month.
- VON WEDEKIND, L. L., Surgeon. Ordered to the Cincinnati, December 2, 1901.
- WILSON, H. D., Passed Assistant Surgeon. Detached from the Naval Hospital, Norfolk, Virginia, ordered home, and granted leave of absence for three months on account of sickness.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending November 23, 1901:

- ANDERSON, ROBERT A., Captain and Assistant Surgeon, is honorably discharged from the service of the United States.
- ASHFORD, BAILEY K., First Lieutenant and Assistant Surgeon. The leave of absence granted him is extended seven days.
- BINGHAM, J. E., Contract Surgeon, is granted leave of absence for one month.
- BOYCE, J. NEWTON, Contract Surgeon, is relieved from temporary duty at the Presidio, of San Francisco, and is assigned to temporary duty on the transport Meade during the voyage to the Philippine Islands. Upon arrival, he will report to the commanding general, Division of the Philippines, for instructions.
- CHIDESTER, WALTER C., Captain and Assistant Surgeon, is honorably discharged from the service of the United States Volunteers.
- EBERLE, HARRY A., Captain and Assistant Surgeon, is relieved from duty at Fort Totten, N. Y., and will report for duty to the commanding officer of the troops to be sent to the Philippine Islands on the transport Crook.
- FORD, CLYDE S., First Lieutenant and Assistant Surgeon, will report at the General Hospital, Washington Barracks, D. C., for duty.
- RAYMOND, HENRY I., Major and Surgeon, will report for duty to the commanding officer of the troops to be sent to the Philippine Islands on the transport Buford.
- STRONG, RICHARD P., First Lieutenant and Assistant Surgeon, will proceed to the Philippine Islands on the transport Meade.

Marine-Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the two weeks ending November 14, 1901:

- GLENNAN, A. H., Surgeon. Granted leave of absence for one month from November 16—November 4, 1901.
- WILLIAMS, L. L., Surgeon. Granted leave of absence for 3 days—November 1, 1901.
- MAGRUDER, G. M., Surgeon. Granted leave of absence for 15 days from November 15—November 7, 1901.
- McMULLEN, JOHN, Assistant Surgeon. Granted 4 days' extension of leave of absence—November 9, 1901. Upon being relieved by Assistant Surgeon C. C. Pierce, to proceed to Baltimore, Md., and report to the medical officer in command for duty and assignment to quarters—November 7, 1901.
- RUSSELL, H. C., Assistant Surgeon. Granted leave of absence for 2 days—November 2, 1901.
- MOORE, DUNLOP, Assistant Surgeon. Granted leave of absence for 6 days—November 7, 1901.

PIERCE, C. C., Assistant Surgeon. Relieved from duty at Key West, Fla., and directed to proceed to Mullet Key Quarantine and assume command of the service, relieving Assistant Surgeon John McMullen—November 7, 1901.

BROCK, G. H., Hospital Steward. Upon being relieved by Hospital Steward Edward Rogers, to proceed to Detroit, Mich., and report to the medical officer in command for duty and assignment to quarters—November 2, 1901.

ROGERS, EDWARD, Hospital Steward. Relieved from duty at Detroit, Mich., and directed to proceed to Cincinnati, Ohio, and report to medical officer in command for duty and assignment to quarters, relieving Hospital Steward G. H. Brock—November 2, 1901.

ROSENAU, M. J., Passed Assistant Surgeon. Detailed to represent the service at meeting of the New York State Association of Railroad Surgeons at New York, N. Y., November 16 and 17—November 13, 1901.

CUMMING, H. S., Passed Assistant Surgeon. Granted extension of leave of absence on account of sickness for 30 days from October 30—November 13, 1901.

GREENE, J. B., Passed Assistant Surgeon. Granted leave of absence for 21 days from November 23—November 14, 1901.

RUSSELL, H. G., Assistant Surgeon. Bureau letter of November 2, granting Assistant Surgeon Russell leave of absence for 2 days, amended so that said leave shall be for 7 days—November 9, 1901.

THORNBURY, F. J., Assistant Surgeon. To proceed to Port Townsend, Wash., and report to medical officer in command for temporary duty—November 12, 1901.

MOORE, DUNLOP, Assistant Surgeon. To proceed to Honolulu, T. H., and report to medical officer in command for duty—November 14, 1901.

HOLT, J. M., Assistant Surgeon. Relieved from duty at Chicago, Ill., and temporary duty at Cairo, Ill., and directed to proceed to St. Louis, Mo., and report to medical officer in command for duty and assignment to quarters—November 14, 1901.

BAHRENBURG, L. P. H., Assistant Surgeon. Relieved from duty at Honolulu, T. H., and directed to proceed to Chicago, Ill., and report to medical officer in command for duty and assignment to quarters—November 14, 1901.

GREGORY, V. D., Acting Assistant Surgeon. Granted leave of absence for 7 days from November 12—November 11, 1901.

TUTTLE, JAY, Acting Assistant Surgeon. Department letter of October 4, 1901, granting Acting Assistant Surgeon Tuttle leave of absence for 30 days, revoked—November 9, 1901.

GAHN, HENRY, Hospital Steward and Chemist. Granted leave of absence for 20 days from November 11—November 13, 1901.

BROCK, G. H., Hospital Steward. Granted leave of absence for 4 days from November 12—November 11, 1901.

RICHARDSON, S. W., Hospital Steward. Relieved from duty in connection with the Pan-American Exposition, and directed to report to medical officer in command at Buffalo, N. Y., for temporary duty—November 12, 1901.

SCOTT, E. B., Hospital Steward. Relieved from duty at Washington, D. C., and directed to proceed to Baltimore, Md., and report to medical officer in command for duty and assignment to quarters, relieving Hospital Steward F. A. Southard—November 8, 1901.

MASON, M. R., Hospital Steward. Upon expiration of leave of absence, to report to medical officer in command at San Francisco, Cal., for duty and assignment to quarters—November 14, 1901.

SOUTHARD, F. A., Hospital Steward. Upon being relieved by Hospital Steward E. B. Scott, to proceed to New York, N. Y., and report to medical officer in command for duty and assignment to quarters—November 8, 1901.

WATTERS, M. H., Hospital Steward. Relieved from duty at Washington, D. C., and directed to proceed to Boston, Mass., and report to medical officer in command for duty and assignment to quarters—November 11, 1901.

Society Meetings for the Coming Week:

MONDAY, December 2d.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vermont, Medical Association; Providence, Rhode Island, Medical Association; Hartford, Connecticut, Medical Society; South Pittsburgh, Pennsylvania, Medical Society; Chicago Medical Society.

TUESDAY, December 3d.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Maine, County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, December 4th.—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Maine, County Medical Society (Bangor); Bridgeport, Connecticut, Medical Association.

THURSDAY, December 5th.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, December 6th.—Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, December 7th.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Massachusetts, Medical Society.

One Untoward Effect of the Tetanus Cases in St. Louis, which was foreseen and predicted in these columns, has already made itself manifest in the higher death rate from diphtheria reported in Chicago and in several of the larger cities. This seems to be attributable to the indisposition of the patients to submit to treatment with antitoxine, for fear of being infected with tetanus.

Proposed Hospital for Contagious Diseases at Chicago.—A hospital for the exclusive treatment of the infectious diseases is being mooted in Chicago, and for the purpose of giving information and collecting funds an office has been opened in room 132 Hartford Building. A charter for such a hospital has already been obtained, but funds are lacking at present. The need for such an institution is regarded by physicians in Chicago as being evident.

Changes of Address.—Dr. L. Duncan Bulkley, to No. 531 Madison Avenue, New York; Dr. A. L. Goodman, to No. 263 West One Hundred and Thirtieth Street, New York; Dr. Ernest Potter Jenks, to No. 100 West One Hundred and Eighteenth Street, New York; Dr. Walter C. Klotz, to No. 126 West Forty-fifth Street, New York; Dr. George T. Mundorff, to No. 304 Second Avenue, New York; Dr. S. L. Price, to No. 705 Vallejo Street, San Francisco; Dr. A. A. Atha, to No. 46 Lexington Avenue, New York; Dr. Charles H. Burr, to No. 465 West One Hundred and Thirty-ninth Street, New York.

Donation for a Canadian Sanatorium.—At a recent meeting of the Medical Society of Montreal, it was officially announced that Lord Strathcona had decided to subscribe \$10,000 toward the erection of a sanatorium at Côte des Neiges.

Dr. E. A. de Schweinitz, dean of the Columbian University Medical School and director of the Biochemic Laboratory, U. S. Department of Agriculture, was recently elected to a corresponding membership of the Epidemiological Society of London, and also to a similar position to the Berlin Society for Combating Tuberculosis.

The Philadelphia County Medical Society recently elected the following officers: President, Dr. T. H. Fenton; first vice-president, Dr. F. W. Perkins; second vice-president, Dr. J. Chalmers Da Costa; secretary, Dr. E. R. Kirby; assistant secretary, Dr. W. S. Ray; treasurer, Dr. Sail Bower.

Clinical Lectures on Orthopædic Surgery.—Dr. Russell A. Hibbs, surgeon-in-chief of the New York Orthopædic Dispensary and Hospital, will give a course of clinical lectures on orthopædic surgery at the hospital, 126 East 59th Street, on Monday and Thursday afternoons at 5 o'clock, from December 2d to January 2d, inclusive. The course will be free to the medical profession and to students of medicine.

A Post-graduate Medical School for Milwaukee.—Articles of incorporation were filed on November 19th with the register of deeds of the Milwaukee Post-graduate Medical School and Polyclinic, with a capital stock of \$25,000. The incorporators are Dr. William H. Earles, Dr. Walter H. Nielson, and Dr. Warren B. Hill. This will be a new department to be added to the Milwaukee Medical School.

Removal of San Francisco's Chinatown.—Dr. J. M. Williamson, president of the San Francisco Board of Health, in his annual report to the mayor, recommends the total obliteration of Chinatown as it now exists as the only way to render it sanitary. He says that it should be depopulated, its buildings leveled by fire, its tunnels and cellars laid bare, and its inhabitants colonized on some distant portion of the peninsula, where every building should be constructed under strict municipal regulation and where every violation of sanitary law could be at once detected.

The Association of Military Surgeons of the United States.—The following have been named as members of a committee of arrangements for the meeting of the Association of Military Surgeons of the United States, to be held in Washington on June 5, 6, and 7, 1902: Major George Henderson, chairman, surgeon-general National Guard of the District of Columbia; Major Louis A. La Garde, surgeon, U. S. army, Soldiers' Home; Major W. C. Borden, surgeon, U. S. army, Washington Barracks; Major F. P. Reynolds, surgeon, U. S. volunteers, Washington Barracks;

Captain E. L. Munson, assistant surgeon, U. S. army, surgeon-general's office; Surgeon S. H. Dickson, U. S. navy, U. S. Marine Barracks; Assistant Surgeon L. L. Williams, U. S. Marine-Hospital Service, office of the supervising surgeon-general; Dr. George M. Kober, Dr. J. Ford Thompson, and Dr. Wallace Neff.

Obituary Notes.—Dr. Alexander Hughes Bennett, of London, widely known as a nerve specialist, died on November 1st at the comparatively early age of fifty-three. He wrote a good deal, especially on epilepsy and paralysis. His Practical Treatise on Electro-diagnosis in Diseases of the Nervous System is well known.

Another prominent London medical man passed away, also, on October 29th, in the person of Mr. Henry Spencer Smith, F. R. C. S. He was one of the original fellows of the college. He was secretary to the first government inquiry into the pathology and treatment of contagious diseases, and was a fellow and formerly a vice-president of the Royal Medico-Chirurgical Society of London. He was a frequent contributor to the medical journals and translated, among other works, Professor Schwann's work on *Microscopical Researches into the Accordance in the Structure and Growth of Animals and Plants*, which obtained for its author, in 1845, the award of the Copley Medal of the Royal Society of London.

The Dinner to Dr. T. Gaillard Thomas, which was given at Sherry's on November 21st, on the occasion of the seventieth anniversary of his birthday, was attended by a number of physicians. The speakers were Dr. Thomas himself, whose remarks are published in full in another column; Rev. Dr. Greer, rector of St. Bartholomew's Church; Dr. S. Weir Mitchell, of Philadelphia; Judge Henry E. Howland; Dr. W. H. Welch, of Baltimore, and Dr. G. C. Shattuck, of Boston. A very cordial note was read from Dr. Metcalfe, who regretted exceedingly his inability to be present. On the dais sat Dr. McLane, Dr. Stevens, Dr. Smith, Dr. E. G. Janeway, Dr. W. M. Polk, Dr. Charles W. Packard, Dr. A. Jacobi, Dr. W. H. Baker, of Boston, and Dr. W. W. Johnston, of Washington. Other physicians present were Dr. H. F. Walker, Dr. A. A. Smith, Dr. H. D. Nicoll, Dr. A. J. McCosh, Dr. G. Leferts, Dr. Adler, Dr. E. L. Keyes, Dr. C. Cleveland, Dr. J. D. Bryant, Dr. M. A. Starr, Dr. W. T. Bull, Dr. R. H. Derby, Dr. Gerster, Dr. Bates, Dr. Emmet Norton, Dr. E. L. Partridge, Dr. E. Gruening, and Dr. E. S. Bull.

Havana Free from Yellow Fever.—Major W. C. Gorgas, chief sanitary officer of Havana, in his official report for the month of October, directs attention to the fact that, whereas the month of October has for the past ten years been one of the severest months for yellow fever, the average number of deaths from that disease being 66.27, the minimum in 1899, 25 deaths, and the maximum, 240 in 1896, this year the month of October was passed without a single case of or single death from yellow fever. Last year there occurred in Havana 308 cases of yellow fever and

74 deaths from this disease. The only difference in conditions between last year and this is that, since February, all mosquitoes in the neighborhood of any focus of infection have been killed and all houses in which cases have occurred and all adjacent houses have been carefully disinfected. This marked improvement in regard to yellow fever is not confined to October, but is notable in every month since the warfare against mosquitoes was inaugurated. The yellow fever year may be considered as beginning on the 1st of April. Since 1889 there has been an average of 362.16 deaths during the six months beginning on that day. The maximum (in 1896) was 871, the minimum (in 1899) was 61. This year there have been no deaths from yellow fever during the six months ending November 1st. That the change cannot be due to improvement in general hygiene can be shown by the fact that the death rate for October, 1900, was 24.33 per thousand, and for 1901, 20.17. All the operations in Havana have been based upon the hypothesis that the mosquito is the only way by which the disease may be transmitted. No attention has been paid to the fomites or to the disinfection of clothing.

National and State Society Meetings for the Coming Month.—Seaboard Medical Association, Norfolk, Va., December 15th. President, Dr. J. E. Sebrell, Courtland, Va.; secretary, Dr. John R. Bagby, Newport News, Va. Western Surgical and Gynecological Association, Chicago, December 18th. President Dr. A. F. Jonas, Omaha, Neb.; secretary, Dr. George H. Simmons, Chicago. Indian Territory Medical Association, Muskogee, I. T., December 3d. President, Dr. George W. West, Eufaula, I. T.; secretary, Dr. Fred. S. Clinton, Tulsa, I. T.

Moving for the Union of the Two New York Medical Societies.—At the meeting of the Medical Society of the County of New York, held on the evening of November 25th, Dr. George B. Fowler, the retiring president, referred to the schism that had occurred in the ranks of the medical profession in this State many years ago, and said that he trusted that the day was near when there would be a general handshaking and agreement, and he hoped that the time was coming when the whole medical profession would be one. On the motion of Dr. D. B. St. John Roosa, the incoming president, Dr. Frank Van Fleet was empowered to appoint a committee of five to cooperate with a similar committee of the New York County Medical Association, should one be appointed, looking toward a union of the two societies.

Births, Marriages, and Deaths.

Died.

BELL.—In Kansas City, Missouri, on Tuesday, November 19th, Dr. Frank Bell, in the thirty-fifth year of his age.

BEDDOE.—In Penn Yan, New York, on Thursday, November 21st, Dr. Charles Beddoe, in the seventy-fifth year of his age.

DAY.—In Eau Claire, Wisconsin, on Tuesday, November 19th, Dr. D. W. Day, in the sixtieth year of his age.

PACETI.—In Baltimore, on Wednesday, November 20th, Dr. Louis B. Paceti.

WRIGHT.—In Brooklyn, on Friday, November 22d, Dr. William G. Wright, in the forty-ninth year of his age.

JACKSON.—In Kansas City, Missouri, on Friday, November 22d, Dr. James P. Jackson, in the fifty-seventh year of his age.

SNYDER.—In Troy, New York, on Tuesday, November 19th, Dr. William H. Snyder, in the eighty-seventh year of his age.

GRAHAM.—In Louisville, Kentucky, on Sunday, November 17th, Dr. T. Graham, in the eighty-first year of his age.

LOVATT.—In Florence, Kansas, on Saturday, November 24th, Dr. J. Hammond Lovatt, in the sixtieth year of his age.

ARNOLD.—In Pawtucket, R. I., on Friday, November 8th, Dr. Eugene Everett Arnold, in the thirty-fourth year of his age.

HARMANSON.—In Tasley, Virginia, on Friday, November 15th, Dr. C. L. Harmanson, in the forty-third year of his age.

SHAFFER.—In Ponca City, Indian Territory, on Thursday, November 14th, Dr. H. W. Shaffer.

TODD.—In Indianapolis, Indiana, on Saturday, November 16th, Dr. Luther L. Todd.

ASHURST.—In London, England, on Tuesday, November 12th, Dr. Samuel Ashurst, of Philadelphia.

HULL.—In Black Rock, on Wednesday, November 13th, Dr. Calvin Edwards Hull, in the eighty-fourth year of his age.

BARRON.—In Baltimore, on Wednesday, November 20th, Dr. Thomas F. Barron, in the fifty-eighth year of his age.

HARTT.—In Brooklyn, on Sunday, November 24th, Dr. John C. Hartt, in the fortieth year of his age.

O'REILLY.—In Bay St. Louis, Mississippi, on Wednesday, November 20th, Dr. Patrick S. O'Reilly, in the fifty-seventh year of his age.

Married.

SEGAR—BARTON.—In Warsaw, Virginia, on Monday, November 18th, Dr. H. Launcelot Segar and Miss Agnes Newton Barton.

PYLE—JARVIS.—In Jersey City, on Tuesday, November 19th, Dr. Wallace Pyle and Miss Ida Jarvis.

SCHNEE—WOODHILL.—In New York, on Thursday, November 21st, Dr. Henry Schnee and Miss Ada Woodhill.

LONG—SHOOK.—In Westernport, Maryland, on Wednesday, November 27th, Dr. Dayton J. Long and Miss Mabel H. Shook.

TUCKER—NORMAN.—In St. Joseph, Missouri, on Wednesday, November 20th, Dr. William Peyton Tucker, of Washington, D. C., and Miss Katherine E. Norman.

WAINWRIGHT—COLE.—In Kansas City, Missouri, on Thursday, November 21st, Dr. Charles Wainwright and Mrs. Ruby K. Cole.

HOLTON—DAVIS.—In Washington, D. C., on Wednesday, November 22d, Dr. James Clarence Holton and Miss Carrie L. Davis.

CAMMANN—SPENCER.—In New York, Tuesday, November 26th, Dr. Donald M. Cammann and Miss Sophie Edwards Spencer.

PALMER—KING.—In New York, on Tuesday, November 26th, Dr. George Bedford Palmer and Miss Mabel Elizabeth King.

BULLWINKEL—WEBER.—In Williamsburg, on Tuesday, November 26th, Dr. Edward Martin Bullwinkel and Miss Helene E. Weber.

DAVIDSON—APPS.—In New Orleans, on Tuesday, November 26th, Dr. Hugh Crawford Davidson and Miss Corinne Apps.

WELLINGTON—HYDE.—In Washington, on Wednesday, November 27th, Dr. J. R. Wellington and Miss Rebecca Hyde.

FALES—HOUSE.—In Washington, on Wednesday, November 27th, Dr. Warren Dexter Fales and Dr. Ella R. House.

Pith of Current Literature.

Medical Record, November 23, 1901.

Is Rabies a Specific Disease? By D. E. Salmon, D. V. M.—The author takes issue with Dr. Charles Winslow Dulles, who asserts that there is no such specific malady as hydrophobia.

Some Facts Learned in the Management of Typhoid Fever in Central West Virginia. By Dr. W. W. Golden.—The author looks upon the regulation of the diet as to kind and quantity as the most important part of the treatment of typhoid fever. He finds cow's milk to be the safest article of food in this disease, and, at the same time, fully sufficient. He believes the advice, given by competent authorities, to postpone a change from the milk-diet until eight or ten days of convalescence have passed, to be most excellent. It is safer and wiser to underfeed than to overfeed. With the daily use of an enema of saponified water, holding in emulsion one drachm of oil of turpentine, the distention of the intestine will hardly ever exceed the normal.

Rupture of the Urethra. A Report of Cases. By Dr. James R. Hayden.—When there is marked hæmorrhage with retention, or bloody urine associated with inability to enter the bladder with instruments; also if there is a fluctuating perineal tumor with, perhaps, a rise in temperature, perineal section and bladder drainage are indicated. In other cases, catheterization, irrigation, and urinary antiseptics, should be resorted to, and watch kept for the first sign of urinary extravasation, in which event external urethrotomy with vesical drainage should be resorted to. Partial suture of the urethra should be employed when the divided ends are widely separated. Complete suture is, in general, contra-indicated.

Operation for Caries of the Mastoid, Secondary Opening of the Lateral Sinus, and Ligation of the Internal Jugular Vein. By Dr. Julius Rosenstirn.

The Value of the Widal Reaction in the Diagnosis of Typhoid Fever in Children. By Dr. Milton Gershel.—In general, the facts concerning the Widal reaction in children are the same as those that hold true for adults. The reaction does not occur later in children than in adults, but somewhat earlier. The Widal test is of greater importance in children than in adults, owing to the frequent atypical character of the disease in the former, and the greater frequency of cases resembling pneumonia and meningitis. In eighty-four cases of typhoid in children, eighty-one gave a positive result. In one hundred and fifteen cases of other fevers, the positive reaction was never obtained.

A Case of Actinomycosis. By Dr. Leonard Weber.—From this and other records of this infectious disease, it would appear that the duration averages from eighteen months to two years; that no reliance should be placed on iodide

of potassium in trying to cure it; but a thorough operation should be done, wherever possible, so soon as the diagnosis has been made.

A Case of Multiple Unilateral Cranial Nerve Paralysis. By Dr. Philip King Brown.—In this case paralysis was complete in the first eight cranial nerves, with the possible exception of the fourth. By way of explanation the author suggests a diffuse bone sarcoma, such as has been found in a number of the small series of these cases already reported.

Hallucination of Snakes. By Dr. W. Moser.

A Personal Experience with Mushroom Poisoning. By Dr. E. A. Blount.

Case of Torsion of the Spermatic Cord. By Dr. A. B. Atherton.

Philadelphia Medical Journal, November 23, 1901.

Historical Note on Small-pox. By Dr. James Tyson.—The author notes the fact that inoculation of small-pox with a view to securing immunity from subsequent attacks, was introduced into England in 1718 by Lady Mary Wortley Montague, the wife of the British Ambassador to Turkey. It was, however, practised for centuries previous to this in China and other Asiatic countries. Jenner's Inquiry into the Causes and Effects of the Variolæ Vaccinæ, illustrated by four plates, was published in 1798, and, within a year or two, vaccination became general over the continent of Europe. Vaccination was introduced into the United States on July 8, 1800, by Benjamin Waterhouse, professor of physick at Harvard University, who vaccinated his own children. President Jefferson was instrumental in introducing vaccination into the Southern States.

The Characteristics of Genuine Vaccinia; Experience with Glycerinated Lymph and some Statistics of the Present Small-pox Epidemic. By Dr. William M. Welch and Dr. Jay F. Schamberg.—According to the experience of the authors, the *quality* of the vaccine scars is a far more reliable indication of the degree of protection than the quantity. A perfectly good vaccine cicatrix presents well-defined margins, is reticulated or foveolated, and looks as if it had been stamped into the skin with a sharply cut die. At the Philadelphia Municipal Hospital for Infectious Diseases, three hundred cases of small-pox have been treated since the beginning of the present year. Out of this number, not a single patient had been recently successfully vaccinated. The authors point out that, while Jenner insisted upon the use of the clear lymph of the vesicle, in the case of glycerinated lymph the entire lesion is curetted, bringing away lymph, vesicle walls, and broken-down epithelial tissue, all of which is made into a pulp and mixed with glycerin and water. The authors attribute cases of sore arms to this admixture of tissue débris.

Prophylaxis of Small-pox in Cities. By Dr. Richard A. Cleemann.—The author points to the fact that in Germany the law provides that every infant must be vaccinated before it is a year old, and every child in a public or private institution

must be revaccinated before it has attained its twelfth year. The author maintains, correctly, that, in this country, the State has a right to withhold certain privileges from those who do not accept special provisions made for the safety of the community. Consonant with this view a law has been passed prohibiting a child from attending a public school unless it has furnished a certificate of successful vaccination. This act should be extended to include all institutions, public or private, where children are received. Vaccination should be made a prerequisite to entrance into the civil service, the army, the navy, and the militia.

Technique of Vaccination. By Dr. Frederick A. Packard.—The author advises the use of glycerinized vaccine kept in hermetically sealed tubes, and the use of a special scarification. The ideal result of the scarification alone is simply a little pinkish or rosy moisture. It is improper to use any form of shield that absolutely prevents the radiation of heat from the skin in the immediate neighborhood. As soon as the vaccine material has produced a specific local lesion, the shield should be removed and the arm dressed with boric-acid ointment. The rational treatment in cases of "sore" arm is to surround the arm with an antiseptic poultice of gauze soaked in bichloride solution (one in three thousand).

Notes on the Small-pox Eruption; Its Clinical Features and Differential Diagnosis. By Dr. William Thomas Corlett.

Some Experiences with Blood Examinations. By Dr. John B. Deaver and Dr. Edward Kemp Moore.—The authors, while admitting the value of blood counts, demonstrate that it is possible to take so optimistic a view of them as not to see their inaccuracies and the limits of their usefulness.

The Supraorbital Reflex in Facial Paralysis. By Dr. Joseph Sailer.

The Present Status of the Bottini Operation. By Dr. Orville Horwitz.

The Surgery of Pulmonary Abscess, Gangrene, and Bronchiectasis Following Pneumonia. By Dr. Daniel N. Eisendrath. (*Concluded.*)

Medical News, November 23, 1901.

Traumatic Stricture of the Œsophagus. By Dr. F. E. Bunts.—Those strictures resulting from ulcerative processes are liable to be found in the lower third of the Œsophagus quite as frequently, or even more frequently, than in the upper third, while those due to mechanical injury, the most frequent of which is the swallowing of lye, are most liable to be found in the upper third. The convincing test is the Œsophageal bougie. The author says nothing of retrograde dilatation or of gastrostomy or gastrotomy in the treatment of these cicatricial strictures, because, in his experience, he has never found it necessary to resort to measures other than simple dilatation. Cases follow.

"What is the Use of Making a Diagnosis in Nervous Diseases, Since Nothing can be Done

Anyway?" By Dr. Theodore Diller.—A correct diagnosis in these cases can save meddlesome and useless treatment and needless expense. A correct diagnosis is of use, also, because some nervous diseases are curable, e. g., neuritis, brain abscess, myelitis, meningitis, etc. The one inexcusable blunder for a physician to make is to treat a patient, week after week, without making a diagnosis at all, or making the diagnosis of "some obscure nervous disease."

A Preliminary Note on the Sterilization of Catheters. A Bacteriological Study. By Dr. C. B. Nancrede and Dr. W. H. Hutchings.—Experiments by the authors demonstrate that an infected soft rubber catheter cannot be sterilized by boiling under four and one half minutes. Mechanical cleansing from all dried pus, coagulated blood, or mucus, will facilitate sterilization. Chemical sterilization, at best, only inhibits the growth of the germs. The experiments have not yet demonstrated that formaldehyde vapor will sterilize infected instruments in less than twenty-four hours. English web catheters can apparently be more easily sterilized by heat than can soft rubber catheters. All methods of sterilization should be continued for much longer periods than the minimum time required for destruction of germs in the laboratory.

Hygiene and Hygienic Legislation. By Dr. W. Scheppegrell.

On Primary Carcinoma of the Liver; Critical Observation and Contribution of Two New Cases. By Dr. Bindo de Vecchi and Dr. Guido Guerrini.

Note upon a Case of Pretended Expectoration of Myriapods. By Dr. Allen J. Smith.

American Medicine, November 23, 1901.

Experimental Yellow Fever at the Inoculation Station of the Sanitary Department of Havana, with a View to Producing Immunization. By Dr. John Guit  ras.—The complete control over the spread of yellow fever that the sanitary department of Havana has obtained this year by the enforcement of prophylactic measures based solely on the doctrine of the transmission of yellow fever by the mosquito, goes far to prove that there is no other channel of communication of the disease. A few sporadic cases have occurred, and some have been imported from the interior; but, in every instance, the propagation of the disease has been arrested. These results have been obtained by the systematic destruction of mosquitoes in every house where a case of yellow fever has presented itself. If this success is interrupted, the responsibility must fall upon the physician who conceals a case of the disease. At the time of writing (September), when the annual epidemic should have been at its height, there was but one case of yellow fever in the city of Havana. The author regrets to report that immunization on a large scale cannot be attained by the present methods without considerable risk to the individual. The risk, however, is less than that incurred when the disease is contracted by ordinary exposure.

A Case of Perforating Typhoid Ulcer; Laparotomy; Recovery. By Dr. William L. Rodman.—The author asserts that there is an analogy between traumatic and pathologic perforations of the intestines, not complete, it is true, but involving the same general surgical principles, and their treatment should be similar, viz., as early a laparotomy as is consistent with the existing shock. It is as much one's duty to operate in such conditions as it is to tie a bleeding blood vessel in hæmorrhage, and not depend upon the slim chance offered by Nature in the way of spontaneous arrest.

A New Constituent of Bone. By William J. Gies, M. S., Ph. D.—This newly discovered substance, osseomucoid, is practically the same as the mucoid in tendon, cartilage, and other connective tissues. It not only responds to the general proteid tests, but appears to have the same solubilities and precipitative reaction as the other connective-tissue mucoids, and yields the same large proportion of reducing substance on decomposition with mineral acids. The combustion equivalents also indicate a close chemical relationship of these glucoproteid products.

Ovarian Pregnancy. Is It an Explanation of Ovarian Hæmatomas? By Dr. W. Stone Scott.—According to the author, ovarian pregnancy is a proved possibility. The most natural consequence of the early death of the ovum in ovarian pregnancy is its gradual transformation into an ovarian cystic tumor; added to which, retrograde changes obscure its origin, and a hæmatoma is the final result.

Suggestions Concerning the Use of the Metric System in Prescription Writing. By Dr. Francis P. Morgan.—The author adduces the accuracy and the simplicity of the metric system in its favor, and urges that we go back to the beginning, and, with no more thought of grains and minims, think and figure solely in the terms and by the spirit of the metric system.

Annular Pancreas. By Dr. Theo. Tiekens.—The author considers annular pancreas as being of interest from a practical, as well as a pathological, standpoint, and that it should be taken into consideration in all obscure cases of tumor and obstruction at or near the pylorus.

Epidemic Meningitis—The History of an Outbreak. By Dr. James McKenty.

Journal of the American Medical Association, November 23, 1901.

The Non-surgical Treatment of Heterophoria. By Dr. George M. Gould.—The author believes that any operative treatment whatever, of heterophoria, is not only useless but bad, and he asserts that, in the vast majority of cases, heterophoria is an innervational affair; it depends upon errors of refraction, and proper spectacles are the principal and effective means of cure, with the aid of prism gymnastics in exophoria.

The Operative Treatment of Heterophoria. By Dr. G. C. Savage.

A Table of Ocular Extrinsic Paralyses. By Dr. Horace M. Starkey.

Mules' Operation. By Dr. Frank C. Todd.—The author believes that Mules's operation has found a permanent place in procedure, and that, as time goes on, the percentage of failures will decrease and it will be more universally performed. The following are the advantages: (1) Absence of tears and secretions; (2) development of orbit maintained; (3) absence of enophthalmus; (4) moisture of prothesis maintained; (5) mobility; (6) in general the satisfaction to the patient, because of natural appearance and consequent absence of self-consciousness, which is bound to make a vast difference in the success and happiness of the individual.

The Treatment of the Acute Psychoses in Private Practice. By Dr. C. Eugene Riggs.—The author considers the question of nutrition, in the acute insanities, of the greatest importance. Milk and eggs are the best nourishment. Full feeding is especially important in puerperal cases; it will quiet patients when hypnotics and sedatives prove utterly useless. If needs be, artificial feeding should be resorted to. Digestion of food is materially assisted by massage. A good iron preparation is usually advisable. Strychnine and whiskey are of great value in controlling excitement. Mechanical restraint is at times desirable. Too great care cannot be taken to avoid such an unfortunate contingency as suicide during convalescence. Under certain conditions, and in carefully selected cases, travel is a therapeutic measure of great importance.

The Psychoses of Chorea. By Dr. Harold N. Moyer.—The mental disturbance in chorea usually comes on after choreic movements, but it may precede them. The type is usually manicacal, though it may occasionally be melancholic or acutely delirious. Mental disturbances are commoner in older children; they are rarely observed before the twelfth year. Chorea that are accompanied by mental disturbances later in life are almost always accompanied by organic changes in the central nervous system. The prognosis is favorable when the mental disease accompanies the simple, acute chorea of Sydenham.

Mirror-writing and the Inverted Image. By Dr. Albert B. Hale and Dr. Sydney Kuh.—The authors give an ingenious explanation of mirror writing. The outer world is impressed upon the retina in an inverted image. It is only by experience laboriously acquired that we learn to interpret this image and to produce upright writing. The child and the feeble-minded, lacking this experience, reproduce the visual image in incorrect spacial relation, hence in mirror, or inverted, writing. The adult, suddenly deprived of this experience, is reduced to primitive conditions, and produces the same results as we see in the case of the child.

School Medical Inspection in Chicago. By Dr. William D. Byrne.

Two Different Ways in which Yellow Fever may be Transmitted by the Culex Mosquito—Stegomyia Tæniata. By Dr. Charles J. Finlay.

Treatment of Ringworm of the Scalp in Institutions. By Dr. Henry W. Stelwagon.

Boston Medical and Surgical Journal, November 21, 1901.

An Investigation of the Boston Ice Supply. By Dr. Hibbert Winslow Hill.—On theoretical grounds the danger of infection through ice is very small. Practically, and under the present conditions of the Boston supply, danger of infection through natural or artificial ice is almost nil. It is not greater than that involved in drinking the Boston tap water, and is certainly infinitely less than that involved in drinking milk. The bacteria present are, except in the extremely rare cases where typhoid bacilli may exist, practically harmless. "Dirt" is found in both natural and artificial ice, usually more abundant and in coarser particles in the former, finely divided in the latter. Artificial ice made from exhaust steam shows a slight oily scum at times after melting.

Lesions of the Bladder during Abdominal and Vaginal Hysterectomy. By Dr. Charles Greene Cumston.—The technique that the author has employed for closing bladder wounds is as follows: Two layers of sutures are employed, the first of which includes the mucous membrane alone; for this, fine catgut should be used. The second and superficial layer of sutures includes the muscle. If the bladder is deeply seated, and if the abdominal walls are very thick, the mucous membrane may first be united by interrupted sutures of fine catgut, but if the wound in the bladder is easily accessible a running suture is to be preferred. As to the superficial suture, it should always be done with a running Lembert's stitch. In some cases, especially if the wound in the bladder is a long one, these two layers of sutures may be reinforced by a third layer of Lembert's suture. If the bladder is opened during a vaginal hysterectomy, the best treatment is simply permanent drainage of the bladder. In only a very few cases has a vesico-vaginal fistula resulted from this treatment, but such a fistula will often close of itself. If it should not close after a number of months, operative intervention should be resorted to.

Suggestions for the Improvement of Training-schools for Nurses. I. Nurses Should Pay for their Training and be Taught by Paid Instructors. II. Nursing Should be Taught by Nurses, Medicine by Physicians. III. Nurses Should be Prepared for Private Nursing by Practice in Families Outside a Hospital, and by the Teaching of Nurses in Active Practice. IV. The Nurse's Training Should not be Exclusively Technical, but Should Include some Liberal Studies, such as Sociology, History, and Literature. By Dr. Richard C. Cabot.

Some Deductions Concerning Milk Modification. By Dr. R. C. MacDonald.

Rupture of the Urethra. By Dr. Arthur T. Cabot.—In cases of ruptured urethra, immediate perineal section should be practised. This procedure not only lessens the danger of urinary infiltration and abscess, but also, in a large proportion of cases, prevents the formation of close, intractable structures. In an early operation, the

search for the posterior end of the urethra is much easier than it is later. The hæmorrhage from the branches of the artery of the bulb serves as a guide to that end of the canal.

Probable Mediastinal Sarcoma with Secondary Adenitis. By Dr. H. F. Vickery.

British Medical Journal, November 16, 1901.

Idiopathic Dilatation of the Œsophagus. By Dr. J. Swain.—By idiopathic dilatation of the Œsophagus is meant a dilatation which exists without any obvious mechanical obstruction. It is rare, but its recognition as a cause of dysphagia is important. In a few cases there is a history of injury. It can be distinguished from a diverticulum by the fact that, when two differently colored fluids, such as coffee and water, are swallowed at an interval of an hour apart, the second fluid can be removed from the Œsophagus by means of a tube, when it will be found to free from mixture with the first fluid, which has previously passed into the stomach. But in the case of a diverticulum, the two fluids will be found to be mixed. The Röntgen rays, gastro-diaphany, and Œsophagoscopy have all been used as means of diagnosis. The chief symptom of Œsophageal dilatation is dysphagia, accompanied by pain and vomiting. The stomach tube usually passes readily into the stomach, which may be washed out; on withdrawing it a few inches, undigested food can be obtained from the Œsophagus. The normal deglutition sound is absent. The cases are of long duration, and operation is not called for so long as the patient's nutrition is maintained. Treatment is unsatisfactory; feeding with the stomach tube and electricity have both failed. Soft foods should alone be taken, and the dilated Œsophagus should be systematically washed out.

Successful Operation for Perforated Intestinal Ulceration in Typhoid Fever. By Dr. F. T. Heuston.—The author reports the case of a woman, aged thirty-four years, suffering from typhoid fever, in whom perforation of an intestinal ulcer took place when convalescence seemed to be well established. Operation was undertaken within twelve hours, the seat of perforation closed with a continuous silk suture, the abdominal cavity washed out with normal saline solution, and the patient made a rapid and uninterrupted recovery.

Two Cases of Post-operative Thrombosis of the Mesenteric Vessels Followed by Death. By A. E. Maylard, M. B.—The two cases in which the post-operative mesenteric thrombosis took place were as follows:

1. Gastro-jejunostomy for symptoms of pyloric obstruction. Death on the fourth day from thrombosis of the mesenteric vessels. 2. Excision of the left half of the thyroid gland; death three days later from thrombosis of the mesenteric vessels. Both cases were women between twenty-five and thirty years of age. On the third day after operation, the patients became excessively excitable and complained of abdominal pain. These symptoms became more marked, until the patients collapsed, and death took place

in twenty-four hours. The abdomen was not tender or rigid on palpation; the pulse was weak and rapid. The temperature was subnormal. At the autopsy, in each case the ileum was found to be of a purple color and necrotic; it was distended and contained blood. The mesenteric veins were thrombosed and numerous hæmorrhages were visible beneath the peritonæum.

On the Removal of Great Lengths of Intestine. By A. Blayney, M. B.—The author reports the case of a boy, aged ten years, who was run over by a heavy wagon, the wheels passing over the lumbar region. The intestines were extensively crushed, as was shown at the subsequent operation. The intestine removed at the operation consisted entirely of ileum, and was eight feet four and a half inches in length. The patient slowly recovered; his appetite became abnormally great, and he suffered from a tendency to looseness of the bowels, which has persisted. The author has collected from the literature thirty-three cases in which considerable lengths of small intestine have been removed. The lengths varied from three inches to twelve feet (Obalinski). In this last case the patient died in twenty-two hours. Of the cases ending in recovery, the greatest length removed was eleven feet (Ruggi). Of the thirty-three cases, nine quickly died; three died in a few months; and twenty-one cases recovered. Of these recovered cases, seven subsequently showed symptoms of intestinal disturbance (diarrhœa); in all of these seven, over six feet six inches of ileum had been removed. None of the remaining cases showed any intestinal disturbance, thus pointing to the conclusion that six feet of ileum (two hundred cubic centimetres) is the maximum length which should be removed in uncomplicated cases.

A Case of Intussusception in a Patient Aged Seventy-two; Laparotomy; Recovery. By C. C. Stead, M. B.

After-care of Cases which have been Operated upon for Perforation of the Stomach. By H. Gilford, F. R. C. S.

An Improved Incision in Laparotomy for the Prevention of Post-operative Hernia. By A. H. Buck, F. R. C. S.—The author holds that: (1) Division of aponeurosis without supporting muscle is bad, as is evidenced by the frequency of ventral hernia after such a procedure. (2) Division of muscle in the direction of the fibres cannot be satisfactory if it entails division of motor nerve fibres. 3. Nor can such division be satisfactory unless supported by other uninjured muscle or aponeurosis. Hence, the author has adopted the following method of incision: The skin, superficial fascia, and fat are carefully incised down to the anterior layer of the sheath of the rectus muscle. This anterior layer is next carefully divided about one inch from the inner margin of the muscle, the incision being as long as is necessary. Great care is taken not to injure the muscle fibres. The muscle is next carefully enucleated outward from its sheath, and held out of the way, while an incision is made in the posterior layer of the sheath, and the operation is

proceeded with. The operation being completed, the posterior layer of the sheath is sutured, the muscle allowed to slide back into place, and the anterior layer sutured, together with the fascia and skin. In this way the body of the muscle comes to lie directly over the sutured wound and protects it.

Case of Congenital Hydronephrosis; Nephrotomy and Drainage; Recovery. By J. T. Shurlaw, M. B.

Bilocular Intrapelvic and Scrotal Hydrocele. By J. L. Firth, F. R. C. S.

A Case of Excision of the Vesiculæ Seminales for Primary Tuberculous Disease. By J. F. Hodgson, M. B.

The Use of a Bag Pervious to Air in Ether Anæsthesia. By Dr. W. McG. Young.

Method of Preparing Sterilized Catgut. By C. A. Ball, M. B.—The author winds his catgut on a reel in a single, smooth, even layer, the various strands being carefully knotted together to prevent slipping. The reel is placed in a five-per-cent. solution of formaldehyde for twenty-four hours; it is then thoroughly washed in cold water. It is next dropped into boiling water, where it remains ten minutes. Lastly, it is placed in the following solution: Mercury perchloride, one part; boiled glycerin, two hundred and fifty parts; methylated spirit, one thousand parts. The glycerin and spirit dehydrate the gut, the former rendering it pliable. The mercury perchloride impregnates the gut, swollen by boiling, with an antiseptic, and hardens it enough to prevent its twisting in the tissues. Such gut is strong, pliable, absorbable, and sterile.

Lancet, November 16, 1901.

Twenty-five Years' Experience of Urinary Surgery in England. By G. B. Browne.—(*The Harveian Lectures.*)—The author begins his lectures with the consideration of the question of urinary fever. He believes urinary fever to be at its outset purely a suppression of urine, varying from merely transitory to the most complete and absolute; this suppression being due to the inhibition of the kidney from urethral shock. Urinary fever never occurs in women, or children of either sex. While it may undoubtedly run on and develop into septicism and even suppuration of the kidney, it is not, primarily, blood poisoning. The author next takes up the various operations performed for stone in the bladder: Perineal lithotomy, lithotrixy, litholapaxy, and suprapubic lithotomy. He calls attention to the good work done by Sir Henry Thompson and Bigelow, and to the value of Clover's various inventions. Perineal lithotomy he looks upon as obsolete. Litholapaxy, by which he means the washing out of stones without crushing, is the simplest and safest procedure, and should be tried in all cases where the stone is small. Lithotrixy at a single sitting is the operation to be performed in all uncomplicated cases of stone in the bladder; but, with large stones in elderly and feeble men, particularly when there has been long-standing

prostatic disease, suprapubic lithotomy should be preferred. Still it is often justifiable to undertake lithotripsy, even when all the conditions favorable to lithotripsy are not present. (*End of Lecture I.*)

The Administration of Anæsthetics in Operations about the Mouth, Nose, and Throat. By R. W. Lloyd, M. R. C. S.—The author recommends the use of gas in operations of very short duration, such as the removal of one tonsil, etc. Gas, followed by ether, is best in cases of adenoid disease. Where the operation is a long one, gas should be used first, then ether, and finally chloroform throughout the operation. Chloroform is best given by means of a Junker's apparatus, with the tube held in the mouth or running through the side of the mouth gag. In conclusion, the author's advice is as follows: Avoid danger and complications by inducing only a moderate depth of anæsthesia. By favorable position and sponging, if required, facilitate the removal of blood from the neighborhood of the air passages. By holding forward, on both sides if necessary, the lower jaw, this manœuvre will tend to prevent or relieve obstruction of the glottis, which may have arisen from falling back of the epiglottis and the tongue. Should difficulties arise, discontinue the anæsthetic and assure yourself on the above points; notice also the state of the complexion, respiration, pupil, and pulse. If artificial respiration is necessary, take care to have the tongue well pulled out, and perform it slowly. Should laryngotomy have been performed, there will be no need to pull forward the tongue.

Impressions about Chloroform and Ether. By Sir W. M. Banks.—Chloroform is infinitely more dangerous than ether; it is a depressant, while ether is a stimulant. As the inhalation of chloroform goes on, the pulse weakens and the face pales. With ether the pulse becomes quick and full and the face congested. A safe axiom to follow is "Plenty of air, plenty of anæsthetic." While the anæsthetic should not be used drop by drop, yet it should not be used to excess. The great secret is to keep the patient on the balance; just on the point of coming out. Steady administration of chloroform where there is no need for it, is the greatest of mistakes. The patient is literally poisoned, and even when rescued from collapse, remains for hours in a dangerous condition. A dangerous time in the giving of chloroform, is the period of struggling. Let the patient sit up and get a little air, but keep at him with the anæsthetic; in a little while he will go under and sink quietly back. The great dangers of chloroform are (1) absolute overdosing of the patient when there is no necessity for it; (2) an omission to allow the patient to be constantly and freely getting an abundance of air into his lungs; and (3), violent repression during the stage of excitement. With regard to ether, the great point is to keep the larynx free from frothy, sticky mucus. Ether is neither so pleasant to take nor so easy to give, as chloroform, but it is safer. In certain rectal and urethral cases chloroform must be used, as ether will not subdue the muscular action. More people are sick under ether, but

the worst cases of sickness are due to chloroform. Galvanism is not of the slightest use as a method of revival. Silvester's method of artificial respiration, hypodermic injection of stimulants, slapping with a wet towel—these are the best means. With ether, mop out the throat and larynx, and get the patient to vomit. Rubbing a rough towel vigorously up and down over the patient's mouth and nose, is often most effectual in reviving him. The simpler the apparatus the better. The chloroform mask, and Allis's inhaler are to be preferred; the complicated machines with stopcocks, etc., are not recommended. A little neat brandy, given just before an operation, is often excellent. No bronchitic or asthmatic subject should be given ether. Patients with valvular heart disease usually stand anæsthetics well, very well; the danger is where there is dilatation or fatty degeneration. Physiological research has not, as yet, contributed, and is not likely to contribute, to a practical knowledge of the safest way to administer chloroform and ether.

Ulceration of the Œsophagus and Stomach Due to Swallowing Strong Hydrochloric Acid; Lessons of Treatment Deduced from Three Cases. By C. B. Keetley, F. R. C. S.—The author reports three cases of poisoning with strong hydrochloric acid. In the first case Loreta's operation was performed for enormous dilatation of the stomach, with complete relief, and recovery of flesh and strength. The second case was one of suicidal poisoning; the abdomen was opened, but before the stomach could be incised, the patient collapsed. In the third case, also one of suicidal poisoning, gastro-enterostomy with Murphy's button was performed for stricture of the Œsophagus and the pylorus. The patient was relieved, but died six weeks later, of pneumonia. The author concludes that, in cases of poisoning by the more powerful corrosive acids, surgical intervention should be almost immediate. Gastrostomy should be performed, and the stomach washed out and drained through the wound. Should pyloric contraction take place, gastroenterostomy is easily and readily performed. Feeding by the mouth should be absolutely interdicted for several weeks at least. A tube should be passed through the wound, through the pylorus, and into the jejunum, and the food introduced through this.

Notes of a Severe and Long-standing Case of Lupus Treated by the Application of the X Rays. By Dr. G. H. Rodman. (*See next article.*)

A Case of Lupus Vulgaris Treated by Exposure to X Rays. By Dr. T. C. Squance.—In both the cases of lupus here reported, the application of the x rays apparently brought about complete cure. The articles are accompanied by photographs "before and after," which certainly speak well for the efficiency of the mode of treatment.

Rotation of the Forearm. By Dr. R. J. Anderson.

On a New Method of Preserving Museum Specimens. By H. Galt, M. B.—The author strongly recommends the use of the following so-

lution for the preservation of museum specimens: Common salt, five ounces; potassium nitrate, one ounce; chloral hydrate, one ounce; water, one hundred ounces. This solution is cheap, it is simple to use, it prevents bleaching by the sunlight, it preserves the color of specimens, it is non-volatile, non-poisonous, and the shrinking of the specimens kept in it is very slight.

Preliminary treatment of the specimens is the same as in the old methods.

Gazette hebdomadaire de médecine et de chirurgie,
October 6, 1901.

Treatment of Cerebral Arterio-sclerosis with Inorganic Serums.—M. Léopold-Lévi reports some remarkable results from the subcutaneous injection of Trunecek's artificial serum in cases of cerebral arterio-sclerosis with apoplexy and its multiple complications. The serum contains:

Sodium sulphate.	6.6 grains;
Sodium chloride.	75 "
Sodium phosphate.	2.25 "
Sodium carbonate.	3.1 "
Potassium sulphate.	6 "
Distilled water, sufficient to make.	1,500 "

All the patients to whom this was given had acid urine at the time, which, however, soon became alkaline or neutral. The injections are made daily or on alternate days, the dose being from fifteen to thirty grains of the serum. The paralyses were, of course, not relieved materially, but consciousness, memory, etc., were restored much more rapidly than under the usual methods of treatment.

Berliner klinische Wochenschrift, October 21, 1901.

Physostigmine in Paresis of the Intestine.—Professor von Noorden reports a number of cases in which he has used this drug in doses of from $\frac{1}{120}$ th to $\frac{1}{80}$ th of a grain for the relief of typhinites in many different intestinal disorders. His results have been excellent and he has observed no evil sequelæ. He gives the drug by mouth three times daily.

Subacute Heart Weakness.—Dr. C. A. Ewald narrates the case of a man who suddenly gave evidence of failure of compensation of the heart without a preexisting cardiac lesion. This lasted for two years, since which time the patient has been perfectly well. Speaking of cardiac therapy, the author emphasizes the removal from the body of fluids which impede the action of the heart, before the cardiac treatment proper is begun. Morphine is a valuable drug in heart disease, and digitalis comes next, although its use must be stopped from time to time.

Pulmonary Tuberculosis and Sanatoria. By Dr. Aufrecht.

The Westphal-Piltz Pupillary Phenomenon. By Dr. F. Schanz.

Riforma medica, September 9, 1901.

A Contribution to the Diagnosis and Treatment of Biliary Colic Depending upon Adhesive Pericholecystitis. By Dr. Ferdinando Gangitano.—The author says that, clinically, biliary colic may depend upon one of three conditions: (a) Gall-stones in the biliary passages; (b) gall-stones complicated by adhesions of the gall-bladder; and (c) adhesions of the gall-bladder without gall-stones. The latter form is the subject of this paper. It differs from the biliary colics due to stones, in the fact that there is no accompanying jaundice, the gall-bladder does not swell up, and there is a constant sensation of weight in the right hypochondriac region. Therefore, in patients who suffer at various intervals from attacks of biliary colic unaccompanied by fever, jaundice, and increase in volume of the liver or gall-bladder, and in whom the examination of the fæces does not show any gall-stones, we may suspect the presence of adhesion around the gall-bladder, especially if there have been, in the past, inflammatory affections of some abdominal organ. In such cases the only rational treatment is an operation, and this specially indicated when the painful attacks, by their frequency and severity, render the patient's life miserable. The adhesions must be carefully separated and the affected parts of the gall-bladder covered with peritonæum, reserving ablation of the gall-bladder for cases in which this organ is hopelessly diseased.

Vratch, October 13, (October 25th, New Style), 1901.

Spondylitis Deformans. By Dr. A. I. Koudrichsheff.—The author reports a case of spondylitis deformans, and discusses some moot points concerning the pathology of this affection. He believes that the disease in question is one of the spinal column itself, and that, while there are cases of spinal cord disease which are accompanied by changes in the spine resembling those of the spondylitis deformans, the spinal cord is frequently accused of causing this affection, without any reason. The features of the cases, such as limitation of motion, partial or complete, the kyphosis, the inconstant involvement of the spinal nerve roots, the marked atrophy of the corresponding groups of muscles, the partial or complete ankylosis of the chest, the frequent involvement of the other muscles, etc., all point to the fact that the cases described by various authors under various names, including the type of Bechterieff, and the "spondylitis rhizomelica" of Struempell-Marie, are examples of the same affection. According to Senator, the differences in the clinical picture are caused only by the region of the spine affected and the degree of involvement of the joints, as well as by the presence or absence of nervous symptoms. Regarding the rôle of exposure to cold and traumatism as causes of this affection, these factors are mentioned in connection with all the types of cases. The spine may be bent in various ways as a result of ankylosis, in some cases there is kyphosis, in others, lordosis, according to the rapidity of the process.

On Relative Insufficiency of the Tricuspid Valve. By Dr. A. F. Eckkert.—Relative insufficiency of the tricuspid means that the valve itself is not altered organically, but that, as a result of hypertrophy, and at a certain stage of the disease, the weakened right ventricle of the heart, is dilated, the papillary muscles cease to contract regularly, and the valve under these conditions cannot completely close the ventricle, so that during systole there is a regurgitation into the right auricle. (*To be concluded.*)

On Catheterization of the Ureters; Its Use in Tuberculosis of the Kidneys, and in Pyelitis Caused by the Presence of Renal Calculi. By Dr. I. E. Hagen-Thorn.—(*Continued.*)—The author reports five cases of kidney disease in which ureteral catheterization was used with advantage. Of these, four were cases of renal tuberculosis, and one of calculi in the pelvis. His conclusions are as follows: Tuberculosis of the kidney is apparently more frequent than is generally supposed. It is often overlooked, and the symptoms of tuberculosis of the kidney—a cloudy urine and irregularity in urination—are often mistaken for cystitis. If blood appears in the urine, together with the other symptoms, it constitutes a pathognomonic sign, though not a constant one. Very often, tubercle bacilli are not found in the urine of such patients. According to the statistics of Albarran, Israel, Koenig, and other observers, primary tuberculosis is not rare in the kidney, and in many cases only one of the kidneys is involved. The removal of such kidneys is a very useful operation. It is necessary, in order to determine whether the other kidney is healthy, to examine the urine from the opposite organ, and to test its capacity for work. This can only be done by catheterizing the ureters.

Catheterization of the ureters is useful as a diagnostic, as well as a therapeutic, measure. It enables us to examine both kidneys when the affection of one kidney masks the diseased condition of the other. It has been used successfully in many cases in which it was desired to prevent the wounding of a ureter. As a therapeutic measure it has been used in order to relieve retention of urine in the pelvis of the kidney; in order to remove or dislodge stones from the pelvis of the kidney (Kolisher, Casper); in operations on the ureters; in the treatment of the early stages of pyelitis by irrigations of the pelvis, and in the treatment of renal fistulæ by permanent drainage through the ureters.

A Retro-uterine Hæmatoma which Hindered Delivery. By Dr. J. K. Schostack.—A peasant-woman, aged forty-three years, had a violent sexual intercourse with her husband, who was drunk at the time, a week before labor. Immediately afterward she was seized with pain in the lower part of the abdomen, vertigo, nausea, weakness, and difficult, as well as frequency of urination. When found in the second stage of labor she was in a condition approaching collapse, the rectum was bulging out, and at each uterine contraction the posterior vaginal wall bulged out from the vulva. The distended bladder was emptied, and an incision made in the rectum, through which the finger was introduced and a mass of clots evacu-

ated from the hæmatoma that prevented the delivery of the head. The forceps was used to accelerate the labor, as the mother was very weak. The fœtus was dead. Tampons were used in the rectum and the wound healed without any complications.

Immorality in Schools. By Dr. A. S. Virenius.—In this article the author discusses the prevalence of masturbation among school boys and the measures to be adopted by school authorities for suppressing this form of immorality. It is the duty of principals of boarding schools and other similar institutions where many boys are living together, to exercise a careful watch over the pupils, to detect if possible those who indulge in masturbation, and to take these boys under special treatment. The practice of expelling such boys is not to be commended, for this means the expulsion of one boy who happened to get caught, while a hundred others in the same school practise masturbation unpunished because undiscovered. The author has examined the genital organs of 2,228 scholars in a number of schools. These examinations were made without the knowledge of the pupils, simply by making them strip, and pretending to be examining other parts of the body. A glance at the genitals showed the presence of three points which the author considers as indicative of sexual excess in youths. These points are the dependent scrotum, the abnormally developed penis (especially in its proportion to the age of the pupil), and the retracted foreskin, which does not cover the glans penis entirely in the natural state. He found in 49 per cent. an abnormal size of the penis, in the same percentage a dependent scrotum, and in 19.46 per cent. a half-covered glans penis. In 20.8 per cent. there was a suspicion of masturbation. He believes that these signs are the result of abnormally developed and excited sexuality in youths. The abnormal size of the penis was noted in 25 per cent. of boys between the ages of thirteen and sixteen years, and in nearly 75 per cent. of boys after the age of sixteen. The cause of over-developed sexuality in youths is usually attributed to the surroundings, the moral tone of the family, and that of the companions, as well as to the frequenting of questionable amusements, such as music halls, etc., and the reading of salacious literature. The author emphasizes the fact that, in addition to these influences, the school life of young men, as at present constituted, predisposes in many instances to masturbation and to other sexual indulgences. The tiresome monotony of school routine and the life in a boarding school where very little attention is paid to the health of the pupils, is prejudicial to good morals. In countries where boys are constantly occupied or amused, and given plenty of leisure and fresh air and exercise, the pupils of boarding schools are comparatively free from over-developed sexuality. The remedy is, therefore, the removal of the cause, the improvement of the surroundings of the pupils, in such a way that their minds shall be kept active in healthy channels, that their bodies shall be kept well and strong, and their nervous systems shall be preserved from the wearying routine of school life.

Book Notices.

Die Parasiten im Krebs und Sarkom des Menschen.
Von Professor Dr. MAX SCHÜLLER, Berlin. Mit
3 Tafeln und 64 Abbildungen im Texte. Jena:
Gustav Fischer, 1901. Pp. 128.

When this book reached the reviewer, he eagerly examined it at the first opportunity, assuming from its title that it was a monograph on the various parasites that had been, and still were, accused of causing cancer. A glance at the first pages revealed that it was nothing of the kind; it is simply an account of the author's researches in quest of the parasitic cause of malignant tumors.

The author is a surgeon, and not a pathologist, as may be supposed. However, the mere fact that he undertook to find the parasite of cancer, surgeon though he is, is only praiseworthy, whatever value his ultimate results may have; for his previous work in pathology entitles him to a hearing.

As the result of a series of researches, the author professes to have discovered in carcinomata and sarcomata an organism which he believes to be the specific cause of malignant growths. Not only has he been able to demonstrate the presence of this parasite in sections, but also to cultivate it by special methods, and to inoculate it into animals with the resulting production of malignant new growths. The author's parasite is classed by him "after consultation with the first botanical and zoological authorities of the university" (of Berlin), in a special division of the lowest species of animals which has never been described by naturalists. He says that they are not *Protozoa*, and that they do not belong to the vegetable kingdom, as they give no reaction for cellulose. He describes them as very peculiar bodies occurring in the form of relatively large, round, oval, or angular capsules with golden-yellow, slightly greenish contents and a lighter, strongly refractive wall traversed by numerous radiate pores or canals. In addition, there are small round forms of similar color and appearance, and these the author takes to be young organisms. Most of the capsules appear in the shape of squares with rounded corners, and they are usually strung or grouped together, adhering to one another by a fine golden-yellow meshwork. The cellular protoplasm of these parasites is more or less granular, and sometimes contains a large round or oval nucleus. Some capsules are filled with what appear to be small spherical bodies, which are also found free in the tissues. These, according to the author, are embryonic forms which burst the capsule and escape. He was not, however, lucky enough to surprise one of the capsules in the act of bursting and discharging its contents. In his study of the biology of the organism in hanging drop preparations, the author noticed a rhythmic wave-like motion of the radiating pore-canals in the periphery of the parasites, and he was able to trace the absorption of particles through these pores, as well as the division of the cells by fission, though he did not trace all the phases of the latter process. The size of these organisms is said to be from three to eight times the diameter of a red blood-cell, and they occur in the tissues of malignant tumors and of affected glands in simply astonishing abundance. Moreover, certain differences in the

size and color of the organisms, as well as the odor of the cultures, enabled the author to distinguish the parasites of sarcoma from those of carcinoma.

The question now arises, How is it possible that organisms of such size and occurring in such numbers in cancerous growths should have escaped the watchful eyes of previous investigators? To this the author answers emphatically that the reason of their failures was that these investigators did not pursue rational methods in their quest, and that they destroyed the parasites while preparing the tissues for examination or culture. The author's method is the only one whereby these parasites can be grown. It consists simply in excising aseptically a piece of the living cancerous tissue and, while it is still warm, *i. e.*, immediately, transferring it to a tube which is kept constantly at 37° C. (98.6° F.). The tube is then sealed with a cork which is immersed in wax, or with a rubber stopper, and the culture is grown for a number of days in a thermostat. At the end of this time the contents of the tube are found to be semi-fluid, but not in a state of putrefaction, and the small whitish or grayish specks that are seen in the fluid at the edges of the culture are colonies of the parasite. No other culture medium will do so well as the tissue itself, but it must be kept in the dark and at constant body temperature, for the slightest exposure to cold or light alters or destroys the parasites. If tissues free from fat and from degeneration are selected, the cultures may be kept for months without putrefaction.

Ordinary methods of fixation, hardening, and staining of tissues destroy these parasites or alter them so that they are no longer recognizable, and therefore the author also devised special methods for the study of the organisms in sections. He recommends especially the examination of unstained sections that have been cleared on the slide with essential oils, and of sections simply stained with hæmatoxylin to bring out the nuclei of the tissues, so as to serve as topographical guides. In this manner he has been able to demonstrate the presence of the parasites in the tissues, and in some specimens in the epithelial pearls. The cause of the failures of inoculation and transplantation experiments in the hands of previous workers is the fact that the parasites have never been inoculated while capable of life and reproduction. Only by the author's methods can positive results be attained.

The author's contention, therefore, could not be broader or more sweeping. Incidentally, he denies the significance of all other parasites described within the past few years as causes of cancer, but his chapter on the literature of the subject is brief and incomplete. If his results are confirmed by others, especially by men who devote themselves entirely to pathology, Schüller's discovery will truly rival any other in modern medicine. Nothing can be gained, however, by too great enthusiasm and too much certainty, and we wish that the author had shown a little less of these qualities, and had displayed a little more modesty and conservatism in this book.

The drawings are in many instances very poorly executed, and even if they were better, one cannot judge of a man's work unless one repeats it or at least examines the original specimens. A rather unexpected side-light has been thrown on the sub-

ject by Hauser, of Erlangen, a pathologist of repute, who examined Schüller's slides and reviewed the present volume in the *Münchener medicinische Wochenschrift* for July 30th. Hauser declares that Schüller's alleged parasites did not occur in the tissues, but seemed sprinkled or strewn upon the sections and that *they were nothing more or less than ordinary "stone cells," which anybody can scrape out of the crevices of a piece of cork.* To cap the climax, he found that the so-called cancers produced by inoculation were nothing but inflammatory infiltrates consisting of round cells, plasma cells, etc., and *did not show even a trace of carcinomatous or sarcomatous morphology.* Of course this requires refutation, to say the least. As to the appearance of the parasites, the present reviewer can add his testimony to Hauser's, for a careful comparison of all of Schüller's colored plates with the microscopical appearances of stone cells from a number of corks showed so close a resemblance in every respect, and so exact a correspondence in the variations of form and structure, that the conclusion seems inevitable that the author's parasites were stone cells that in some way got into the cultures and sections. Of course, no sentence can be fairly pronounced until all the evidence has been submitted, and a repetition of the author's work may furnish corroboration of his statements.

Die Protozoen als Parasiten und Krankheitserreger nach biologischen Gesichtspunkten Dargestellt. Von Dr. F. DOFLEIN, München. Mit 220 Abbildungen im Texte. Jena: Gustav Fischer, 1901. Pp. xiii-274.

In this book the present state of our knowledge concerning that group of living creatures which has of late begun to play so prominent a rôle in pathology—the *Protozoa*—is critically presented from the point of view of a zoologist. We think that the fact that it was written by a biologist, not by a physician, adds to its usefulness, for the questions involved in the study of the *Protozoa* themselves, aside from the morbid processes which some of them give rise to in man and the lower animals, are essentially biological. While there are a number of works on the *Protozoa* as parasites and disease-producers in the German language, such as L. Pfeiffer's and Kruse's, there is no complete treatise which deals with the subject in the light of the latest researches.

The introduction considers the biology of *Protozoa* in general, especially as regards their parasitic life. The rest of the book is devoted to a systematic study of the various organisms in the order of biological relationship and classification. Among the *Rhizopoda*, the most important one from the medical point of view is, of course, *Amaba coli*, and the brief but comprehensive chapter on this subject is one of the most valuable ones in the book. The author takes the view that these amœbæ act only as carriers of bacteria when they penetrate into the intestinal submucosa. When the bacteria have once passed beyond the barrier offered by the mucosa, an inflammation takes place which facilitates the entrance of larger numbers of amœbæ and their accompanying germs into the submucosa; in this sense *Amaba coli* is a cause of tropical dysentery. In regard to the relation of the amœba to tropical abscesses of the

liver, the author endorses the opinion of Kartulis, that it is the amœba which carries the disease from the intestine to the liver, probably by carrying into the latter organ the bacteria which are supposed to be the direct cause of tropical dysentery. The chapter on amœbæ is fitly closed by the remark that, while all statements concerning the pathogenic power of the *Protozoa* are to be regarded with caution, this applies most forcibly to the amœbæ. The chapter on *Sporozoa* is the most satisfactory of all in this book, from the medicopathological point of view. Especially praiseworthy is the careful treatment of the biology and life-cycles of these important parasites, among which are found the *Coccidia* and the *Hemosporidia*. The latter suborder includes the *Plasmodium*, or *Hæmatozoon*, *malariae*. To this organism a very complete section is devoted, and the latest researches upon the mosquito as a link in the life-cycle of the parasite, and on conjugation and other moot points, are given prominent places. The illustrations are carefully drawn and well adapted for the elucidation of morphological details. The book is without doubt one of the most important additions to the recent literature of parasitology.

BOOKS, ETC., RECEIVED.

A Reference Handbook of the Medical Sciences, embracing the Entire Range of Scientific and Practical Medicine and Allied Science. By Various Writers. A New Edition, completely Revised and Rewritten. Edited by Albert H. Buck, M. D. Volume III. Illustrated by Chromolithographs and Six Hundred and Seventy-six Half-tone and Wood Engravings. New York: William Wood & Company, 1901. Pp. vi-860.

Anatomy in its Relation to Art. An Exposition of the Bones and Muscles of the Human Body with especial Reference to their Influence upon its Actions and External Form. By George McClellan, M. D., Professor of Anatomy at the Pennsylvania Academy of the Fine Arts, etc. Illustrated by Three Hundred and Thirty-eight Original Drawings and Photographs made by the Author and expressly prepared for this Work. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 7 to 142. (Price, in cloth, \$10.)

The Röntgen Rays in Medicine and Surgery as an Aid in Diagnosis and as a Therapeutic Agent. Designed for the Use of Practitioners and Students. By Francis H. Williams, M. D. (Harv.), Visiting Physician to the Boston City Hospital, etc. With Three Hundred and Ninety-one Illustrations. New York: The Macmillan Company, 1901. Pp. 658. (Price, \$6.)

An American Text-book of Pathology. For the Use of Students and Practitioners of Medicine and Surgery. Edited by Ludvig Hektoen, M. D., Professor of Pathology in Rush Medical College, Chicago, etc., and David Riesman, M. D., Professor of Clinical Medicine, Philadelphia Polyclinic, etc. With 443 Illustrations, 66 of them in Colors. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 9 to 1245. (Price, in cloth, \$7.50.)

The Accessory Sinuses of the Nose; their Surgical Anatomy and the Diagnosis and Treatment of their Inflammatory Affections. By A. Logan Turner, M. D. (Edin.), F. R. C. S. Ed., Surgeon for Diseases of the Ear and Throat, Deaconess Hospital, Edinburgh. With Forty Plates and Eighty-one Figures. Edinburgh: William Green & Sons, 1901. Pp. xiv-211.

International Clinics. A Quarterly of Clinical Lectures and especially prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pædiatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose, and Throat, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the World. Edited by Henry W. Cattell, A. M., M. D., and others. Volume III. Eleventh Series. Philadelphia: J. B. Lippincott Company, 1901. Pp. viii-303.

Miscellany.

The Factors Leading to Variations in the Age of Puberty and the Clinical Character of Menstruation.—Dr. Arthur E. Gilles concludes, in the *Medical Chronicle* for July, an interesting series of articles on this subject. The following is a summary of the results arrived at in his paper:

The Age of Puberty. (1) Race has a certain influence on the age of puberty, but it is subordinated to the influence of climate. Broadly speaking, a curve of latitudes of different countries from 10° to 66°, and a curve of mean annual temperatures from 25° C. to 0° C. corresponds fairly closely with a curve of the age of puberty in those countries ranging from twelve to seventeen. The mean age of puberty between these extremes—viz., 14.5—forms a kind of “menstrual equator,” and corresponds with the age of puberty in London. (2) Puberty is established earlier in towns than in the country. (3) Among the wealthier classes puberty occurs earlier than among the poor, the middle classes occupying an intermediate position in this respect. Improved mental status has the same influence as better social position. Early sexual relations tend to hasten the advent of puberty. (4) Girls of robust constitution menstruate earlier than the delicate ones. The tuberculous diathesis is associated with late menstruation, and the neurotic diathesis with very early puberty. (5) Menstruation is generally established earlier in brunettes and later in positive blondes. It is latest in the group of “sub-blondes”—namely, girls of lighter negative or non-descript coloring.

Clinical Characters of Menstruation. (1) The periodicity of menstruation is more irregular in those who start menstruating early or late than it is in those whose first menstruation is from thirteen to seventeen. The greatest regularity is associated with a moderate amount of loss. In the “moderate” group, 11 per cent. are irregular; in the “scanty” and “profuse” groups, 32 per cent. So also the irregularity among blondes is 32.5 per cent.; among brunettes, 24.7 per cent.; and in the intermediate grades of coloring, 16 per cent. The proportion of irregularity among all cases is 17.6 per cent. Extra work or worry and sexual excitement may antedate the periods. (2) The duration of the flow is directly proportional to the amount of blood lost. (3) The amount of the monthly flow is greatest in those who menstruate early, and least in those who start late. When the age of puberty is twelve or earlier, 21.8 per cent. lose little, and 58.2 per cent. lose much. When puberty does not occur till the age of eighteen or later, 66.6 per cent. lose little, and 20.1 per cent. lose much. In warm climates menstruation is more abundant than in cold climates. Just as darker pigmentation is associated with earlier puberty, so it is found in relation with greater loss. The percentage of those who lose “little” is 39 among brunettes, 48 among sub-brunettes, 50.8 among sub-blondes, and 55 among blondes; while the percentage of those who lose “much” is 41.9 for brunettes, 25.5 for sub-brunettes, 25 for blondes, and 16.9 for sub-blondes. After marriage and child-bearing, the amount of loss is unaltered in 56 per cent. of cases, increased in 20 per cent., and diminished in 24 per cent. Physical

fatigue shortens the intervals and increases the pain and quantity. (4) About 35 per cent. of women menstruate painlessly at first. The amount of pain varies with the quantity lost, and not inversely. Among those who lose “very little,” 40 per cent. have no pain and 28 per cent. have severe pain. Among those with “profuse” loss, only 16 per cent. are free from pain, and 56 per cent. suffer severely. Pain before menstruation commences is often sacral in position; during the flow it is suprapubic. After marriage and child-birth, the amount of pain is unaltered in 65.3 per cent. of cases, increased in 20.7 per cent., and diminished in 14 per cent.

The Treatment of “Inoperable” Cancer of the Breast.—Dr. C. H. Leaf (*Edinburgh Medical Journal*, 1901, Vol. ix, p. 452; *Medical Chronicle*, July) says that the principle of the method is to prevent dissemination of the cancer cells and cancer juices to internal organs along the lymphatics by keeping them as near the surface of the tumor as possible, and this the author attempts to accomplish by means of suction action. He has had constructed a large vulcanite shield, fitting accurately on the skin around the growth, the edge of the shield being provided with an inflateable air-cushion, similar to that of a Clover's ether inhaler, to insure accurate apposition. The surface of the shield is provided with a tap through which the air inside the apparatus can be exhausted by an ordinary air-pump. To be really effective, the apparatus should be worn continuously. Very little pain is caused. If the surface of the growth has ulcerated there will be no obstacle to the cells and juice, which are drawn to the surface, being got rid of entirely, and this is of such advantage that the author advises that ulceration be encouraged, where it is not present, by the use of hot fomentations, or even by making a breach in the skin by multiple punctures or incision. It is important to maintain absolute rest for the arm of the affected side, since every movement aids the flow of lymph from the breast through the deeper lymphatics, and thus assists dissemination. Even after an apparently successful operation for removal of a breast cancer, the author would instruct the patient to keep the arm in a sling and not to use it for at least two years, lest a few cancer cells might have been left behind, and become driven into the deeper lymphatics by movements of the arm.

The Factors that Influence the Severity of Syphilis.—Dr. Bernard Wolff (*Atlanta Journal-Record of Medicine*, October) sums up a paper on this subject with the following conclusions:

1. The factors which influence the severity of syphilis reside in both the seed and the soil, the individual and the infecting material.
2. Syphilis varies in type with the nature of the soil and the quality of the virus.
3. The nature of the soil depends upon the physical condition of the individual, his health, race, age, and sex. The quality of the virus, upon the dilution from frequent transmission and attenuation by mercurial treatment continuously or intermittently carried out along the links of the antecedent chain.
4. Attenuated virus and healthy soil mean abortive or benign syphilis, while, with the possible exception of racial immunity or resistance, depraved soil and unmodified virus mean severe or malignant syphilis.

The Vaginal and Rectal Opening of Pelvic Appendiceal Abscesses.—Dr. J. F. Baldwin (*Cleveland Journal of Medicine*, September) reports from cases, two in women and two in men, of pelvic abscess resulting from appendicular inflammation, in which he operated by a free incision through the vagina or through the rectum, according as the patients were women or men. In the former case, a free opening was made through the posterior fornix, giving exit to a large amount of foul-smelling pus. The cavity was washed out thoroughly and a large rubber tube introduced with iodoform gauze. The drainage was removed in three days, and after that, the cavity was washed out daily until closed. In the latter case, the abscess was opened with a pair of scissors through the rectum; the scissors were introduced, with their points closed, into the abscess cavity and then withdrawn with their blades widely separated. The cavity was washed out freely with water and a gauze drain introduced. Immediate relief was afforded by the operation and prompt recovery took place.

Th author concludes: "The opening of these abscesses *per vaginam*, or *per rectum* in males and virgins, seems to be the simplest and most natural procedure in the world. The tissues are thin, no important structures are involved, the drainage is almost ideal, and at least temporary recovery would seem to be inevitable. If the appendix continues to make trouble, its removal, as an interval operation weeks or months later, will be attended with the absolute minimum of risk, while to open such an abscess filled to distention with the vilest possible pus through an abdominal incision and across the open peritoneal cavity, means very great risk of a fatal peritonitis, or, in case this is obviated by thorough packing, it means an extensive incision with prolonged drainage and an almost inevitable hernia. It seems to me, therefore, that the suprapubic operation in such cases is not prudent surgery, and that the results must be greatly inferior to the infrapubic procedure."

Women as Risks in Life Insurance.—Dr. Mahillon, of Brussels (*Medical Examiner and Practitioner*, October) winds up a careful consideration of this subject with the following conclusions:

1. The statistical observations of insurance companies show that the mortality among female risks is greater than among male ones.

2. As these results are not in accordance with the statistics of general mortality and with the statistics of companies which sell annuities, there is ground for supposing that a number of female risks now considered as acceptable would be postponed or declined if greater severity was brought in the practice of the medical examination of women.

3. The true safeguard of companies therefore lies in an examination made as complete as possible, carried out, not only upon the organs common to both sexes, but also upon the pelvic organs.

Companies would act wisely in requiring this examination and in arranging a set of questions relating to it. In this way the examiner could fall back, if the woman objected, upon the necessity of fulfilling his duty, or could report that he had not made a complete examination, stating the reasons why he was prevented from so doing.

4. In the present social state, insurance is less justifiable in women than in men; this is proved by the much smaller number of women who avail themselves of it. Hence it would be to the interest of companies to discover the object leading a woman to take insurance and to decline her application or to give her a deferred policy which should only come in force say two years after the contract was signed, whenever the morality of her intention was not perfectly clear or whenever it was found that the woman possessed personal and regular resources (annuities, pensions) which would end with her life; for in this case one might suppose that she obeyed the advice of others who, for some motive or other, discounted her premature end and had an interest in advising her to take insurance.

5. The examination of women requires from the examiner a very special amount of care and attention. This examination must also bear upon the genital organs and can in no manner offend the applicant if carried out with proper tact; however, I deem it desirable that the measure taken by my advice by the Caisse d'Épargne Belge should everywhere be adopted, every time that circumstances permit it. This is to have the applicants examined by female physicians who are competent to make this examination.

6. The use of the means of investigation which modern science teaches us, is rendered necessary by a tendency to fraud, which is more common than is generally thought to be the case. A number of scandalous lawsuits have revealed false statements, omissions, reticences, and even substitutions of persons, which show that speculation creeps in everywhere, even in financial operations which would seem to be inspired only by one of the most laudable of virtues, providence.

The Papuan Medicine Man, according to the *Philadelphia Record* for November 9th, exercises a primitive method of bloodletting. According to a note in that paper, and a photograph supplied by Dr. Haddon, and taken during the Cambridge expedition to British New Guinea, he uses a delicate bow and arrow made of the rib of a cocoanut leaf. The arrow is armed with a sharp thorn and is shot into the patient just deep enough to relieve the pain of tension by causing a flow of blood. The arrow is fastened to the bowstring and can easily be guided to its mark.

A New Ureter-cystoscope.—Dr. Bransford Lewis (*St. Louis Courier of Medicine*, September), at a recent meeting of the Medical Society of City Hospital Alumni of St. Louis, read a paper on Ureter Catheterism in the Male.

He refers to a reported case in which death resulted from the removal of the only kidney, under the belief that it was a hæmatometra, rendered probable by congenital absence of the vagina; and discusses the various methods and instruments hitherto in use for ureterocystoscopy—viz., the instruments of Nitze, Leiter, Brenner, Casper, and Albarran, and the urine segregator of Harris. He recalls the fact that in a series of 26 attempted ureteral catheterizations in the male, reported by Dr. Tilden Brown (*Annals of Surgery*, December, 1899), there were 7 failures, or 25 per cent.; and this series represents the efforts of those most accustomed to the work

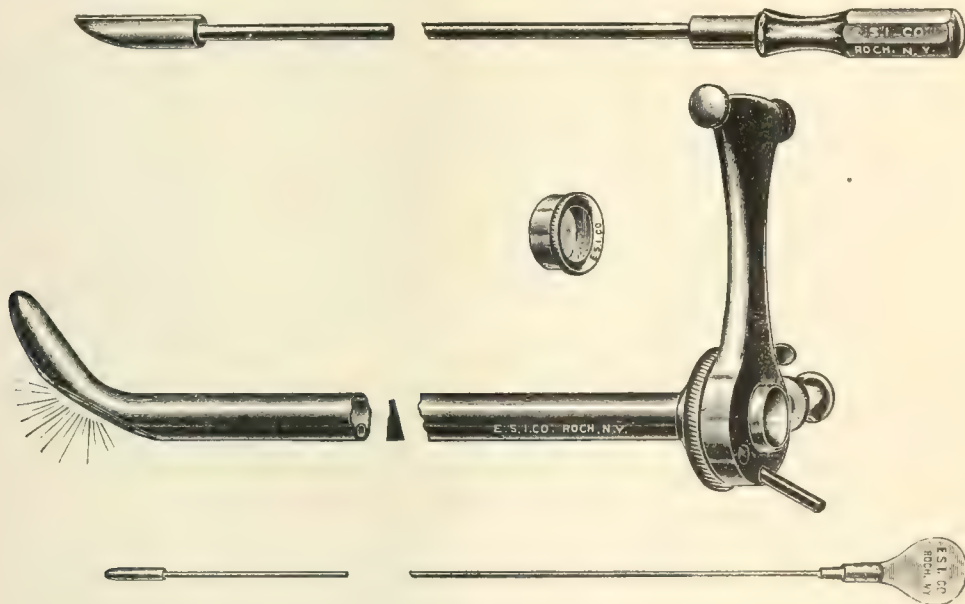
and, presumably, most skillful in its execution. Attempts by unskilled hands will undoubtedly give a much larger percentage of failures. If such be the case, the instruments for ureteral catheterism in the male hitherto in use fall far short of affording satisfaction, to say the least. This is likewise true, in the author's opinion, of the Harris segregator, which not only causes an unbearable amount of pain in a number of cases, even after the generous use of cocaine, but affords erratic and unreliable results. It may drain from one side and not the other for a time, and later, stop draining from the first and begin to drain from the second; or bloody urine may come from both sides when it should come from only one. An enlarged prostate is apt to compromise the efficacy and reliability of this instrument at all times.

The author then describes an instrument of his own invention which may be used for ureteral catheterization in either male or female.

It consists of a tube, which carries in its upper wall a smaller tube for the conduction of the wires that connect with the electric lamp, and in its lower

The ureteral catheter which the author employs is the same as that furnished with the Casper cystoscope. The lamp made use of is the mignon lamp but lately introduced by the makers, and possesses the remarkable attributes of much light and little heat; though affording a brilliant glow, it radiates so little heat that it may be held within a quarter-inch of live tissue for an indefinite period and without discomfort, to say nothing of pain. It is really this property of the electric lamp that makes this instrument feasible. A hot lamp requires the shield and protection of fluid before it can be introduced into the bladder; whereas this can be used with perfect safety and comfort, so far as heat is concerned, in the *empty* bladder. Thus the use of fluid is eliminated, together with its several disadvantages, such as rapid clouding by in-flowing pus or blood, etc.

From the brief description given, it is evident that the instrument is extremely simple. It has no lenses to intervene between the eye and the object of investigation. The window in this instrument is so



wall another small tube for the conduction of the silk-web ureteral catheter, and for guiding and controlling its inner extremity after it reaches the bladder cavity. The light from the lamp emerges through a glass window, sealed in the roof the main tube. The lamp, when burnt out, is removable by unscrewing the tip and pulling it out.

To facilitate the introduction of the cystoscope, an obturator is furnished, which closes the distal orifice and prevents scraping of the membrane against the edges of the opening; but, at the same time, these edges are so rounded that they may be brought in contact with the membrane without injury to the latter; so that the instrument, if withdrawn from the bladder into the prostatic urethra, may be pushed back into the bladder without re-inserting the obturator.

A glass-covered cap may be placed over the ocular end to enable the operator to distend forcibly the bladder with air when that condition is not effected by posture. The inflation is made by a rubber bulb attached to a stop-cock.

placed that it may be cleansed by a cotton swab without removal from the bladder. The lamp is brought within a half inch of the membrane undergoing search for the ureteral opening, and the closeness and directness of the illumination thus produced is of great advantage in facilitating its discovery. The finding of a ureteral opening under the most favorable conditions is often a difficult matter, so that every point that favors its exhibition should be secured.

A difficulty to which attention is called by Dr. Tilden Brown is that met with when the bladder is so contracted that only two ounces or less of fluid can be retained in it. In using the present instrument no fluid is used at all; on the contrary, the bladder is emptied as much as possible beforehand, and it is not desirable to have it distended to any marked degree, even with air. The absence of fluid prevents the clouding of the field of view by in-flowing or pus blood. Indeed, the emerging of bloody fluid from a ureteral opening would assist in the discovery of the latter by marking its location.

The cystoscopes in the market are not sterilizable by the ordinary means of dry or steam heat, because of the delicacy of their construction and the presence of the cemented lenses. Before using this cystoscope it may be placed in a steam sterilizer as long as is desired.

There are two ways in which double catheterization may be accomplished: By making the catheterizations of the two ureters at successive sances, or successively at the same sance; or, after the ureter-catheter is introduced into one ureter, a small soft rubber catheter is introduced into the bladder through the main tube; both catheters are allowed to remain in their positions as the cystoscope is withdrawn; one of them drains directly from the ureter, the other from the bladder-cavity, which, of course, is collecting the urine from the other ureter. As to whether this manœuvre is perfectly trustworthy, avoiding any chance for a mixing of the two urines through the escape of some of the urine alongside of the ureteral catheter, there is a question. Some operators, notably Guyon, depend on it. If the catheter fits in the ureter tightly, it will probably not allow of any escape; but if it is a loose fit from patency of the opening, one should not rely on this method, but resort to successive catheterization.

As to position, the knee-chest posture proving unsatisfactory, the author resorts to the dorsal decubitus, and has found it to be very much better adapted to the easy discovery of the ureteral openings; and by providing a semi-Trendelenburg pose to further gravitation of the in-flowing urine toward the vesical fundus, and at the same time causing moderate forcible distention of the organ through the air-cock of the instrument, the interference of accumulating fluid is done away with.

In the female, placed in the dorsal position with the hips well elevated, when the obturator is withdrawn from the cystoscope, permitting the in-rush of air, the bladder almost invariably dilates; but with the male in the dorsal position this is not the case; passive dilatation does not take place, and forcible distention with the air-pump is necessary. While no damage is done to the bladder by injecting air into it, and no danger can arise from its possible ascent into the ureters, air is not well borne by the sensitive patient; it seems to cause a more painful sensation than a similar amount of water. Consequently in the absence of a satisfactory technique for anæsthetizing the bladder only, the author has used chloroform anæsthesia, although he believes that with thorough cocaineizing of the posterior urethra and vesical neck, and the injection of some sedative solution, such as antipyrine, into the bladder, this difficulty will be overcome.

Preliminary irrigation and emptying of the bladder and urethra having been carried out, and sterilization of the cystoscope and accessories accomplished, the patient is put under anæsthesia and brought into the lithotomy position with the hips elevated. The cystoscope is introduced in the manner of ordinary catheterization. On taking out the obturator there may be some spurting of urine that has been left in after the irrigation, or that has accumulated since then. The author has had a pump constructed with which to remove this balance effectually. It is inserted directly through the cystoscope and then works automatically. Next, the ocular window is placed in position, air is pumped

into the bladder to the degree of moderate distention, and the electric current is turned on. By moving the inner end of the instrument in various directions, a panoramic view of the interior of the bladder is obtained. If one is trying only for ureteral catheterization he immediately seeks one of the upper angles of the trigone. He sees a small, slanting slit or opening in the membrane, from which, if he watches closely, he will observe the emergence of a little spurt of urine at intervals. The silk-web ureteral catheter has already been in position for manipulation, lying within its proper tube of the cystoscope even before the latter was introduced into the bladder; so it is now readily pushed forward toward the ureteral opening which it easily penetrates and passes on up the channel, its flexibility enabling it to adapt itself to the natural curve of the ureter. While in this position, the penetration of the ureter by the catheter can be perfectly demonstrated to any spectator present. If it is desired to drain that ureter for a time, the catheter is pushed well up into the ureter and coincidentally the cystoscope is withdrawn from the bladder and urethra. The ureter-catheter is sufficiently long to permit of this. Air is prevented from escaping from the bladder through the ureter-catheter tube by the close hugging of both tube and catheter at their junction by a small tube. After the operation it is best to empty the bladder of the air by passing in a soft rubber catheter, or allowing it to escape through the cystoscope at the time of removing it. The patient is liable to experience gruesome thoughts if, later, he ejects air from his bladder.

While the object of this instrument is primarily the catheterization of the ureters, the view it affords of the interior of the bladder should not be underestimated. It is similar to the picture presented by the Kelly cystoscope in the female bladder; which, in certain respects, is far superior to that presented by the lens cystoscopes. Aside from the disadvantages of a fluid medium, already mentioned, these instruments with lenses give an inverted image; and, corresponding to the magnification of the field there is contraction of its area. In other words, there are these several modifications of the image before it gets to the eye of the observer, who may or may not be able to interpret and judge them correctly. But with the cystoscope under discussion, there is absolutely nothing to intervene the object and the eye, so that what is seen, is seen without any modification whatever. Moreover, to the sense of sight may be added that of touch, by means of the probe; so that when one is in doubt as to what he sees, he can add the testimony of the probe on the subject.

Further, with the present instrument a satisfactory view of the neck can be accomplished in exactly the same manner that an endoscopic view is obtained, viz., by successive changes of its position, either in turning it or gradually withdrawing or reintroducing it.

Finally, the field of direct therapy to bladder, ureters, and kidney-pelves will be materially broadened by making use of the direct access afforded by this instrument. Applications can be made to the vesical membrane by the cotton-tipped swab, as is done with the urethroscope; and successive antiseptic irrigations for ureters or kidney-pelves are no more impracticable than the catheterization itself.

Original Communications.

ULCEROMEMBRANOUS ANGINA ASSOCIATED WITH THE FUSIFORM BACILLUS (VINCENT); A REPORT OF TWELVE CASES IN CHILDREN.*

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The mouths of infants and children present, under abnormal conditions, so great and so complex a variety of conditions that each and every distinctive type of disease, with a definite appearance and ætiological factor, is heartily welcome. In recent years much attention has been given to the bacteriology of the oral cavity, and a large number of micro-organisms has been described by Miller, of Berlin. Despite this, however, there are a few conditions which, in their clinical appearance and in their microscopical characters, stamp them as separate affections. Thus, the membrane of diphtheria has its Klebs-Loeffler bacilli, the superficial coating of sprue has its *Saccharomyces albicans*, and the ulcerations which form the subject of this paper have their fusiform bacillus of Vincent with spirilla. It is somewhat surprising that English and American authors have paid so little attention to this condition, for it is not rare and, on account of its practical importance, deserves more careful study.

Although ulceromembranous angina was previously recognized by several French and Russian authors, it is only within the last three years that German writers have described this affection. In the standard text-books of Henoch, Baginsky, and Vogel and Biedert no special mention is made of this form, and the results of microscopical examinations are not given.

Fruhwald (1), in 1889, had examined a number of cases of ulcerative stomatitis and had described a short ovoid bacillus which he thought the cause of this condition. Cultures of this bacillus gave a foetid odor, while inoculations into animals produced a negative result. Later investigators have not confirmed his observations as to the specific character of this bacillus. In 1894 Plaut (2) reported five cases of angina in which the bacillus and spirillum described by Miller were found in large numbers. But it was not until 1898 that Bernheim (3) reported thirty cases of ulcerative stomatitis in all but two of which the typical microscopical picture of an abundance of fusiform bacilli and spirilla was described and the importance of their uniform presence recognized. Within a short time cases were then reported by Vincent (4), Lemoine (5),

Abel (6), Stoecklin (7), Salomon (8), and later by Bosquier (9) (one case), Speranski (16) (one case), Letulle (22), and others.

In our experience of twelve cases of ulceromembranous angina, limited to children under ten years of age, several observations were made.

Situation of the Ulceration.—In six instances the ulceration was found on the right tonsil, in four cases on the left, and in two on both. In the last, smears from both tonsils demonstrated the presence of abundant fusiform bacilli and spirilla. In one of these cases both tonsils were involved simultaneously, while in the other the left tonsil became affected two days after the right. Comby (17) states that the tonsillar lesion of ulcerative stomatitis is more commonly found on the left side, an observation contrary to our experience in these cases. Similar ulcerations, either independent of or in connection with the tonsillar ulceration (Case X), may occur on the tongue, cheeks, or gums. In all of our cases, with the exception of one (Case X), the ulceration was limited to the tonsil. Any portion of one or both tonsils may be affected; thus, in some cases the lower and inferior, in others the centre, and in others the upper and outer portion showed the lesions.

Size.—This varied from the nail of the little finger to involvement of the greater part of the tonsil.

Shape.—For the most part, this was irregularly circular or oval.

Character.—As to its character, the term *chan-croidal* seems most fitting. It certainly appears to have a worm-eaten floor, the edge being on a level with or slightly elevated above the tonsillar surface. Except for the necrotic base, it looks like a "punched-out" ulcer. The tonsillar inflammation is usually very moderate; when more marked the ulcer appears somewhat deeper and the destruction of tissue greater than they really are. Only at its incipency, *i. e.*, within the first twenty-four to thirty-six hours, does it appear membranous; but even then, if a swab is applied directly against the lesion, the tissue will give way and the swab will enter a cavity. The color in different cases is either yellowish, greenish-gray, or a dirty light brown; but all have in common the sloughing base with the level or slightly raised edges.

Depth.—This, also, varies from an eighth to half an inch, sometimes extending to the floor of the tonsil.

Temperature.—In all of our cases there was *some* elevation of temperature (rectal); in four, it ranged from 101° to 103.4° F. In this our experience agrees with that of Vincent; Salomon, however, states that, as a rule, there is no fever.

Submaxillary Glands.—With two exceptions the submaxillary glands were enlarged, and always on

*Read before the Laryngological Section of the New York Academy of Medicine, November 27, 1901.

the same side as the lesion. When both tonsils were affected, both glands became enlarged. It was, furthermore, noted that the glands remained enlarged for some time after the healing of the ulcer. The enlargement was painless. Comby (17) states that there is an occasional tenderness due to periadenitis.

Symptoms.—The symptoms are usually entirely local, the fever, as a rule, rarely being so high as to produce constitutional disturbances. The children are brought to the physician because of pain in the throat and difficulty in deglutition. One child was presented because of a distinct enlargement of the right submaxillary gland, another because of fever (103.4° F.) and headache. The symptoms are, as a rule, so mild that when the child is presented the process has already gone on to distinctive ulceration. In two cases, seen at the onset, the semblance to a diphtheritic membrane was so marked that antitoxine was administered. It may be mentioned in passing that, in these cases, the ulcerations were not influenced by the injection, but responded to local treatment. There is no fœtor of the breath unless the tonsillar ulceration is associated with that of the tongue, cheek, or gums.

Diagnosis.—For purposes of description, the diagnosis may be divided into (a) clinical, (b) microscopical, (c) bacteriological.

Clinical Diagnosis.—The most important distinction is from diphtheria, confluent follicular amygdalitis, and other tonsillar inflammations, for not every ulceration of the tonsil is associated with this fusiform bacillus.

The facts that one tonsil is usually involved, that the submaxillary glands are enlarged, and that the temperature, as a rule, is not markedly elevated, suggest diphtheria. Clinically, it differs from diphtheria in that it is an ulcerative process, in the absence of tendency to spread beyond the tonsil, and in the usual absence of asthenia and constitutional symptoms. For all practical purposes it may be stated that the affection is ulcerative, while diphtheria is membranous. It must not be forgotten, however, that many cases of diphtheria are ambulatory, without any signs of prostration, and that in the third and fourth weeks, as Hensch (19) states, ulceration may occur. The fact that other members of the family are affected cannot be relied upon for suspecting or corroborating the diagnosis of diphtheria, because, in our series, three members of one family (Schwartz) were attacked, two of them simultaneously, the other, three weeks after a cure had been effected in her sisters. This seems to show that, after all, most cases of tonsillar infection are contagious to a greater or less degree.

From confluent follicular amygdalitis it is distinguished by the absence or mildness of constitutional symptoms—fever, headache, malaise, and prostra-

tion—by the superficial character of the former, and by the presence perhaps of follicular spots on one or the other tonsil. The cases of follicular amygdalitis associated with ulceration are distinguished by the presence, in addition to the ulceration, of follicular spots on one or both tonsils and by the constitutional disturbances.

Microscopical Diagnosis.—With all the clinical aids just mentioned, it is upon the microscopical appearances that a positive diagnosis must be made. While in diphtheria no reliance, or very little at best, is to be placed upon the immediate examination of a smear from the tonsil, the opposite holds good in this condition, in which every reliance is placed on the smear, and practically none—for reasons to be mentioned—on the cultures on ordinary media. In making smears and cultures it will be found that the swab forces the necrotic mass before it and finds its way into a cavity of varying depth; at times portions of the sloughing mass are removed and bleeding easily takes place.

While our smears have been stained with watery solution of methylene blue (five per cent.), gentian violet, Loeffler's blue, Lugol's solution slightly acidified with lactic acid, and Ziehl's solution of carbolfuchsin in the proportion of one to three of water, we have found with Vincent and Salomon that the last gives the most distinct picture.† In all of the cases the microscopical picture was practically the same in that the characteristic fusiform bacilli and spirilla were present in very large numbers.

Vincent (14) distinguishes two forms: 1. *Diphtheroid*, which is rare, and in which the fusiform bacilli alone are found. 2. The *ulceromembranous* form, which is frequent, and in which both the fusiform bacilli and spirilla are present in great numbers. Hence the term "*angine fusospirillaire*." In all of the cases which we have examined we have found the two forms combined.

The bacillus is about twice as long as the Klebs-Loeffler bacillus and, as being needle-like, somewhat pointed at the ends (fusiform). Some are bent so as to form a crescent. They are sometimes arranged end to end in \cup shape, and at other times at an acute angle \angle ; some are arranged in pairs or groups similar to the diphtheria bacilli; others are scattered about without any particular order or grouping. They vary somewhat in size, some being larger and thicker than others; however, they are always longer and thicker than the diphtheria bacilli. The spirilla are long and cork-screw-like, with wide curves; they also vary in size, the longer and thicker ones staining more deeply.

As to the motility of the bacillus, authors differ. Vincent found it non-motile; Letulle found it motile. We have used a drop of the saliva of the patient as suggested by the latter, and found it dis-

tinctly motile. The spirillum has a very rapid and wavy motion. In some cases the stain is not uniform along the entire length of the bacillus, but interrupted in one or more places. It has no spores. The spirillum is rapidly decolorized by the Gram method; the bacillus slowly.

The microscopical picture (Fig. 1) depends much on the method of applying the swab; the process is essentially a destructive one, and the deeper into the necrotic mass one goes the greater the number of fusiform bacilli and spirilla and the fewer the cellular elements. If the swab is merely passed over the surface, a very different picture will be obtained from the smear, in that the cellular elements, leucocytes, epithelial cells, salivary corpuscles, and a great variety of bacilli and cocci will be obtained, and a much smaller number of the fusiform bacilli and spirilla.

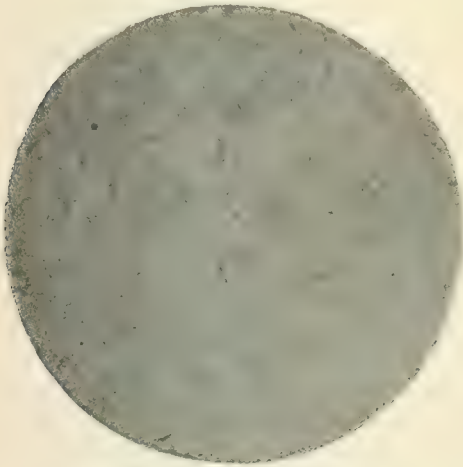


FIG. 1. Fusiform bacilla and spirilla, stained with carbolfuchsin.

In a smear from a diphtheritic throat the microscope will show in few or great numbers the Klebs-Loeffler bacilli, leucocytes, epithelia, cocci, etc.; a diagnosis of diphtheria based upon such an examination is uncertain and not to be recommended. In tonsillar ulcerations associated with follicular amygdalitis the smear shows an abundance of other bacilli and cocci and but a few or no fusiform bacilli, with or without spirilla. In the smears that we have examined from cases of aphthous stomatitis, follicular amygdalitis, mucous patches, the oral lesions of varicella, Bednar's aphthæ, etc., we could record only the presence of cocci in groups, debris, epithelial cells, bacilli, *Leptothrix buccalis*, salivary corpuscles, and comma bacilli, but never the typical picture of fusiform bacilli and spirilla in great numbers.

With the improvement of the ulcerative process, the spreads show fewer fusiform bacilli and spirilla and more of the normal bacteria and cellular elements of the oral cavity. In smears from dental

ulcers, pyorrhœa alveolaris, and ulcerative stomatitis, involving the gums, cheeks, lips, and tongue, unassociated with tonsillar lesions, we have found the same picture as in ulceromembranous angina. It is highly probable that the so-called ulcers of Bouveret, occurring in typhoid fever, are also associated with the fusiform bacillus.

Bacteriological Diagnosis.—It has been stated that, in this condition, but little reliance can be placed upon making a positive diagnosis from cultures, while the opposite is true for diphtheria. The reason for this is that thus far no satisfactory medium for the growth of the fusiform bacillus in a pure uncontaminated colony has been found.

The first investigators found it absolutely impossible to cultivate this bacillus on any culture medium. Abel succeeded in obtaining on blood serum, not isolated colonies, but the bacillus in and on colonies of a large diplococcus, which grew sparingly on plates. Recently Vincent (14), in inoculating peptone-bouillon, succeeded in obtaining the fusiform bacilli in impure culture, *i. e.*, in conjunction with other micro-organisms; he also found that the organic fluids from the human body—cerebrospinal fluid with the addition of blood, pleural exudates, or exudates from old rheumatic joints—furnished the best media for their growth. These cultures have a foetid odor similar to that of ulcerative stomatitis. The bacillus is killed in a few minutes at a temperature of 60° C. Inoculations of the culture under the skin and into the muscles produced abscesses, fistulous tracts, or tissue necrosis in which the fusiform bacilli were found in abundance, together with a small number of other bacteria. It was, furthermore, found that previous contusion or the injection of a solution of lactic acid favored the production of these lesions and the multiplication of the fusiform bacilli.

In our observations we have used but two media: 1. That of the New York board of health (blood-serum, 3 parts; bouillon, 1 part; 1 per cent. grape sugar). 2. Libman's culture medium (21) (glucose-serum-agar, with $\frac{1}{2}$ per cent. glucose). In the former the cultures failed to show the presence of the fusiform bacillus or spirillum, but the medium served our purpose in excluding diphtheria. In no instances were Klebs-Loeffler bacilli found, so that the combination mentioned by Bernheim has not been observed by us. It is not impossible, of course, that such might take place, and for that reason cultures should always be made. In most of the cases staphylococci and streptococci grew abundantly, and spreads demonstrated their presence.

It was hoped that more favorable results would be obtained with Libman's culture medium. However, cultures which were examined at periods ranging from twelve to forty-eight hours gave substan-

tially the same results. Never were fusiform bacilli or spirilla found, never Klebs-Loeffler bacilli, but invariably a profuse growth of staphylococci and streptococci was seen.

Plaut (2), in his description of two cases of ulceromembranous angina, states that the microscopical examination of the exudate showed the presence of a very large number of the bacilli (*Spirillum sputigenum*) and spirilla (*Spirochate dentium*) described by Miller. Bernheim and the other German investigators who followed him state that the fusiform bacillus is found normally in small number in the mouth; though it is usually not mentioned, they probably refer to the *Spirillum sputigenum*.

There are three micro-organisms described by Miller which are deserving of consideration:

1. The *Spirillum sputigenum* (12). This is found normally in small numbers in the mouth. If the platinum loop is introduced between a slightly inflamed gum and the tooth of an uncleanly mouth, the microscopical examination of the material collected will show a large number of spirilla sputigena, also many examples of *Spirochate dentium* and other micro-organisms. The *Spirillum sputigenum* is described by Miller as a comma-shaped bacillus similar in form and size to the cholera vibrio, and as having a rapid screw-like motion. It could not be cultivated on any known culture medium. From the description thus given it will be seen that the fusiform bacilli differ in that they are longer, that the majority of them are straight or only slightly bent. Notwithstanding these differences in size and shape, it is highly probable that the fusiform bacillus and the *Spirillum sputigenum* are identical, such differences also occurring in other bacilli (diphtheria).

2. Miller's comma bacillus (12). In size and shape this resembles the *Spirillum sputigenum*. It was found in the inflamed edge of the gums in unhealthy mouths. It differs from the fusiform bacillus in size and shape and, also, in the fact that it can be cultivated on gelatin.

3. Bacilli which Miller (10) found associated with other micro-organisms in putrid pulpitis. In form and staining they resemble very closely the fusiform bacilli. He describes them as straight or curved needle-like rods with pointed ends. They could not be cultivated on any known culture media.

Vincent (4, 14, 15) also states that he found the fusiform bacillus in twenty-two of twenty-seven normal mouths examined.

From the description as given by Miller it would seem as if there were many points of resemblance between the bacillus as described under (3) and that of Vincent. Further investigations will be required to prove or disprove their identity.

The spirillum corresponds to the *Spirochate dentium* of Miller (12). Heim (11) describes a *Spirochate oris* which he found in the tonsillar exudate of a suspected diphtheria. There is not sufficient reason for separating the two. This case was probably one similar to those here reported.

In 1883 Miller suggested the possibility of a genetic connection between the bacillus (*Spirillum sputigenum*) and the spirillum (*Spirochate dentium*). He advanced the theory that the bacillus originated from the spirillum by the separation of its segments. Later he gave up this hypothesis on account of the greater width and deeper staining of the bacillus. Plaut does not consider this sufficient reason for discrediting the connection.

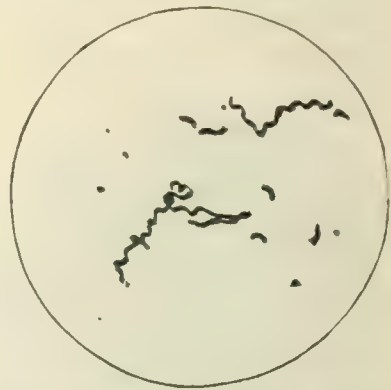


FIG. 2.—Cholera vibrios, involution forms, gelatin culture, x 1000. (After Günther.)

Observations of transitional forms which we have made in our series of cases would seem to indicate that there is a similar connection between the fusiform bacilli and spirilla. The reasons for this probable connection are the existence of

- (a) larger and thicker spirilla;
- (b) spirilla showing segmentation;
- (c) free segments of spirilla;
- (d) bacilli thinner than the average;
- (e) bacilli arranged end to end in a ~ shape.

We see similar transitional (involution) forms in some cultures of the cholera vibrio, in which (Fig. 2) the comma bacilli unite to form spirilla, and, *vice versa*, in the cultures of some spirilla comma forms are present (Fig. 3). Miller mentions that, in old cultures on gelatin, all his comma bacilli grew to spirilla.

It has been stated that, in all of our cases, the bacilli were found associated with spirilla. It is highly probable, however, that the bacilli play the more important part because (1) Vincent describes a diphtheroid form of angina in which only the fusiform bacilli are found, and (2) Netter (20), as quoted by Kraus, succeeded in obtaining a pure culture of the spirilla which, when inoculated into animals, gave a negative result; whereas Vincent ob-

tained a positive result from the inoculation of the fusiform bacilli.

The fact that the fusiform bacillus is found associated with a small number of other micro-organisms would not in itself be sufficient reason for denying its causative relation to this form of ulceromembranous angina, for the same is true of the Klebs-Loeffler bacillus, which we now know to be the direct cause of diphtheria.

Until all three conditions as laid down by Koch—constant presence, pure culture, and experimental inoculation—are fulfilled, it cannot be stated with absolute certainty that the fusiform bacillus stands in direct causative relationship to this form of ulceromembranous angina. The following points, however, make its specific character highly probable:

1. Their uniform presence in very large numbers or nearly pure culture.



FIG. 3.—*Spirillum rubrum*, gelatin culture, x 1000. (After Günther.)

2. Their gradual disappearance during the process of healing, and their rapid disappearance when the ulceration heals.

3. The presence of so few other micro-organisms.

4. Cases in which the condition has been transmitted from one individual to the other.

Prognosis.—The prognosis is invariably good, a cure usually being effected within three weeks. Le-moine (5) mentions one case which lasted seventy days. Considering the appearance of the ulceration, the subsequent tonsillar destruction is remarkably slight.

Treatment.—The treatment in our cases was that usually recommended for such conditions; in the majority of instances we applied daily to the necrotic mass a solution of silver nitrate, three to five per cent. The cases were cured in from six to twenty-six days. The tenth patient, who, in addition to the tonsils, showed involvement of the gums, cheek, and tongue, was not discharged as cured until the forty-second day. In two instances Lugol's solution was used, and it has seemed to the writers that iodine solutions were more efficient, although more disagreeable.

Recently Siredey (18) has recommended chromic acid directly applied to the lesions of ulceromembranous stomatitis as highly efficacious. Alkaline mouth washes, solutions of potassium permanganate, etc., were given when necessary.

Appended will be found a short history of the cases seen by us at the Good Samaritan Dispensary:

CASE I.—Rosy P., aged four years, came on May 4, 1901. Her mother had noticed enlargement of the right submaxillary gland the morning before. On the right tonsil there was a brownish ulceration, with edges on a level with the tonsil. Temperature, 99.8° F. Bronchitis. Spread from ulceration stained with Ziehl's solution (1 to 3) showed abundant fusiform bacilli and spirilla. A culture on board of health medium showed no Klebs-Loeffler bacilli; on Libman's medium, staphylococci. No fusiform bacilli or spirilla. Five-per-cent. solution of silver nitrate applied to ulcer. Discharged, cured, on May 15th.

CASE II.—Harry G., aged five years, was brought to the dispensary on June 18th, complaining of pain in the throat. The right tonsil presented a greenish membrano-ulceration with level edge. We were strongly suspicious of diphtheria, and so 2,000 units of antitoxine were administered. Temperature, 99.2° F. Enlargement of the right submaxillary gland. Cultures proved the absence of Klebs-Loeffler bacilli and the presence of staphylococci. A smear stain with carbolfuchsin (1 to 3) and methylene blue showed numerous fusiform bacilli and spirilla. The treatment was with three-per-cent. solution of silver nitrate. Discharged on June 30th.

CASE III.—Esther S., two years and a half of age, came on July 2d. She had been sick for two days with pain in the throat. Temperature, 100° F. Moderate enlargement of the left submaxillary gland. The left tonsil showed a yellowish-gray ulceration with apparent membrane. Two days later the right tonsil was covered with a greenish necrotic mass, with enlargement of the right submaxillary gland. A spread from the right tonsil stained with diluted Ziehl's solution and one from the left tonsil with methylene blue showed abundant fusiform bacilli and spirilla. No Klebs-Loeffler from the culture. The left tonsil was well on the eighth, the right tonsil on the eleventh. Lugol's solution seemed to hasten recovery.

CASE IV.—Jennie S., aged four years, a sister of the preceding patient, came on July 2d for sore throat. On the right tonsil there was a brownish-yellow necrotic ulceration. No enlargement of the submaxillary gland. Temperature, 100° F. No Klebs-Loeffler bacilli from culture, but abundant staphylococcus growth. A spread stained with diluted Ziehl's solution showed a typical picture of numerous fusiform bacilli; spirilla only in moderate numbers. Treated with three-per-cent. silver solution. Discharged July 11th.

CASE V.—Joseph F., aged five years, was brought to the dispensary on July 30th. He had been sick since the night before with pain in the throat. Temperature, 99.2° F. On the upper and outer portion of the right tonsil there was a yellowish ulceration; it looked like membrane. Right submaxillary gland

enlarged. A spread stained with Loeffler's blue and diluted Ziehl's solution showed characteristic fusiform bacilli and small, fine, winding spirilla. No Klebs-Loeffler bacilli found with the culture. Treated with three-per-cent. silver solution. Discharged August 12th.

CASE VI.—Gussie S., aged five years and a half, sister of the subjects of Cases III and IV, came on August 1st, having been sick one day with headache and pain in the throat. Temperature, 101° F. On the left tonsil there was a light-brown ulceration with slightly raised edge. Left submaxillary gland enlarged. Cultures failed to show Klebs-Loeffler bacilli. Numerous fusiform bacilli and deeply stained spirilla were found on staining a smear with carbolfuchsin (1 to 3). Five-per-cent. solution of silver nitrate applied daily. Discharged August 15th.

CASE VII.—M., aged seven years, came on August 5th for sore throat and pain on the left side and difficulty in deglutition. Temperature, 102° F. Left submaxillary gland palpable. On the left tonsil a greenish-gray membrano-ulceration was diagnosed as diphtheria by the assistant, and 2,000 units of antitoxine were given. No Klebs-Loeffler bacilli were found in the culture. A smear stained with gentian violet and diluted Ziehl's solution gave a characteristic picture. Five-per-cent. silver solution to the tonsil. Discharged on August 21st.

CASE VIII.—Dora K., aged seven years, came to the dispensary on August 10th, having been sick for five days with pain in the throat. She could not swallow without great difficulty. On the right tonsil there was a brownish ulceration of about the size of the nail of the little finger. Right submaxillary gland enlarged. Temperature, 101.2° F. Cultures show numerous staphylococci and streptococci, but no diphtheria bacilli. Smears stained with diluted carbolfuchsin demonstrate numerous fusiform bacilli and fine spirilla. Treated with a three-per-cent. silver solution. Cured on August 19th.

CASE IX.—Harry H., aged five years, presented on August 31st for sore throat, headache, and fever, having been sick one day. Temperature 103.4° F. He did not look very sick. Right submaxillary gland enlarged. On the right tonsil there was a sloughing, greenish ulceration, easily entered with a swab. No Klebs-Loeffler bacilli found from a culture. A smear stained with methylene blue and carbolfuchsin showed fusiform bacilli and spirilla. Five-per-cent. silver-nitrate solution to the tonsil. Discharged September 16th.

CASE X.—Rosy R., aged six years, came on October 5th. Ten days before she had had ulceration of the tongue due to a bad tooth, which had been extracted. Ulceration of the tongue grew worse, and now, in addition, there existed ulceration of the cheek, gums, and both tonsils. The tonsils present a yellowish-green ulceration occupying the entire tonsils. Breath foetid. Temperature, 100.4° F. Cultures from the tonsil showed no Klebs-Loeffler bacilli. Both submaxillary glands enlarged. Spreads from both tonsils and from the ulceration of the gums, tongue, and cheek, when stained with watery solution of blue and diluted Ziehl's solution, gave the same picture of abundant fusiform bacilli and spirilla of various sizes. Despite daily applications of Lugol's solution and five-per-cent. silver-

nitrate solution to the tonsils, a cure was not effected until November 1st. The lesions of the tongue, gums, and cheek were more obstinate. Even applications of pure carbolic acid followed by alcohol to the tongue failed to cure. Finally pure chromic acid was employed on a probe, applied directly to the ulcerations. This treatment, followed by daily applications of a ten-per-cent. solution of chromic acid, effected a cure by November 6th. A 1-to-2,000 solution of potassium permanganate was used as a deodorizer.

CASE XI.—Louis S., five years old, had had pain in the throat for three days. No fever or constitutional disturbances. On the left tonsil there was a yellowish-gray ulceration of the size of the little finger-nail. Edges not elevated. No surrounding inflammation. Temperature, 99.6° F. Left submaxillary gland slightly enlarged, not tender. Ulcer about half an inch deep. No foetor or odor to the breath. Teeth decayed. A swab applied to the necrotic mass caused bleeding. A spread stained with dilute Ziehl's solution showed the characteristic picture. Cultures on board of health medium gave staphylococci and streptococci, but no Klebs-Loeffler bacilli. Lugol's solution applied to the tonsil. Patient did not return.

CASE XII.—Tilly S., aged four years, had been sick six days with pain in the throat. No constitutional disturbances. A physician had said that the child had tonsillitis. Temperature, 99.6° F. No foetor to the breath. Submaxillary glands not enlarged. The left tonsil showed a greenish necrotic mass involving about three quarters of the tonsil. The edge was level, with slight surrounding redness. The swab entered a cavity almost to the floor of the tonsil; there was a moderate degree of bleeding. A spread stained with Ziehl's solution showed the characteristic picture, more especially the end-to-end arrangement. A culture showed an abundance of staphylococci and a few streptococci. No Klebs-Loeffler. Lugol's solution applied to the ulceration. Cured in eight days.

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APPENDICITIS.*

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In presenting another paper on the subject of appendicitis the thought naturally arises, What is there new in this subject to call to your attention? The literature of this subject is so voluminous and has received such careful study by the very first minds of the surgical profession that it would seem that the "last word" must have been written, and that we could say with Ambroise Paré that there only remain to posterity a few small details to be discovered. Yet with appendicitis, despite the valuable work of McBurney, Morris, Richardson, Price, Fowler, and many others, new phases are continually presenting themselves, new lessons being learned or old convictions strengthened.

It has been my privilege to operate for this disease between three and four hundred times a year for several years past, and yet I can truthfully say that nearly every case has for me some new lesson in the living pathology of this disease. With each lesson learned as to the course and phases of this protean disease, the deeper is burned into my mind

the conviction that the only true conservatism in appendicitis lies in recourse to the aseptic scalpel of the surgeon just as soon as the diagnosis is made.

Whoever hopes to recognize the disease under discussion must first study its pathological anatomy. He, above all things, must be familiar with its ante-mortem pathology, which teaches far more than the post-mortem pathology. The practitioner of internal medicine is unfortunately thrown upon his observations at the bedside and the post-mortem table alone. Would that every practitioner and student of medicine could have the opportunity of studying the living pathology of large numbers of cases of appendicitis at the operating table, for then the lesson of what is true conservatism in the treatment of this disease would be impressed upon them.

Let us not lose sight of the important fact that every death from appendicitis, in an individual otherwise well, excepting those of the fulminating type, could have been prevented by the use of the knife at the proper time. If we are to operate in our cases early, an early diagnosis is necessary, and therefore it is to the early diagnosis of appendicitis to which I will first direct your attention. If the three cardinal symptoms of appendicitis are kept in mind, the early diagnosis is in nine cases out of ten very simple. There are, it is true, a few atypical forms which are very puzzling, but these are very rare, and the chief difficulties in early diagnosis are either due to forgetting the three cardinal symptoms, or more commonly to being confused by other symptoms that are only secondary or intercurrent. The early diagnosis is usually the easiest diagnosis, for it is in the protracted cases that most of the confusing symptoms arise to draw our attention away from the real cause of the trouble.

The three cardinal symptoms are pain, tenderness, and rigidity. Sudden abdominal pain in an individual previously well is the first point. Pain, sudden in onset, general or localized to any part of the abdomen, is usually the first symptom. Then, after a short time, localization to either that valuable anatomical landmark, McBurney's point, corresponding to the position of the base of the appendix, or to a point over the tip of the organ, which may be nearly anywhere in the abdominal cavity.

The tenderness may be at first general or local, and a very valuable diagnostic point is general abdominal pain with tenderness limited to McBurney's point. The typical tenderness of appendicitis is not that elicited by carelessly applied pressure or tight clothes, but a tenderness confined to a small area elicited by the pressure of a single finger. Another important sign is that pressure in other parts of the abdomen often causes pain, not where the pressure is applied, but under McBurney's point. The tenderness is more often localized to McBurney's point.

*Read at the meeting of the Fifth District Branch of the New York State Medical Association, held in Newburgh, N. Y., November 20, 1901.

ney's point than is the pain, probably from the fact that in the unusual positions of the appendix the base is commonly more superficial than its tip.

Rigidity of the neighboring part of the rectus and overlying flat muscles is **nearly always present** from the onset, but this can sometimes only be demonstrated by the most delicate and gentle touch. Many a doctor who has sufficient practice and experience, nevertheless, never learns palpation, since lightness of hand is wanting. Examine in the region away from the seat of disease first. This rigidity is, however, often so marked that it gives the examiner the impression of an abdominal mass and an abscess is diagnosticated when it does not exist.

None of these three symptoms are in themselves pathognomonic, but taken collectively, in ninety per cent. of cases, present a picture that cannot be mistaken. If, in examining a suspected case of appendicitis, we first carefully inquire into these three symptoms, ignoring for the time any other symptoms that may be present, we can usually decide whether we must look elsewhere for the seat of the trouble. A case presenting these symptoms is generally appendicitis, and almost as large a percentage of cases of appendicitis present these symptoms in the first few hours.

The diseases which in our experience are the hardest to distinguish from acute appendicitis in the early stages are typhoid fever, extra-uterine pregnancy, cholecystitis, and acute mechanical obstruction of the bowels. However strange it may seem, typhoid fever is the most difficult to distinguish from a mild case of catarrhal appendicitis, where the previous history of vague abdominal colic referable to the lower abdomen cannot be elicited. In the diagnosis the prodromes of typhoid fever are very important. Then, in this disease the tenderness is more diffuse and there is usually gurgling, a sign that we have found very unusual in appendicitis. The blood count may furnish a valuable means of diagnosis, as a leucocytosis practically excludes typhoid fever. The Widal reaction is valueless, as it has not been established in the early stages, in which confusion usually occurs.

The diagnosis between a ruptured extra-uterine gestation sac and appendicitis is not important, as both conditions call for immediate operative interference. The history, vaginal examination, low temperature, and signs of shock are usually sufficient to distinguish the two conditions.

Cholecystitis may usually be separated from appendicitis, but in some cases of terminal appendicitis, in an appendix pointing upward, especially if accompanied by jaundice, the diagnosis is, I believe, impossible. Jaundice is not very rare in appendicitis, and is due, I think, to the same intestinal infection that lights up the appendicitis, causing a

catarrhal inflammation of the bile ducts. The history, point of greatest tenderness, character and distribution of the pain, and a rectal examination are all valuable points and are usually sufficient.

The diagnosis between acute mechanical obstruction and appendicitis is also not very important, for **here again is immediate operation indicated in both.** The temperature, pulse, and the three cardinal symptoms are nearly always sufficient to distinguish these conditions, but it should also be remembered that the immense majority of cases of acute obstruction in the adult are caused either by hernia or a previous peritonitis, and this point should be looked for in the history.

I have not attempted to give you a full account of the symptoms of appendicitis, but only wish to impress upon your minds the importance of the three cardinal symptoms of appendicitis and that if, in approaching the diagnosis of any abdominal disease, these points are clear in your mind, many cases, otherwise difficult of diagnosis, will not be troublesome. The practice of keeping the patient under observation to see whether the case will become an operative one or not, is highly to be condemned. The only justifiable excuse for delay is uncertainty of the diagnosis, and in case of doubt it is the duty of the physician to seek counsel to settle the question as soon as possible.

I appreciate the difficulties of a country practitioner who is not always able to obtain the best professional counsel and is therefore sometimes justified in delay until the diagnosis is certain. I do not hesitate to say that it is unjustifiable to defer operation after the diagnosis has been made. It is high time that a note of warning is given to the gentlemen who are in the practice of following such a course, for time after time have I seen valuable lives sacrificed on the altar of this variety of procrastination.

The pathology of appendicitis is that of an infection in all its forms, and this fact is important to keep in mind. The kinks, strictures, and fecal concretions act as a cause only by retarding drainage and giving the organisms in the appendix an opportunity to multiply and become virulent. This fact alone explains why surgery is the only sure and conservative form of treatment.

The treatment of appendicitis can only be rationally discussed from the surgical side. Every right-thinking medical man must admit that the medical aspect of appendicitis relates to the diagnosis only; therefore, so soon as the diagnosis has been made, the case is no longer medical, but surgical.

The surgical treatment of appendicitis, which means the administration of the aseptic scalpel of the surgeon at the earliest possible moment after the diagnosis has been established, will surely, in

by far the greater majority of cases, restore the patient to a condition of health. The few exceptional cases are those of the fulminating variety and occur usually as the first attack; in this variety of appendicitis it must be conceded that this form of treatment promises the only chance of recovery.

The ideal time to operate in appendicitis, to obtain ideal results, is in the stage of appendicular colic, before the wicked hand of inflammation has taken possession of the vulnerable tissues composing this organ. We are all familiar with the disastrous effects of delay, procrastination, or call it what you will, in this type of inflammation, and we well know, too often to our sorrow, the result of this dilly-dallying, therefore, I will not go into a detailed description of the various reasons why operation should not be delayed, but will at once take up the consideration of some of the more common disastrous sequelæ of delayed operation.

Formerly abscess formation was regarded as the indication for operation, certainly a most unfortunate view, for then the time for an ideal operation has passed. There are still a few men who teach that a high grade of leucocytosis should be present to indicate the time for operation, but this form of procrastination is the cause of a high mortality and cannot be too strongly condemned.

A walled-off abscess is often called a fortunate event, but in reality it is a most unfortunate state of affairs. The procrastination which ever allows an abscess to form is to be deplored, and it is due only to a kind Providence and not to the physician's skill that instead of a walled-off abscess a general septic peritonitis has not rendered all hope of recovery impossible.

An abscess cavity must heal by granulation, cicatrization, and contraction. In appendicular abscess of any size the inner wall is formed by adherent loops of small bowel. During contraction the calibre of the bowel is often occluded and acute mechanical obstruction results, which, unless relieved by immediate operation, must result in the death of the patient.

In the experience of the writer at the German Hospital, where he performs yearly from one hundred and fifty to two hundred operations for acute appendicitis, many of which are of the abscess type, the percentage of intestinal obstruction is comparatively large. The writer so fears this condition, which usually does not occur for ten days, two weeks, or later, following primary operation, that upon the appearance of paroxysmal abdominal pain, nausea, inability to pass flatus or to have the bowels moved by simple purgative medicines aided by high enemata through the rectal tube and given by hydrostatic pressure, and with the presence of slight tympany with paroxysmal pains provoked by gentle

palpation of the abdominal wall, he immediately advises a section. By this practice I am able to record recoveries in patients that otherwise would have perished.

It is the practice of the writer in dealing with these large abscess cases not to content himself with the evacuation of the abscess and the removal of the appendix, but, further, to relieve the adherent coils of bowel, which, done with proper manipulative skill and disposition of sterile gauze to guard against infection of the general peritoneal cavity, and the placing of gauze drains, prevents this complication being more common than it otherwise would. Again, in these abscess cases it happens frequently that, in addition to the principal focus of suppuration, there are other foci; in other words, secondary collections. In such instances the evacuation of the primary focus of pus does not necessarily mean the evacuation of the secondary collections. This phase of treatment I regard as one of the most important. I am sure that overlooking secondary collections figures conspicuously in the mortality of this class of cases.

It is not the practice of the writer in dealing with these cases to disrespect the non-involved peritonæum, therefore he does not evacuate or break up adhesions and use general irrigation with simple distilled water, saline, or any chemical agent, but lays more stress upon the proper disposition of sterile gauze for protection before the abscess has been broken into. The abscess having been evacuated, he occasionally uses limited irrigation, by which I mean irrigation simply of the abscess cavity, but more often does he cleanse the cavity by wiping it thoroughly dry with sterilized or iodoform gauze. A form of packing for drainage he is fond of using is the so-called cofferdam.

Where the appendicular inflammation has involved to any degree the neighboring structures, particularly the great omentum, as is so commonly seen in abscess cases, it is necessary to tie off the involved portion of the omentum, which frequently is partly or entirely gangrenous. While we should exercise every precaution to tie well off to the proximal side of the involved portion of the omentum, it happens in a small percentage of cases that the septic process through the involved lymphatics results in the formation of a pus collection found, at subsequent operation or autopsy, immediately below the transverse colon.

Portal pyæmia is the consequence of phlebitis of the walls of the appendix or the meso-appendix. This condition is more commonly seen, in the experience of the writer, in highly acute and virulent cases of appendicitis than in those cases which result in a walled-off collection of pus. Necrosis of the cæcum and ascending colon from the pressure of

the neighboring pus collection, and consequent general sepsis with ultimate death, is not an infrequent sequel to appendicular suppuration. This form of local necrosis and general sepsis is more likely to occur where the abscess is diffused, extending well up to, if not involving, the right lobe of the liver. In a small percentage of post-colic appendicular abscess cases the lower part of the right lobe of the liver not only forms a part of the wall of the abscess cavity, but is often also the seat of ulcerative necrosis. Another odd, but not very unusual manifestation of appendicular suppuration is an abscess either penetrating or working up behind the diaphragm and causing a pyothorax, which sometimes ruptures into a bronchus and the pus is expectorated. The writer has seen a number of cases of this type, and the pathological rôle which appendicular suppuration is capable of playing is almost indescribable, the pathological freaks being so numerous and diversified. In the experience of the writer, the largest mortality is seen in late post-colic appendicular suppurations.

That the most common cause of appendicular fæcal fistula is pressure necrosis from the presence of pus cannot be disputed. That appendicular fæcal fistula is a most unfortunate pathological condition cannot be denied. That appendicular fæcal fistula, when involving the small as well as the large bowel, is a most serious condition must be admitted. That operation for the cure of appendicular fæcal fistula is attended by much more risk than is the primary operation for the removal of the appendix in acute appendicitis, if done at the earliest possible moment after the establishment of the diagnosis, is the unquestioned truth.

I have recently read an article upon this subject before the New York State Medical Association, which will appear in the journal of that association, and to which I refer my listeners for a further description of this deplorable and in a great majority of cases preventable surgical affection.

Papers upon points, many of which are referred to in this paper, belong not to the present day surgery, but properly to the mediæval ages of surgery. I regret to have to call attention to these and the tampering with human life by either stupidity or prejudice, certainly inexperience to say the least, in not recognizing the note of warning by those who are in a position to speak authoritatively, is the explanation. I regret that too many of our teachers have not yet awakened to the fact that students are to be properly taught, and not taught, as they are today in too many of our colleges, that there is a medical treatment of appendicitis and that the so-called appendicular surgeon is too keen to use the scalpel. So long as this teaching prevails, so long

will many deaths from appendicitis have to be recorded, the responsibility for which must rest upon the shoulders, not of those who are taught, but those who teach.

That many doctors are misled by the disproportion between the local signs and the constitutional symptoms there is no doubt, by which I mean, that the patient with a comparatively high temperature and a correspondingly high pulse rate, in whom the bowels have been freely moved, not presenting marked localized rigidity, and this perhaps less than on the day previous, will lead the attendant to believe his patient is better, while the most serious condition of affairs may be present and making rapid extension within the abdominal cavity. The progress the disease is making, locally, is less likely to be recognized when the appendix occupies the upper portion of the pelvis and therefore not within as close reach of the palpating finger as when it lies immediately beneath the abdominal wall in the right iliac fossa. An anomalous position of the appendix is often responsible for misjudgment in the hands of the inexperienced.

I will not continue the discussion any further, as it would require hours to cover the various disastrous pathological phenomena which appendicitis is capable of bringing about. In thanking you for the privilege of appearing before you and the attention you have given me while reading this paper, I will request that you have your cases of appendicitis operated upon at the earliest possible moment. Do not give ear to the remarks in favor of medical treatment, and the statistics that may be offered to strengthen these remarks, but believe, as I do, that statistics are misleading and can be doctored to suit the particular case. The more the writer sees, the more living abdominal cavities he opens in the presence of this disease, the less he knows about appendicitis, except that the sooner the appendix is out the better for the subsequent welfare of the patient. While it has been said that "a living man with an appendix is better than a dead man without an appendix," it is also true that a living man without an appendix is better than a dead man with an appendix.

Civil Service Examinations for positions in New York State and county departments and institutions will be held about December 7th in all the principal cities of the State. Among the positions to be filled are the following: Director of the Pathological Institute of the State Commission in Lunacy, with a salary of \$5,000; physician, third grade, in State hospitals, the usual salary is \$900 per year and maintenance, and assistant bacteriologist of the Department of Health, an office requiring half the time of the official and paying a salary of \$500 per year. Full details regarding the examinations may be obtained from the chief examiner of the State Civil Service Commission, Albany, N. Y.

REPORT OF A CASE OF INTERSTITIAL PREGNANCY.*

By R. H. PIERSON, M. D.,

SYRACUSE, N. Y.

This case is of interest as illustrating a type of ectopic gestation seldom recognized, which may, under favorable circumstances, progress to full term and terminate in a practically normal labor.

The patient, Mrs. X., aged twenty-three years, was married in 1897. She had one pregnancy in 1898, which went to full term. The child weighed over ten pounds, but died soon after birth; cause of death unknown. Since the birth of the child the patient has been troubled with leucorrhœa. The patient does not give a history of any severe sickness. She weighs about 130 pounds. Her general health is first class. In 1898 she became infected with syphilis. She did not know at the time from what she was suffering, and had not suitable medical attention. From her description of the symptoms it would seem that the primary sore was followed by a well-marked secondary eruption, and this was followed by condylomata.

The patient first came under my care on August 7, 1899. At that time she had a papular eruption upon the face, hands, and chest. I prescribed a saline cathartic. The trouble disappeared, and I did not see the patient again until on March 30, 1900. At that time she had an enlarged inguinal gland on the left side, about the size of a hen's egg. The leucorrhœa was very bad. She had also a sore throat. I prescribed protoiodide of mercury and hot douches. The trouble cleared up in about two weeks. The patient was advised to continue treatment, but, so soon as the symptoms were better, she neglected doing so.

August 17, 1901.—The patient came to the office. The leucorrhœa was moderate. The patient thought she was about six weeks pregnant. She had pains at times on both sides of the uterus, more marked on the left side. She had been vomiting for three weeks. She thought she must have strained her left side when vomiting, as at times she felt sharp pains there.

Examination showed an enlarged uterus and a slight enlargement of the left tube. There was a mucopurulent discharge from the cervix.

In hope of ending the pregnancy, the patient had taken six emmenagogue pills. They had produced a brisk cathartic action, but showed no signs of accomplishing the desired result. She was advised to discontinue her attempts at abortion and to allow Nature to pursue her own course. This advice was not taken.

September 4th.—I was called to see the patient, who had taken between three and five ounces of cotton-seed oil. She was very sick for a day or two, but remained firmly resolved to persist in her efforts to put an end to her pregnancy.

September 15th, 5 a. m.—After repeated attempts, the patient had secured a miscarriage. The foetus had been expelled about two hours. There were

pains every few minutes, followed by bleeding and the expulsion of blood clots.

I proceeded to clear out the uterus. The external os was contracted so as barely to admit the end of the index finger. It was easily dilatable. The internal os could be felt above it as a definite constriction. The cavity of the uterus was about three inches in diameter. The placenta was located in the upper left part. It was adherent, but could be easily separated from its attachment, by passing the tip of the finger under its edge and peeling its circumference from the uterine wall. When the peripheral portion had been liberated, it was found that the central portion was continued through the side of the uterus. It passed through a ring about one half an inch in diameter to a cavity outside the uterus. This opening in the uterus corresponded to the location of the uterine end of the Fallopian tube. Its margin was a distinct ring, which felt firmer than the rest of the uterine wall.

It was thought inadvisable, at this time, to disturb that portion of the placenta not in the uterus, so the uterine portion was separated from it and removed, hoping that the tubal portion would be expelled in the course of the next twenty-four hours. At the expiration of that time, the temperature rose to 101° F. There was pain on light pressure over the lower part of the abdomen, more marked on the left iliac region. No placental tissue had been passed. There had been slight bleeding and there was a slight foul odor upon the guards. These conditions indicated a removal of any adventitious material before it became a source of danger.

After the usual antiseptic precautions with the patient under an anæsthetic, an exploration of the uterus was made. The external and internal os were found contracted, so that the finger could not be passed through. It was slowly dilated. The uterine cavity was then found to be continuous with another cavity which widened out abruptly from this orifice to a diameter of about one inch and there quarters. This cavity was about two inches and a quarter in length, tapering toward the left from the larger uterine end. It was filled with placental tissue which was removed. During these manipulations the opening into the uterus was dilated to nearly the diameter of the larger portion of the tubal cavity. To insure drainage, a strip of gauze was left in the uterus. On the evening after this procedure, the patient's temperature was 102° F. On the following morning it was 101° F., and, in the afternoon, became normal, where it remained. The recovery was uneventful.

I saw her again on October 10th. She was then in good health, but had occasional pains in the left side after over-exertion.

This patient was well on toward the fourth month of pregnancy. The placenta was about two inches and a half in diameter; the foetus over three inches in length. Its lips were well formed, and the fingernails were apparent as thin membrane.

This case is one where the gestation originally occurred in that portion of the tube within the thickness of the uterine wall, the interstitial portion. As the ovum matured, it forced open the uterine end of

*Read before the Syracuse Academy of Medicine, October 22, 1901.

the tube and produced the condition just described.

To diagnosticate such a condition prior to abortion and exploration is extremely difficult or impossible.

Burton C. Hurst, of University of Pennsylvania, says of interstitial pregnancy: "A diagnosis is difficult or impossible. The uterus enlarges to a greater degree than in any other variety of ectopic gestation, and it may be impossible to determine whether or not it is symmetrically enlarged. The condition is recognized after an abdominal section or upon a careful intra-uterine exploration." This statement refers to earlier cases than the one here reported.

This case would never have been recognized except for the intra-uterine exploration. This fact is of interest in determining the course of procedure in cases of miscarriage and abortion where complications arise.

A careful digital exploration of the uterus, under suitable antiseptic precautions, can do no harm, and will often bring to light conditions least suspected by the physician. If in this case placenta-forceps had been used and the membranes simply twisted from their site, in all probability the tubal portion of the placenta would have remained to become a medium for the growth of septic germs. Only a post-mortem or subsequent exploration would have revealed the true condition.

There are two questions of interest which occur in the consideration of this case. What was the relation of the uterus to the tubal cavity while the fœtus was in the uterus? And what would have been the result if the pregnancy had not been interrupted?

From the condition of the tubal orifice, its distensibility, and the fact that the tubal cavity held so much placental tissue, I am led to believe that, when the uterus was distended by the presence of the fœtus, the ring was much larger than at the time when first observed. Contractions of the uterus had contracted this ring.

So we had this cavity practically included in that of the uterus. As gestation progressed and the uterus enlarged, it is possible, that, by the time the pregnancy was completed, the relations would have been nearly those found in the normally pregnant uterus, and the labor at full term would have occurred and a satisfactory result have taken place without interference of any kind. In such an event the pre-existing condition would not have been recognized.

505 SOUTH WARREN STREET.

A New Medical Building at Toronto University is to be erected for the accommodation of the third and fourth-year classes in medicine.

THE DAILY MEDICAL INSPECTION OF SCHOOLS.

By D. S. LAMB, M. D.,

WASHINGTON, D. C.

(Continued from page 1006.)

The movement toward the medical supervision of school children in New York State dates back at least to 1872.

Dr. W. C. Wey, of Elmira, N. Y., read a paper on the Sanitary Inspection of Schools at a meeting of the Medical Society of the State of New York in 1877,²¹ in which he said that, in 1872, the Board of Education of Elmira appointed a competent physician to examine the schools and exclude pupils who failed to show evidence of successful vaccination. From that time till 1877, sanitary inspection had continued in Elmira, and frequent visits had been made by a judicious physician, who, besides attending to the matter of vaccination, had to look after all forms of contagious disease, personal uncleanness, offensive deformities, the school furniture, the regulation of the cubic space for each pupil, the floor space, heating and ventilation of rooms; in a word, the whole domain of medical police as applied to schools, was under his wise control and management.

Dr. E. C. Seguin, of New York,²² read a paper before the American Medical Association, at Buffalo, N. Y., in June, 1878, in which he enumerated many things that the medical inspector should attend to; the cleanness of the school, the proper drainage of the grounds, the shade, the lighting, the ventilation, the books, charts, etc., used, as to type, the desks, and the condition of the children when admitted; he went quite minutely into the subject of school hygiene.

At the close of the discussion on School Hygiene at the meeting just mentioned,²³ Dr. Frank H. Hamilton, of New York, introduced the following resolution, which was unanimously adopted: "Resolved that in the opinion of the American Medical Association, medical men ought to have a voice in the construction and location of public school buildings; in the question as to the age at which children should be admitted, the hours of study, and the general management of the institutions; and to this end it is believed to be necessary that one or more intelligent physicians should be placed on boards of education, boards of trustees, and upon other similar boards having the control of public education and schools."

Dr. George F. Shrady,²⁴ in an editorial, strongly urged the passage of a bill for the medical inspection

²¹Transactions of the Medical Society of the State of New York, Albany, May, 1877, p. 307.

²²Hospital Gazette, iii, 1878, p. 355.

²³Transactions of the American Medical Association, 1878, xix, p.

²⁴Medical Record, xiii, 1878, p. 369.

of schools by the board of health; the bill had already passed the New York Assembly.

Nothing more definite, however, appears to have been done in regard to the medical supervision of the children, until Boston made its decided innovation in 1894.

Dr. Charles F. Roberts, sanitary superintendent of New York, wrote October 3, 1896, to the city board of health,²⁵ stating that he believed that the greatest source of transmission of infectious and contagious diseases among children of this city was their contact with one another in the schools. In his opinion, this transmission could best be overcome by a daily examination of the school children by a medical inspector of the board of health. At first glance the undertaking seemed almost impossible because of the large number of scholars. But he believed it could be done. It would not require the services of a physician in any school more than from thirty to sixty minutes daily, to examine the children who should be selected by the teachers in their respective classes as not appearing to be in good health. The selected ones would be examined by the physician and, if found to be ill, should be obliged to return to their homes. If the disease was contagious and of a kind requiring the action of the board, the name and address of the child could be telephoned to the office of the Division of Contagious Diseases and the child would be visited at its home by the Inspector of the District and properly cared for. The list of absentees could also be obtained and these be visited at their homes by the same or other inspectors of the health department, to ascertain if their absence was due to contagious or infectious disease.

In commencing this work, the children attending the primary schools and the primary department of the grammar schools and the parochial schools should first receive attention. In the schools having the largest attendance of scholars, two physicians should be detailed to take charge, one in the boys' and the other in the girls' department, and, where schools were small, one physician could attend to more than one school. The physicians should reside near the schools to which they were assigned. Their services would be required about 200 days, the actual number of school days in the year.

The duties of the medical inspector should be as follows: He should visit the school daily when in session, so soon after the opening of the morning session as would be convenient to the principal of the school, and examine all the children who had been separated by the teachers; those found too ill to remain in school, he should advise the teachers to send home for the observation and care of the parents and family physician. If the child thus sent home

should return next day with continued illness the same action should be repeated. A scholar found to have a contagious disease or reported to have been in contact with such disease, or if it appeared that, by reason of desquamation or otherwise, the child had not yet fully recovered from such disease, the name, age, and address of the scholar should be telephoned at once to the Chief of Division of Contagious Diseases for such action as he might think required.

The inspector should obtain from the principal the names and addresses of all absentees from the morning roll call and should forward the same to the Division of Contagious Diseases.

He should also keep a record of the number of children daily inspected by him, and the names, ages, and addresses of those found by him to have any disease, and report the name, age, and address of the child and the character of the disease, semi-weekly on a blank to be furnished by the department, to the Chief of the Division of Contagious Diseases, and should make a weekly summary of all work performed by him.

Where several cases of scarlet fever, diphtheria, or measles occurred among the children of one class, the names and addresses of all absentees in that class should be obtained from the principal and forwarded to the Chief of Division of Contagious Diseases, with a memorandum of the facts coming to the inspector's knowledge in regard to the cases of contagious diseases.

The medical inspectors should not give professional advice in any case. They should indicate the need of such advice in all cases where such need existed. They should examine all children thought by the teachers to be ailing, and indicate the need of treatment in cases in which it was required. The treatment itself should be left to the family physician or to hospitals or dispensaries.

The principal of a primary school or primary department of grammar schools should set apart a place for the children selected by the teachers for examination by the medical inspector. He should aid the inspector in any way deemed necessary to protect the health of the other children of the school. He should each morning prepare a list of all absentees from school, and deliver the same to the medical inspector at the time of his visit.

Teachers in charge of classes should at time of morning roll call select from their classes the children who are apparently ailing or are thought to have been in contact with any one ill with contagious or infectious disease.

As a preliminary experiment, Dr. G. S. Lynde was appointed a medical inspector and made a report on November 19, 1896 (*Ibid.*, p. 359) upon all

²⁵Annual Report of the Board for 1896, p. 77.

the cases of scarlet fever and diphtheria occurring in two selected districts. He found that two thirds of the families in which these diseases had appeared during the month of October had children in school; the other third had not. He satisfied himself that many cases of diphtheria had not been recognized. He stated that measles was undoubtedly most often brought into a house from the school and then usually spread through the house. He found that thirteen cases of scarlet fever had occurred in one school, none of which had been reported to the health department, and the epidemic would certainly have continued if these cases had not been found out by the investigation he made. He recited many instances to illustrate his conclusions.

In view of these facts, an application was made by the board for the appointment of one chief medical inspector and 150 medical school inspectors to serve during the school term of each year, September to June, inclusive (*Ibid*, p. 57).

The *Annual Report of the Board of Health of New York City* for the next year, 1897, stated (pages 39 to 42) that for sixty-five days, from March 29th to June 30th, including the primary department of grammar schools, primary schools, parochial schools and others, the daily average attendance was 149,520; 228 schools had been visited; 14,346 visits; 28,107 boys and 35,705 girls had been examined, total 63,812; number excluded 4,182. Of those excluded, 88 were cases of measles, 167 of diphtheria, 32 of scarlet fever, 11 of croup, 26 of whooping-cough, 117 of mumps, 702 of contagious eye diseases, 2,627 of head lice, 108 of body lice, 130 of chicken-pox, and 175 of skin diseases.

From September 30th to December 24th, 72 school days, the inspection included also the grammar department of grammar schools, industrial schools, kindergarten schools, etc.; there was a daily attendance of 236,773; 290 schools were visited; 17,104 visits; 21,977 boys were examined and 22,839 girls, total 44,816; 3,366 were excluded. Of those excluded, 36 were cases of measles, 67 of diphtheria, 12 of scarlet fever, 9 of croup, 29 of whooping-cough, 105 of mumps, 644 of contagious eye diseases, 2,098 of head lice, 38 of body lice, 86 of chicken-pox, and 242 of skin diseases.

The *Annual Report of the Board*, for 1898, stated (pages 43-82) that during the year the Division of Medical Inspection of Schools had been greatly broadened and improved; 192 medical school inspectors had been appointed to inspect the public and parochial schools in Greater New York. The inspector was required to report every school-day at the school to which he was assigned, from 8.50 to 9.30 a. m. He should carefully examine each child that had been isolated by the teachers, and exclude from school each one affected by, or showing symp-

toms of, any contagious or infectious disease. He should furnish each excluded pupil with a printed card, upon which he should note the date, name, and location of the school, the name, age, and address of the child, and the reason for its exclusion. These cards signed by him were to be taken home by the excluded pupil.

The inspector should ascertain from the principals and teachers of the schools the names and addresses of all children having contagious diseases in their families, where notification had not been sent to the schools by the board of health and such lists should be forwarded with the daily reports. If, in the opinion of the inspector, immediate action ought to be taken by the board in any case, he should immediately communicate by telephone with the chief inspector. Medical school inspectors were not, under any circumstances, to visit children at their homes, to prescribe for them, or to suggest treatment at the schools. The treatment should be received from the family physician, or in the dispensaries or hospitals.

After the necessary disinfection and fumigation of the rooms in which there had been an infectious or contagious disease, postal cards were mailed by the Division of Contagious Diseases, notifying the proper schools that it was safe to readmit the child or children living in these rooms.

The total average attendance during the year was 456,394 (*Ibid*, p. 108); school days, 183; schools visited 462; 70,940 visits; 69,047 boys and 70,918 girls, total 139,965, were examined; 7,606 were excluded. Of those excluded, 253 were cases of measles, 118 of diphtheria, 32 of scarlet fever, 25 of croup, 276 of whooping-cough, 517 of mumps, 1,627 of contagious eye diseases, 3,502 of cases of head lice, 152 of body lice, 380 of chicken-pox, 703 of skin diseases, and 21 miscellaneous.

The *Annual Report* for 1899 states (p. 73-4) that the inspection included the grammar, primary, parochial, industrial, kindergarten, intermediate and other schools. The total average attendance was 413,256; school days 192; 594 schools visited; 77,834 visits. There were examined 60,955 boys and 67,852 girls, total 128,787; 9,367 were excluded. Of those excluded, 278 were cases of measles, 119 of diphtheria, 42 of scarlet fever, 20 of croup, 227 of whooping-cough, 675 of mumps, 1,894 of contagious eye diseases, 4,498 of head lice, 86 of body lice, 474 of chicken-pox, 988 of skin diseases; 5 cases of scarlet fever at home, 6 of diphtheria at home; 44 of suspicious fever, 1 of tuberculosis, 2 of ear diseases, and 4 miscellaneous.

Dr. H. G. McAdam, one of the medical inspectors of schools of New York city,²⁶ writes as follows: "In the history of the earliest civilized times we read of medical supervisors, medical directors, and medi-

²⁶*New York Medical Journal*, February 10, 1900; also reprint.

cal attendants as comprising a part of the personal furnishing of scholastic institutions. In the seats of learning in ancient Rome, Greece, and Egypt, we find paid officers skilled in the art curative, and indeed in some of these schools and colleges the man of medicine was the chief figure of the faculty. . . . In more modern days, too, and down even to this year of grace, we find everywhere and at all times, systems or practices or provisions which will answer to the phrase, medical inspection of schools." . . . He goes on to say that these forms of medical work had for their prime object the *cure* of disease. But the object of the present form of medical inspection was not to cure, but to *prevent* disease; taking charge of the well rather than of the sick; considering the entire community in its relation to the school; because these schools potentially were foci for the spread of infectious and contagious diseases. The welfare of the entire community was the object. An ounce of prevention was worth a pound of cure.

He added that the teachers had grown alert and skilful in detecting signs of something wrong, and parents had become more enlightened and vigilant. The child excluded could not return until free from disease; but if he failed to return within a reasonable time the truant-officer visited the residence to learn the reason why. The parents therefore were compelled to give attention to the child, and had also become alive to the importance of hygiene, pure air, good water, cleanly habits and surroundings. The direct work was the prevention of the spread of disease; the ultimate effect was the education of the mass of the people in preventing the origination of disease.

Dr. W. M. Carhart, of New York city,²⁷ writes as follows:

"In most school statistics, diseases of the scalp and skin outnumber other forms, and contagious diseases come next in frequency. Diphtheria and the eruptive diseases are often discovered in their periods of invasion. All such children should of course be excluded until the danger of infection is over. It is in this way only that school epidemics can be avoided."

He further says that during some school examinations undertaken in 1896, he found many children struggling along without correction of vision when the Javal ophthalmometer showed several dioptries of astigmatism; some were wearing lenses for near-sightedness, who were not myopic at all. The eyes of children were not adapted to prolonged strain. The mind of the child of to-day was too often developed at the expense of its vitality and health. Education in schools, public or private, should never be allowed to interfere with the health of a child or

the development of its character. To this end the present methods of education must be greatly altered. The medical profession through medical inspection had the hygiene of the children in its charge.

In the discussion on the above paper, Dr. L. B. Tuckerman, of Cleveland, Ohio, said he had made considerable effort for several years to have medical inspection of schools established in Cleveland, and only last year had it been adopted. One instance in his knowledge showed the necessity of this inspection. A school teacher had a sore throat; her physician told her she might continue teaching. Within two weeks, five children out of her room died; and there were over forty other cases of diphtheria in the same school which were traceable to her as a source of infection.

Dora Keen (see *infra*) stated that, in New York city, a list of absentees was obtained where a case of contagion had occurred, and of 85 families visited, 15 cases of scarlet fever and 19 of diphtheria were found. Many cases of diphtheria and a smaller number of scarlet fever had been unnoticed; 13 cases out of 20 of scarlet fever would have been unknown if the absentee list had not been examined; four did return, and would have remained to spread contagion if they had not been known as dangerous. Others were preparing to return, so that the epidemic would have been indefinitely prolonged.

(To be continued.)

ON A NEW PRINCIPLE IN NEPHROPEXY.

By CARL BECK, M. D.,

NEW YORK.

The principle of this—as it seems to me—new procedure consists in suspending the kidney after having buttonholed it, on the fibres of the nearest muscle. I may be permitted to give the following preliminary report:

In a woman of twenty-four years the right movable kidney, after being exposed by a lumbar incision, was perforated near its lower pole by a trocar of a moderately large size, a procedure which caused but little hæmorrhage. The margin of the spinalis dorsi muscle was incised then, and a bunch of fibres, just large enough to pass the renal buttonhole, mobilized. By a Péan forceps this band-like muscular flap was drawn through the renal hole made by the trochar. Then the end of the flap was fastened somewhat below its former muscular bed by iodoform-silk sutures. Thus the kidney was held *in situ* only by living tissue. There was no reaction, and the operation seems to be a success. The principle of this method is similar to that of my modified method of ligamentopexis, illustrated by Fig. 2 in the *American Journal of Obstetrics and Diseases of Women and Children*, Vol. xlii, No. 8, 1900.

²⁷Bulletin of the American Academy of Medicine, v, 1900-1, p. 60.

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the subsequent questions are as follows:

VII.—What is your method of preventing laceration of the perinæum in labor? (Answers due not later than December 9, 1901.)

VIII.—In fractures of the upper third of the femur, how do you manage the tendency of the upper fragment to tilt forward? (Answers due not later than January 10, 1902.)

IX.—How do you treat gall-stone colic? (Answers due not later than February 10, 1902.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested that the answers be short, no one answer to contain more than six hundred words. We shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers as original communications.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted this month has been awarded to Dr. W. P. McIntosh, of the Marine-Hospital Service (stationed at Mobile, Ala.), whose paper was published in our issue for November 30th.

PRIZE ESSAY NO. VI.

HOW DO YOU USE QUININE

FOR THE PREVENTION AND CURE OF MALARIAL DISEASE, AND WHAT OTHER TREATMENT DO YOU EMPLOY?

(Concluded from page 1015.)

VALUABLE HINTS ON THE SUBCUTANEOUS USE OF QUININE.

Dr. Christopher C. Beling, of the New Jersey State Hospital, Morris Plains, N. J., says:

Quinine may be regarded as a specific remedy for malarial disease. Its salts are used in the treatment of malarial infections almost to the exclusion of other remedies. The sulphate is most commonly used. The hydrochloride seems to act better, but it is not so much used, because it is more expensive.

The administration of quinine for the prevention of malarial disease will depend to a great extent upon the severity of the infection the patient is exposed to, the length of time he may have to reside in malarious localities, and previous malarial infections.

From five to ten grains of quinine, taken every morning, will usually serve as a sufficient prophylactic

in regions where malaria is most prevalent. A useful method is to give the powder in an infusion of strong black coffee, which, apart from its stimulating properties, acts as an excellent medium for disguising the bitter taste of the alkaloid. I have found it to work very well in those patients who were compelled by virtue of their occupation to expose themselves to the early morning air. Syrup of yerba santa is a good vehicle. Three grains of quinine, thrice daily, is usually an efficient dose in regions which are not very malarious.

The administration of quinine for the cure of malarial disease may be instituted in small, or in large doses, either by the mouth or hypodermically, *per rectum* or intravenously. The most common mode of giving it is by the mouth, prescribed in the form of pill, capsule, powder, or solution. Quinine in pill form is uncertain in its action. The hypodermic method is the most satisfactory with regard to the rapidity of the results obtained, and should be employed in those cases of pernicious fever where it is desirable to get the system under the influence of quinine as rapidly as possible. The intravenous injection of quinine has been recommended by some observers, and may be tried in desperate cases.

Quinine may be appropriately administered by enemata in certain classes of patients, such as infants and the insane, where the bitter taste is objectionable and the reason cannot be appealed to. In such cases it may be necessary to combine the quinine with a small dose of opium. The bowel should be previously washed out, and the solution injected slowly, well up into the bowel.

The quantity of quinine necessary to cure the disease is variable. It will depend upon the intensity and the form of the infection. Better results are obtained by the administration of quinine in a few large doses, prescribed with regard to the onset of the attacks, than by a protracted daily use of the drug in small doses. A combination of both methods, one following the other, gives very satisfactory results. In the severe forms, as seen in the tropics, an initial dose of fifteen grains usually suffices. It should be given when the fever is beginning to subside, and then followed by five-grain doses four or five times a day for a week at least, after which it should be continued in two- or three-grain doses with liquor potassii arsenitis, four or five drops, twice or thrice daily, for about a fortnight. Under this treatment relapses are not likely to follow. The initial dose may be varied from ten to fifteen grains or more.

In the intermittent fevers a few ordinary therapeutic doses are generally sufficient to break up an attack, but the fever usually reappears about the end of the eighth day or so. It is, therefore, advisable to give from fifteen to thirty grains in the begin-

ning, in divided doses, and then to follow it up with smaller doses for the next two weeks or so.

Although in regular intermittent fevers the administration of quinine a few hours before the attack is likely to prevent the recurrence of a relapse, the parasite being destroyed in the intracorpuseular stage, the same cannot be predicted of its action in the æstivo-autumnal forms. In these cases the object should be to have a good quantity of quinine circulating in the blood at the time of the attack, or as short a time before it as possible, so that it may act on the parasites when they are sporulating. Quinine destroys the parasite most easily when it comes in contact with it in its sporulating, or extracorpuseular, stage.

It is at times necessary to push the drug vigorously in the pernicious forms. For this purpose the hypodermic method, recommended by Ziemann, may be used. Make a solution of seven grains of the dihydrochloride of quinine in thirty minims of distilled water, and inject it deep into the glutæi. The proportion of quinine to the fluid should not be less than one to four. In this ratio the injections are usually not very painful, and give prompt and satisfactory results, without producing unpleasant symptoms. Another useful way of giving quinine hypodermically is as follows:

R Quinine sulphate. 15 grains;
Tartaric acid. 8 "
Distilled water. 2½ ounces.

M.

The following precautions should be taken: 1. Filter and sterilize the solution of quinine by boiling. 2. Sterilize skin and syringe. 3. Inject *deep*.

It should be remembered that the hypodermic method is very valuable in the severe fevers of children, as it is at times almost impossible to get them to swallow, and rectal medication cannot, as a rule, be depended upon.

Quinine must be used with care, or, as Hare says, "mixed with brains," in malarial fever complicated with nephritis and hæmaturia. In acute intermittent malarial fever with hæmaturia, the indication will be to wait till the attack is over, and then administer quinine to prevent the next paroxysm. The administration of quinine will be necessary in those cases in which the paroxysms are very frequent, and the danger of continued attacks is greater than that of the renal damage from the drug. In such cases the organic salts of potassium should be used to flush out the kidneys, and intestinal lavage with normal salt solution may be employed. A passing remark on the use of quinine in cases of malarial disease complicating pregnancy will probably help to correct an erroneous impression some practitioners have with regard to the oxytocic action of

the drug. Quinine has no effect on the gravid uterus till parturition has begun, and its exhibition is, therefore, not contraindicated. A pregnant woman may take quinine daily, if she is obliged to reside in a malarious district, in addition to taking the other precautions advised for the prevention of malarial infection.

Recent investigations have shown that there is an intimate relation between malaria and mosquitoes. It is still unsettled what part paludism plays in the generation of the disease. In the prophylactic treatment it is safe, therefore, to assume that both these are causative factors.

Attention to the following simple rules will usually suffice to prevent malarial infection:

1. Avoidance of fatigue and excesses of all kinds. Judicious, liberal diet. The use of alcoholic beverages in small quantities, particularly in warm countries; spices and condiments in small quantities; coffee, on account of its tonic properties.

2. The drinking-water should be boiled and filtered carefully unless its purity is unquestionable.

3. Avoidance of exposure at night, which is the time the *Anopheles* usually bites. The protection of the dwelling house from mosquitoes by the use of fine wire or other screens. The destruction of those mosquitoes which have gained entrance into the house. The screening of beds at night.

4. The destruction of mosquitoes by the draining of stagnant holes, pools, drains, and other breeding-places, and the destruction of the larvæ by the use of petroleum thrown on the surface of those pools, which cannot be drained. One ounce of petroleum to fifteen square feet will destroy the larvæ, and continue to prevent their development from two to four weeks.

5. The isolation of the malarial patient from the *Anopheles*, should it exist in the same locality.

Even without the auxiliary action of quinine, the system carries on a more or less successful warfare against the plasmodium of malaria. In this combat the leucocytes appear to play an important rôle. Those suffering from debilitating diseases are usually more susceptible, and are wont to suffer from many relapses. Tonic treatment is, therefore, indicated, and iron in some form should be administered. I have used arsenic and strychnine, as a tonic, in all cases that have come under my care in this hospital, with very satisfactory results.

Sometimes it will be necessary to stimulate the hepatic function by the use of cholagogues. For dysentery complicating malarial infection a pill composed of a grain of blue mass, half a grain of ipecac, and half a grain of opium, twice or thrice a day, is sufficient. Extractum belæ fructus liquidum is an excellent remedy for the enteric complications of malarial infection.

During the chill hot drinks may be given freely. In the hot stage, cold acidulated drinks. Cracked ice may be used for vomiting, cold applications to the head for headache. Treat continued pyrexia by cold or tepid baths. Give stimulants in cardiac weakness and in the algid forms. Removal to a non-malarial region, or better to a high altitude, will establish convalescence very quickly.

Cachectic conditions should be treated vigorously by tonics and stomachics, such as condurango, nuxvomica, gentian, and the use of some alkaline water early in the morning. Enlargement of the spleen may be treated by the external application of the red iodide of mercury ointment over the splenic area. Warburg's tincture is useful in ordinary mild fevers.

Recently guaiacol has been recommended very highly where treatment with quinine has not been successful. Inunctions of creosote, with equal parts of olive oil, in amounts of from thirty to sixty minims for adults, and from fifteen to twenty minims for children, are said to have been tried and found to be satisfactory. A specific action is supposed to have been observed. The results obtained with methylene blue have not been conclusive enough to give it a place by the side of quinine in the treatment of malarial disease.

THE FALLACY OF A QUININE IDIOSYNCRASY.

Dr. P. R. Egan, surgeon in the U. S. army (stationed at Fort Douglas, Utah), writes as follows:

The minimum dose of quinine sulphate used by me in the cure of malarial disease is twenty grains, with a proportionate reduction according to age, for children. Less than this seems insufficient. This amount is given in capsules at bedtime, in combination with an equal quantity of sodium bromide. The bromide is given because it prevents tinnitus, the peculiar fulness of the head, and other nervous symptoms produced by the quinine. They are administered at bedtime to neutralize during sleep any unpleasant action from large doses, and to gain sufficient time for the complete effect of the quinine in arresting the attack of the following day. Given in this way, I have never seen poisonous effects from the drug, nor can I remember when I heard any complaints about either its taste or effects, while complaints about other medicines are unfortunately common. If the patient is habitually constipated and prompt action is required, a stimulating enema is given, but if the case is less grave, a mild dose of calomel is administered during the day and the quinine as usual at bedtime. If the patient is not constipated, no laxative is necessary.

This treatment is promptly curative in ordinary cases. However, if after three days the attacks have not been prevented, another dose of quinine

and bromide is given after breakfast. In cases of the severest type, yet another dose is given after the midday meal. The two pernicious cases that have come under my observation, with unconsciousness and delirium during the exacerbations of the fever, were promptly cured by this method, with but one attack of delirium after the treatment was begun. In two other cases, because of irritability of the stomach, an enema of thirty-five grains of quinine, dissolved by tartaric acid in two ounces of water, had to be substituted for the night dose of quinine and bromide. However, after two days both patients were able to take their medicine by the mouth. Enemata were resorted to rather than hypodermic injections, because of severe abscess seen after this method in the practice of others. Still, if the pernicious cases had failed to promptly respond to the treatment outlined above, I should not have hesitated to inject with due antiseptic precaution fifteen grains of the hydrobromide or hydrochlorosulphate. One case of hæmaturia yielded to the nightly dose of quinine and bromide in three days. I have never found occasion for the use of substitutes for quinine.

For the last twenty years I have used this method, and have been able to test it in the Valley of the Rio Grande and in the tropics. To-day I am unable to remember a case of malarial disease the manifestations of which it failed to control. Recently a case came under my care from the Philippine Islands. One dose in the evening for three days had no effect, and a dose morning and evening for three more days met with an equally unfavorable result. The patient then discovered what he was getting and refused to take any more quinine, as Dr. Brown, Dr. Jones, and Dr. Robinson had told him "in the islands" that quinine was only injurious to him and that he should never under any circumstances take any of it. He said they had given him tincture of digitalis or some such drug in place of it in Manila. He was assured he would receive no more quinine, but was given twenty grains that night and three times the next day. The following morning his temperature was normal, and remained so as long as he was under observation. There are many cases of this kind, and there are very many Browns, Joneses, and Robinsons. In the days before the advent of the plasmodium or of the "typhoid reaction" there was a mild epidemic of what looked like remittent fever at Fort Davis, Texas. I gave every patient admitted to the hospital thirty grains of quinine and bromide three times a day for four days, with absolutely no effect over the disease. Thereafter the patients were dieted without medicine, when the disease ran its course and a gradual recovery took place in every case in about three weeks. The fever never went above 103° F., and there was no diarrhoea or eruption. However, a couple of re-

lapses in officers' children, one of whom presented an eruption, left little doubt in my mind that I was dealing with a mild form of enteric fever, and not with a failure of quinine.

To prevent the recurrence of malarial attacks, the night dose is given for a week, then for four days before the fifteenth day, and for three more days before the twenty-first day from the original attack. A severe case of recurring malarial disease contracted in the Indian Territory some three years previously was in this manner completely cured.

The prevention of malarial infection in a malarious locality I attempted in the early days of my practice by the administration of five grains of quinine in a cup of coffee before the patient left his house in the morning. He was also to take his breakfast before going out, to return before sundown if possible, and to avoid the night air as most dangerous. In this way many were kept free from malaria. At the present day the drainage of ponds and marshes, the application of petroleum to their surface, the planting of trees, the protection of doors and windows with fine-meshed screens to prevent the entrance of mosquitoes, reentering houses at sundown, and remaining therein until after sunrise have been demonstrated to be sufficient for the prevention of malarial infection. But where exposure to the night air is unavoidable, five grains of quinine should be taken daily as long as the exposure continues.

NEVER GIVE QUININE ON A RISING TEMPERATURE,
EXCEPT IN FULMINANT CASES.

Dr. William C. Griggs, of Philadelphia, writes as follows:

With possibly the exception of the administration of mercurial in syphilis there is probably no more strongly established fact in clinical medicine than that the administration of quinine will in great measure prevent and cure malarial fever. It passed the experimental stage years ago, but, unfortunately, there is probably no more ill-used drug in the pharmacopœia to-day than quinine. The stereotyped order "one pill to be taken every two hours till the ears ring" is as scientific as "one pill night and morning till you are salivated."

This little paper will deal not with the microscopic diagnosis, the differences between micro-organisms as a guide to the administration of quinine, for I am afraid that quite a considerable percentage of the readers of this journal are not fortunate enough to possess an immersion lens of sufficient power. So far as the vast majority of the profession is concerned, the administration of the drug can be treated under two principal heads; first, when given for an acute case; secondly, when given for a subacute or chronic one.

Given, then a case of acute malarial fever, quinine should not be used either during the chill or during the febrile stage, not till sweating has begun. Should it be given before, it almost always causes vomiting and the remedy is rejected. Give hot drinks and wrap the patient in a blanket, and as soon as the sweating stage is reached, then is the time to begin the administration of quinine.

In a large number of cases there is considerable nausea at the beginning of an attack; then a dose of ipecac relieves the stomach and makes the administration of remedies easier or even possible. An emetic during the first few hours of a fever is often of much greater use than a cathartic.

After the first dose of quinine, take the temperature every hour. Should it rise again, give an antipyretic, then as soon as the thermometer shows another decline, or sweating again sets in, give another dose of quinine. Give the smallest dose that will control the fever, and if possible stop before ringing of the ears sets in. Be governed by the thermometer instead of the ears. Should the bowels be constipated, move them, of course, but do not give mercury in these cases; I have seen several cases of salivation when even a very small dose of the drug has been given. Podophyllum is the best remedy we have for this condition. It acts on the liver and relieves the engorgement of that organ, something so prevalent in acute cases of malarial fever.

Next to medicinal antipyretics, baths are perhaps the greatest aids to the use of quinine in these acute cases. My rule has been as follows: In slight cases with a temperature of 101° F. or under sponge with tepid water; for cases over 101° up to 103° F., the cold pack—a sheet wrung out of warm water next the patient, covered with another sheet wrung out of cold water. The thermometer is to be placed in the mouth and shaken down continuously till the temperature begins to fall, then give a dose of quinine. For severer cases, when a temperature of from 103° to 105° F. is recorded, a cold bath with general rubbing of the surface of the entire body is indicated, and, lastly, for cases which remain stubborn under the simple bath or those showing 105° F. or over, the ice bath is of the greatest use. Great care must be taken to give the quinine as soon as the thermometer shows the temperature is being reduced; it is much better to give several baths, each shorter than the preceding one, than to give one long bath and have the patient taken out shivering. He should never be kept in the bath or the pack till he feels cold. Ice rubbed over the body in the bath is often very grateful to a patient suffering from a severe attack. I have often had patients say while I was at work over them that it was the best ten minutes they had had since the fever began.

Children stand large doses of quinine wonderfully well. Sweet spirits of nitre and diluted nitrohydrochloric acid are the two greatest aids to quinine.

One word as to the best way to give the drug to small children. Some parents have very great difficulty in giving quinine. Children are too small to take it in pill form, they try to chew "the balls" or cannot swallow them, very often bring them up even after they have been swallowed. If, however, the quinine is made into a solution, the child's head kept low after giving, and, what is the most important part of the performance, the roof of the mouth, back of the teeth and tongue, together with the inside of the cheeks, immediately washed out with a rag soaked in warm water, there will in almost every case not only be an absence of vomiting, but after a dose or two given in this way the child ceases to dread the medicine. Above all, never tell a child it is "nice, sweet medicine," and so coax down a dose; there will always be trouble after the first one. Deception never pays with children.

In the subacute or chronic stage we have a very different set of symptoms, and they therefore require a different mode of treatment. There is, however, in these cases, as in the acute, the cardinal point, never to give quinine on a rising temperature. It reminds one of the old preacher who always refused to pray for rain on a rising barometer. Do not get into a rut in treating these chronic cases, and, as a spur to your endeavors, occasionally read over the advertisements of the patent medicine men, where the patients are made to say that they suffered for years, "physicians were in vain till"—they took Dr. Smith's something-or-another. A great many of them are too true, alas! for some physicians say "only a case of malaria," and give quinine pills "night and morning," or "till your ears ring," and then dismiss the case without further thought.

One of the greatest aids to the use of quinine here is the temperature chart. Patients like it; it is something out of the common to keep one themselves. Then study it carefully every two or three days and note the time the curve begins to mount above the normal line. Explain its use carefully to the patient and impress upon him the importance of taking his temperature as soon as he begins to get the chilly feeling which so often heralds an attack of fever. When this happens, then comes the antipyretic as in an initial case, followed of course by the quinine. Capsicum often aids quinine greatly in these chronic cases, the usual rule being one part of capsicum to two parts of quinine.

Fowler's solution is a great aid, but the bowels must be watched carefully during its administration. Nux vomica is excellent when there is diarrhoea, and is a useful adjunct to quinine at any time.

I have been able to hold in better check cases of diarrhoea in malarial subjects with nux vomica given in small doses than with any other single drug.

In children the spleen and liver enlarge very rapidly sometimes, but abscess of the latter organ is much less likely to follow than in adults. Syrup of iodide of iron lends aid here.

The greatest preventive of malarial fever is, of course, to leave a malarious spot, but if this is not possible, give small doses of quinine every morning after breakfast; a grain is usually sufficient if it is taken regularly every day. If taken upon an empty stomach, it is apt to cause nausea, and even if it does not cause nausea it often "rises," as the patients say, and the bitter taste may be present in the mouth for hours. Twice a week give a small dose of nux vomica; a drop of the fluid extract is the best form.

If the drinking-water comes from wells or streams, boiling it is perhaps the next most important preventive. I have frequently noticed when travelling in malarious districts that the persons who drank nothing but tea or coffee were always less subject to attacks of fever than those who drank the water unboiled.

Mosquito-curtains are perhaps the next greatest aid to the prevention of malarial fever. Although I am not willing to grant that attacks, at least secondary ones, are always caused by the bite of mosquitoes, for I have seen cases upon the hills far above the mosquito line, and the worst attack of fever I ever had personally was at sea a thousand miles from the place where the pilot brought the first mosquito aboard; yet it is a fact that in the tropics, where the worst cases of fever occur, persons who habitually sleep under mosquito-curtains invariably suffer less from attacks of fever than those who sleep unprotected.

Lastly, there is one other line of cases which are never, I believe, seen in this country, but are common in the tropics. Since, however, our government has begun colonization in the far East, it may not be out of place to mention them here. They are the fulminating cases, where the system is overwhelmed early with the poison and death often takes place so quickly that the system never reacts. Here the temperature runs up to an alarming height; I have personally seen it reach the 111° mark. Here, of course, we cannot wait for sweating to take place before giving quinine. It must be given immediately and in large doses, also in the quickest way, hypodermically. The bisulphate should be used in preference to the sulphate, on account of its solubility. It should be largely diluted and injected into the gluteal region or the large muscles in the back, where it is less likely to produce abscess, but, the only other alternative being

death to the patient, a surgeon is not likely to hesitate for fear of abscess. An antitoxine syringe is very useful in administering the drug in this way, as it will carry a much larger dose than the usual needle.

In addition to the quinine hypodermically, give ice baths; ice-water thrown into the bowels will act very promptly, but whatever is used must be used in heroic doses and as quickly as possible.

Therapeutical Notes.

For the Prevention of Chordee.—Gerald Dalton (*Edinburgh Medical Journal*, July) says that the following injection is useful:

℞ Solution of morphine hydrochloride 15 minims;
Cocaine hydrochloride..... $\frac{1}{2}$ grain;
Water to..... 2 drachms.

M.

Inject into the urethra and retain for five minutes, before retiring.

The Treatment of Ozæna with Methyl Blue.—Bonnet (*Gazzetta degli ospedali e delle cliniche*, October 24th) speaks highly of nasal irrigation with a two-and-a-half per cent. solution of methyl blue, practised at first three times, and later once, daily. This method has the inconvenience of staining the nasal orifice and upper lip of a blueish tint, but it causes rapid disappearance of the foul odor, and a cure is commonly attained in three or four weeks.

An Astringent Injection for a Residual Gleet.—Gerald Dalton (*Edinburgh Medical Journal*, July) says that occasionally astringent injections are required (after the irrigation treatment) in the finishing process, when there is a thin glycerin-like discharge, a useful one being:

℞ Zinc sulphate, } of each $\frac{1}{2}$ a grain to 3 grains;
Lead subacetate, }
Tincture of catechu... 10 to 30 minims;
Glycerin..... $\frac{1}{2}$ a drachm to 1 drachm;
Water to..... 1 ounce.

M. For injection.

Suprarenal Extract in Gonorrhœa.—Dr. George O. Jarvis, in the *International Medical Magazine* for September, reports cases of gonorrhœa treated with suprarenal extract, which, by its exsanguinating effect, lessens congestion, facilitates local applications and drainage, and diminishes absorption of toxins.

He gave injections every three or four hours, or as often as was necessary to reduce the inflammation, of about one drachm of the following solution:

℞ Suprarenal extract..... 2 drachms;
Cresol..... 5 to 10 minims;
Water and glycerin..... to 1 ounce.

M.

The bowels are to be kept well open and proper diet and habits enjoined. This treatment seems to be specially efficacious, as, indeed, might be expected, in the prevention of chordee.

For Dysentery.—The *Journal of Tropical Medicine* for November 1st gives the following:

℞ Magnesium sulphate..... 1 drachm;
Dilute sulphuric acid, } of each 10 minims;
Tincture of opium, }
Quinine sulphate..... 1 grain;
Corrosive mercuric chloride... $\frac{1}{32}$ of a grain;
Peppermint water..... $\frac{1}{2}$ an ounce.

M.

This dose to be taken every three hours.

Local Anæsthesia by Antipyrine.—The *Journal des praticiens* for October 19th gives the following formula, as recommended by Terrier and Pereire:

℞ Powdered antipyrine..... 30 grains;
Cocaine hydrochloride..... $\frac{3}{8}$ of a grain;
Boiled filtered water..... 60 minims.

M.

Each injection of fifteen minims contains $7\frac{1}{2}$ grains of antipyrine and about $\frac{1.5}{100}$ of a grain of cocaine. From one to three injections may be employed.

Sodium Bicarbonate in Vomiting of Pregnancy.—Gastric pain, heartburn, acidity, nausea, and vomiting, occurring especially in the morning and relieved by taking food, are all symptoms commonly observed both in hypersecretion and during pregnancy. A French physician, struck by the resemblance to these symptoms of those experienced by certain pregnant women, has acted upon this suggestion, according to the *Medical Standard* for October. He reports in the *British Medical Journal* that satisfactory results have been obtained in the case of pregnant women by administering daily five doses of sodium bicarbonate, each consisting of thirty grains given in a capsule.

An Ointment for Instillation in Gonorrhœa.—Gerald Dalton (*Edinburgh Medical Journal*, July) has had distinctly good results from the following:

℞ Carbolic acid..... 10 grains;
Pure iodine..... 5 "
Olive oil..... $\frac{1}{2}$ a drachm;
Lanoline to..... 1 ounce.

M. ft. unguentum.

To be used, with or without preliminary irrigation, by means of a Guyon catheter syringe, or a small silver tube with a short terminal curve screwed on to a hypodermic syringe, passed through the compressor muscle into the posterior urethra. The instillations may be performed every second, third, or fourth day, according to the strength of the ointment used, immediately after an irrigation. *Antrophores*, which consist of small coiled springs coated with an insoluble substance, outside which is an insoluble mass with which the various drugs may be incorporated, may be used in those cases where patients are unable to attend regularly. They are of two forms, urethral and prostatic, the former six inches, the latter nine inches long, for use according to the site of disease. They are introduced into the urethra on going to bed, and are left in fifteen minutes. The spring is then withdrawn and leaves most of the drug mass in the urethra.

Flexible bougies coated with the ointment may also be used.

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A LESSON FROM HAVANA.

We have often spoken admiringly of the good work done by the chief sanitary officer of Havana, Major and Surgeon W. C. Gorgas, United States Army, but not until the issue of his report for the month of October has there been made known such a complete and convincing demonstration of his triumph over yellow fever, a disease that has been endemic in the city for a century and a half. By whatever means it might have been achieved consistently with civilized methods, such a triumph would have been hailed by everybody as a splendid advance in sanitation, but when it proves, as in Major Gorgas's judgment it seems to prove, that the mosquito is the sole agent in spreading the disease, it puts the finishing touch to the argument in favor of the insect theory of causation, makes Dr. Charles Finlay's name immortal, and does away forever, we venture to hope, with the "shotgun quarantine."

For the last twelve years there has been an average of 66.227 deaths from yellow fever in Havana during the month of October, which is "one of the severest months for yellow fever." The largest number for the month, 240, occurred in 1896, and the smallest, 25, in 1899. In October of this year there were no cases reported and no deaths in cases previously reported and holding over into October (three in number). "It has only occurred a few times since yellow fever became endemic in Havana, some century and a half ago," says Major Gorgas, "that an October day (and certainly never two successive days) has passed without a death from yellow fever. This year we passed the whole of October without a case or a death." So great a change,

he argues, cannot be due to chance or to the continued improvement in general sanitation. The general death rate in Havana for October, 1900, was 24.33; for October, 1901, it was 20.17. This difference, substantial as it is, is not such as to warrant crediting general hygienic measures with the utter stamping out of yellow fever. As regards precautions against this one disease, there has been but one new element this year—the effort to exterminate mosquitoes.

Since February of the present year Major Gorgas's force has endeavored to kill all the mosquitoes in the neighborhood of every focus of the disease as it was discovered, and has carefully disinfected every house that has lodged a yellow fever patient, together with all the adjacent houses. All the work against yellow fever has been done upon the hypothesis that the mosquito is the only carrier of the disease. Fomites have not been considered in any way, clothing has not been disinfected, and the only effort has been to kill the mosquitoes that had bitten a sick person and to prevent any more mosquitoes from biting. The results have been so positive that it was soon seen, not only that Havana could thus be freed from yellow fever, but that every focus of infection from without the city could be sterilized immediately upon its discovery. "The business interests of Havana," says Major Gorgas, "were so closely united to those of neighboring towns that it was impossible to quarantine against them without causing entire business paralysis. These towns, early in the year, showed yellow fever infection, and a system of inspection of non-immunes was adopted whereby every non-immune coming to the city from infected points in the neighborhood was registered and kept under observation for a week. In this way we have managed to get hold of all cases coming from these points—some fifteen or twenty cases."

We believe that New Orleans and the other Gulf cities of the United States will soon demonstrate that they have learned the lesson taught by Major Gorgas in the following paragraph: "The practical application of this great truth made in Havana this year will within a few years, it seems to me, be carried out by our southern cities liable to yellow fever. It seems to me that if in Havana, where yellow fever has been endemic for 150 years, and where at present there is a non-immune population of somewhere

in the neighborhood of 40,000 people, we cannot only get rid of yellow fever, but have free communication with a half-dozen infected towns in our neighborhood, and yet prevent the introduction of the disease, then all our southern cities ought more easily to do the same thing." We believe the sanitary officials of our Gulf towns are such men that not "within a few years," but at once, they will act on Major Gorgas's hint. The sanitary revolution that has been accomplished in Cuba as a consequence of the American occupation must ever count greatly to the credit of American medicine and of American discipline. It must not be neutralized in the least degree by failure to learn the lesson from Havana.

THE TREATMENT OF MALARIAL FEVERS.

In this issue we complete the publication of as many of the essays submitted in the sixth series of Our Subscribers' Discussions as we can spare space for. All of them, it seems to us, call to mind important points to be observed. The ætiology of malarial disease has undergone a revolution within recent years, and there are few if any who oppose either the view that the disease is due to Laveran's plasmodium or the thesis that certain mosquitoes are the means of conveying the infection. It is not a little remarkable, we think, that there should be so little opposition shown to these two matters of general conviction, for as a rule there are many who, apparently from mere perversity, dissent from anything that seems to them an innovation. For such men, the world does not move, but they do not really block the advance of knowledge, and perhaps they sometimes favor it by disposing their fellow-men to a finer distinction between that which is merely novelty and that which is real progress. We may consider the plasmodium theory and the mosquito theory as established.

In the matter of treatment, quinine is unchallenged as the sovereign remedy, but as to how that drug should be administered and as to what other measures of treatment it may be wise to resort to, much is to be learned from the experience of the great body of medical men who do not ordinarily make themselves heard. One of our contributors, Dr. Griggs, lays it down as a rule that quinine should not be given "on a rising temperature," ex-

cept in fulminant cases. By this he means, we presume, that there is no use in shutting the stable door after the horse is gone—in other words, that it is useless to give quinine after the temperature has begun to rise as the introduction to another paroxysm. To quote Dr. Frederick C. Shattuck, in his notes to the recently issued third American edition of Strümpell's *Text-book of Medicine*: "Four hours is the shortest time that it is safe to allow for quinine by the stomach with probability that the expected chill will be prevented." All writers are agreed, so far as we know, that in pernicious cases cinchonism must be induced as quickly as possible, no matter what the temperature may be or what may be the particular manifestations aside from the stages of chill, fever, and sweating.

We quite agree with Dr. Egan that there is no such thing as a real idiosyncrasy forbidding the employment of quinine. It is very true that the drug sometimes induces vomiting in children. If it is the bitter taste that leads to this effect—and we do not think it always is—we may prescribe the tannate incorporated with chocolate, or dissolve the sulphate in a strong infusion of coffee, as is mentioned by several of our essayists. If we are not mistaken, it was Dr. Abraham Jacobi who first recommended this mode of administering quinine to children, and it is our recollection that he insisted that the coffee should be strong, cold, not more than a tablespoonful in amount, and unsweetened. If for some other reason than its bitter taste quinine causes vomiting, we may resort to suppositories containing the proper dose of the bisulphate. Dr. Belling properly lays stress upon the importance of the subcutaneous administration of quinine in certain cases, and the danger of the formation of abscesses, if an acid is used to aid in the solution of the drug, should not stand in the way of this method of administering the quinine in cases calling for it. To quote again from Dr. Shattuck, "Such a risk should have no weight if the physician has any suspicion that he has to deal with the pernicious form of the disease." Some of our contributors mention opium as a useful adjuvant, and we are inclined to think that its value is not so widely appreciated as it deserves to be. Opium is not a mere analgetic and narcotic; it is distinctly a supporting drug.

As to the use of oil of citronella as a preventive of mosquito-bites, mentioned by Dr. McIntosh, it is

our impression that it protects only the parts to which it is applied, and we must caution our readers against anointing the forehead too copiously with it if they are to undertake any considerable exertion on a hot day, for the perspiration is apt to wash it into the eyes, upon which it has a decidedly irritating action.

A RARE PIECE OF NEWSPAPER FRENZY.

What with the sad affair of President McKinley's assassination, the deplorable outbreak of tetanus in St. Louis as a result of contamination of a lot of diphtheria antitoxine, and the occurrence of several cases of tetanus falsely attributed to vaccination in Camden, the newspapers have of late given unusual attention to medical matters. As we have heretofore acknowledged, they have in the main dealt justly and intelligently with these affairs. A notable exception is to be found in the *Washington Post* for November 20th, in an editorial article entitled *Killing Children Again*. The tetanus cases seem to have inspired the writer to uncork the phials of his wrath against the medical profession, but he strikes out wildly at all the bacteriological examples of progress in therapeutics.

The *Post* has borne an excellent reputation, and we marvel that it should have admitted into its editorial columns such a tirade as the article mentioned. It is nothing more or less than pure rant. No attempt is made to disguise the venom with the least semblance of argument. The writer is evidently playing to the gallery. So palpable is this that the article will doubtless fail to be taken seriously by any well-balanced person. We question if even the professional antivaccinationists will not shrink, brazen and unscrupulous as they are, from pointing to such ravings in confirmation of their grotesque assertions. It is possible to be unfair and fanatical, and yet preserve some decency of expression, but the *Post's* article is vulgar as well as abusive. It may prove injurious among those who are too ill informed to detect its fallacies and unable to distinguish its ferocity from force, and medical science aims to preserve their life and health as well as those of the refined. It is on this account alone that we pay any attention to it, for the medical profession, so far as regards its own sake, can well afford to treat all such attacks with indifference.

TETANUS AND VACCINATION.

From a professional point of view, ample evidence has already been adduced to show that in the Camden cases, at least, vaccination was not responsible for the tetanus that ensued. An important fact, however, which should be forcible enough to impress even the lay mind, was recently made public by Dr. Davis, the president of the board of health. Two brothers were vaccinated from the same vaccine point; yet, while one of them subsequently died from tetanus, the other, whose arm was hardly sore, passed through a normal vaccination without any harmful results. It must be pretty clear, in this case, at any rate, that the environment, and not the vaccine, was responsible for the introduction of tetanus into the system. Such facts ought to be made widely known, to counteract the harmful prejudice that popular and irrational outcry occasions. In this clamor, as in everything which can subserve the ends of sensationalism, the newspapers have been a prominent factor. If they must hasten to make public all such topics *before* they have been subjected to a careful scrutiny by competent authorities, they should at least give equally widespread prominence to such convincing evidence as that now adduced on the other side, to calm the panic that they have so largely contributed to cause.

THE IMPORTANCE OF POST-MORTEMS ON LUNATICS.

A coroner's jury, after a prolonged investigation, has acquitted the authorities of the Cook County Asylum for the Insane, at Dunning, Ill., of any blame for the death of John Renz, a patient who died in the institution of self-inflicted wounds. As a result of this inquest the superintendent of the asylum has requested the county commissioners to direct that post-mortem examinations be made of the bodies of all patients who die in the institution. The history of this case is but a repetition of what has occurred time and again in hospitals for the insane, and as a safeguard against any possible brutality of the nurses on the one hand, and as a means of protecting the staff and the institution against the belated lodgment of baseless charges of cruelty on the other, the adoption of the post-mortem examination as a routine measure has much to recommend it. In this State, and probably in many others, the consent of the nearest of kin is required by law, but this is a matter which could and probably should be changed so far as applies to the pauper insane.

A REMARKABLE CASE OF FOREIGN BODY IN THE UTERUS.

The tolerance of foreign bodies occasionally shown by the cavities and passages of the body is astonishing—rarely more so perhaps than in a case recorded by Czarnecki (*Deutsche medicinische Wochenschrift*, 1901, No. 23; *Berliner klinische Wochenschrift*, October 21st). A girl twelve years old inserted a pen-case into her vagina, ostensibly to prevent the menstrual flow. She afterward made several attempts to remove it, but failed. She grew up without experiencing any discomfort from the foreign body, married, and, when she was thirty-five and a half years old, had an abortion in the fifth month of gestation. After the abortion she could no longer perceive the pen-case. A year and a half later she was brought to bed at term, and Czarnecki found the foreign body within the uterus, lying by the side of the fetal head, from which position he extracted it by incising the cervix. It was about three inches long and rather more than an inch in thickness. He infers that it found its way into the uterus at the time of the abortion, and remained there for a year and a half without causing any disturbance.

A NEW JOURNAL OF ANATOMY.

The first number of the *American Journal of Anatomy* has been received at this office. It is a large octavo of 98 pages of text, beautifully printed and profusely and admirably illustrated. The new journal is edited by a board of nine well-known anatomists, of which Dr. Henry McE. Knowler, of the Johns Hopkins University, is the secretary, and the list of collaborators is made up of the names of sixty-five eminent teachers and investigators living in various cities of the United States and Canada. The journal is to be issued quarterly. It is published in Baltimore. Human anatomy is its chief field, but it is announced that comparative anatomy, embryology, histology, and cytology will also be included. This excellent publication cannot fail, we should say, to stimulate and reward anatomical research in America.

A NEW LIFE INSURANCE MEDICAL JOURNAL.

A new monthly journal, entitled the *Fraternal Medical Examiner*, has made its appearance. The first number is dated November, 1901. It is edited and published in Omaha by Dr. Ira W. Porter. The medical affairs of fraternal beneficiary orders seem to constitute its special scope, but life insurance in general, which touches medicine at many points, is also to meet with its consideration. If we may judge by the initial number, the *Examiner* is destined to render a peculiar service to the administration of life insurance affairs.

News Items.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending November 30, 1901:

Smallpox—United States.

California....	San Francisco..	Nov. 10-17....	1 case.	
Illinois.....	Chicago.....	Nov. 16-23....	4 cases.	
Indiana.....	Evansville....	Nov. 16-23....	2 cases.	
Louisiana....	New Orleans....	Nov. 16-23....	10 cases.	1 death.
"	Shreveport....	Nov. 16-23....	3 cases.	
Massachusetts.	Boston.....	Nov. 16-23....	37 cases.	4 deaths.
"	Cambridge....	Nov. 16-23....	3 cases.	
"	Chelsea.....	Nov. 16-23....	1 case.	
"	Everett.....	Nov. 16-23....	1 case.	
"	Newton.....	Nov. 16-23....	1 case.	
"	Somerville....	Nov. 16-23....	1 case.	
Minnesota....	Minneapolis..	Nov. 9-23....	5 cases.	
Missouri.....	St. Joseph....	Sept. 1-Oct. 31.	80 cases.	
Nebraska....	Omaha.....	Nov. 16-23....	4 cases.	
New Jersey....	Camden.....	Nov. 16-23....	1 case.	
"	Jersey City....	Nov. 10-26....	9 cases.	
"	Newark.....	Nov. 18-25....	25 cases.	2 deaths.
New York....	New York....	Nov. 16-23....	6 cases.	1 death.
Ohio.....	Ashtabula....	Nov. 16-23....	1 case.	
"	Cincinnati....	Nov. 16-23....	3 cases.	
Pennsylvania.	Allegheny City.	Nov. 16-23....	2 cases.	
"	Lebanon.....	Nov. 16-23....	2 cases.	
"	Norristown....	Oct. 12-Nov. 23.	39 cases.	5 deaths.
"	Philadelphia..	Nov. 16-23....	46 cases.	7 deaths.
Tennessee....	Nashville....	Nov. 16-23....	1 case.	
Utah.....	Salt Lake City.	Nov. 9-23....	4 cases.	
Vermont.....	Burlington....	Nov. 16-23....	1 case.	
Washington....	Tacoma.....	Nov. 9-16....	1 case.	
Wisconsin....	Greenbay....	Nov. 17-24....	6 cases.	

Smallpox—Foreign.

Argentina....	Buenos Ayres..	Sept. 1-30....	93 deaths.	
Brazil.....	Pernambuco....	Oct. 1-15....	74 deaths.	
Canada.....	Nova Scotia..			
"	Halifax.....	Nov. 16-23....	10 cases.	
Colombia....	Cartagena....	Nov. 4-11....		3 deaths.
"	Panama.....	Nov. 11-18....	125 cases.	
France.....	Nice.....	Oct. 24-31....		2 deaths.
"	Paris.....	Nov. 2-9....		4 deaths.
"	St. Etienne....	Oct. 18-31....	1 case.	
Gt. Britain...	Glasgow.....	Nov. 9-16....	1 case.	
"	London.....	Nov. 2-9....	297 cases.	19 deaths.
Russia.....	Moscow.....	Oct. 26-Nov. 2.	16 cases.	2 deaths.
"	Odessa.....	Nov. 2-9....	5 cases.	2 deaths.
"	St. Petersburg.	Oct. 26-Nov. 9.	4 cases.	1 death.
"	Warsaw.....	Oct. 26-Nov. 2.	1 case.	
Spain.....	Malaga.....	Oct. 26-Nov. 2.		4 deaths.
Uruguay....	Montevideo...	Sept. 21-Oct. 12.	161 cases.	15 deaths.

Yellow Fever.

Brazil.....	Pernambuco....	Oct. 1-15....		1 death.
Mexico.....	Merida.....	Oct. 26-Nov. 2.	Several cases.	
"	Valladolid....	Oct. 26-Nov. 2.	Several cases.	
"	Vera Cruz....	Nov. 9-23....	41 cases.	12 deaths.

Cholera.

India.....	Bombay.....	Oct. 22-29....		1 death.
"	Calcutta.....	Oct. 12-26....		55 deaths.
"	Madras.....	Oct. 19-25....		40 deaths.
Java.....	Batavia.....	Oct. 12-19....	25 cases.	20 deaths.

Plague—Foreign and Insular.

Gt. Britain...	Liverpool....	Nov. 7.....		1 death.
India.....	Bombay.....	Oct. 22-29....		191 deaths.
"	Calcutta.....	Oct. 12-26....		36 deaths.
"	Karachi.....	Nov. 13-20....	20 cases.	9 deaths.
Russia.....	Odessa.....	Oct. 31-Nov. 9.		1 death.
Hawaiian Islands...	Honolulu....	Nov. 8-10....		1 death.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending November 30, 1901:

DISEASES.	Week end'g Nov. 23		Week end'g Nov. 30	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever....	75	16	67	18
Scarlet fever....	184	12	183	20
Cerebro-spinal meningitis....	0	3	0	3
Measles.....	316	11	429	12
Diphtheria and croup.....	269	46	283	49
Small-pox.....	6	1	10	2
Tuberculosis.....	241	131	283	166

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending November 30, 1901:

BAKER, DAVID, First Lieutenant and Assistant Surgeon, is relieved from duty as surgeon on the transport *Meade* and from further duty in the Division of the Philippines, and will report in person to the commanding general, Department of California.

FAUNTLEROY, POWELL C., Captain and Assistant Surgeon, is granted leave of absence for fifteen days.

FIELD, PETER C., First Lieutenant and Assistant Surgeon, is relieved from further duty at Fort Slocum, N. Y., and will proceed to Fort Robinson, Nebraska.

HEFFENGER, ARTHUR C., Contract Surgeon, will report at Fort Constitution, New Hampshire, for duty.

HORR, EDWARD F., Captain and Assistant Surgeon, is granted leave of absence for two months.

ROBERTS, DAVID M., Contract Surgeon, is relieved from temporary duty at Fort Bliss, Texas, and will proceed to Fort Sam Houston, Texas, for duty.

SARGENT, ERLE H., Contract Surgeon, will proceed to San Francisco for transportation to the Philippine Islands.

WILLIAMS, CHARLES F., Contract Surgeon, is relieved from duty at Fort McPherson, Georgia, and will report for duty with the First Battalion of the Twenty-seventh Infantry, *en route* to the Philippine Islands.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending November 30, 1901:

BEEBE, D. G., Assistant Surgeon. His resignation is accepted, to take effect November 30, 1901.

BUCHANAN, J. B., M. D. Appointed an assistant surgeon in the Navy from November 23, 1901.

DRAKE, N. H., Surgeon. Detached from duty as a member of the medical examining board, Naval Laboratory, New York, and ordered home to await orders.

GREEN, E. H., Medical Inspector. Commissioned a medical inspector from November 3, 1901.

PERSONS, R. C., Medical Inspector. Commissioned a medical inspector from November 3, 1901.

RUSSELL, A. C. H., Surgeon. Ordered to duty as a member of the medical examining board, Naval Laboratory, New York.

SNYDER, J. J., Assistant Surgeon. Ordered home and granted leave of absence for three months when discharged from the Mare Island Hospital.

THOMPSON, EDGAR, Assistant Surgeon. Detached from the Naval Hospital, Chelsea, Massachusetts, and ordered to duty at the Charleston Exposition, in charge of the exhibit of the Medical Department of the Navy, and in attendance upon the Marine Guard and the Marine Recruiting Rendezvous.

Society Meetings for the Coming Week:

MONDAY, *December 9th.*—New York Academy of Medicine (Section in General Medicine); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private); New York Ophthalmological Society (private); Lenox Medical and Surgical Society, New York (private); Harlem Medical Association of the City of New York; Gynecological Society of Boston; Burlington, Vermont, Medical and Surgical Club; Norwalk, Connecticut, Medical Society (private).

TUESDAY, *December 10th.*—New York Academy of Medicine (Section in Genito-urinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark (private) and Trenton, N. J., Medical Associations; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Phila-

delphia; Practitioners' Club, Richmond, Kentucky; Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, *December 11th.*—New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Massachusetts, Medical Association (private); Philadelphia County Medical Society.

THURSDAY, *December 12th.*—Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Massachusetts, Medical Club (private); Pathological Society of Philadelphia.

FRIDAY, *December 13th.*—Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, *December 14th.*—Obstetrical Society of Boston (private).

Dr. Smith Ely Jelliffe has been appointed visiting neurologist to the City Hospital.

Public Drinking Cups are to be Abandoned in the public schools of Cleveland on the recommendation of the health officer of the city, because of the dangers of conveying infection through their agency.

The Nursery and Child's Hospital, New York.—Dr. J. J. Hall has been appointed consultant physician to this institution, in succession to Dr. T. M. Markoe, deceased. The vacancy on the attending staff, caused by the resignation of Dr. J. J. Hall, will be filled in January.

Three Additional Cases of Tetanus in Camden have developed since our last note on the matter was printed. In these, as in the earlier cases, the disease did not develop until twenty days or more after vaccination, a fact which of itself gives assurance that the germs are not conveyed by the virus.

Segregation of the Tuberculous in Arizona.—In the annual report of the Governor of Arizona to the Secretary of the Interior he insists that the time has come to afford some protection to that portion of the population which is in a normal condition of health, from infection from the large number of patients, suffering from tuberculosis who come to Arizona.

A Hygienic Laboratory for the Marine-Hospital Service.—The appropriation of \$30,000, made at the last session of Congress for the erection of a building for the laboratory for the study of hygiene by the Marine-Hospital Service, is now available and a site for the laboratory has been selected on the Potomac flats near the terminus of the proposed memorial bridge across the river.

The Philadelphia Municipal Hospital.—A concerted movement is on foot to secure the removal of the Philadelphia Hospital for Contagious Diseases from its present site to one more remote from the thickly populated districts. The present site is a valuable one, and it is expected that it will be sold and that the sum so secured will suffice to purchase a site and to erect and equip a hospital in some more suitable locality.

A Physician Elected as a Trustee of Columbia University.—One of the two vacancies on the board of trustees of Columbia University was filled on December 2d by the election of Dr. Edward L. Trudeau.

In Active Practice at Ninety-eight.—Dr. Charles F. Willgohs, of Clinton, Ohio, recently celebrated his ninety-eighth birthday. Dr. Willgohs is probably the oldest physician in active practice in this country.

The Ray Brook Site for the Tuberculosis Hospital.—The Board of Trustees of the New York State Hospital for Consumptives have finally decided to locate the hospital at Ray Brook, on the western slopes of the Adirondack Mountains.

Fined for Operating a Hospital without a License.—The officials of St. Luke's Society have been fined for conducting a hospital without a license at 1712 Indiana Avenue, Chicago. The fine was suspended on the officials agreeing to secure a license.

Swine-pox in Buffalo.—Dr. C. H. Zink, an inspector of the Bureau of Animal Industry of the Department of Agriculture, recently discovered and condemned the carcasses of forty-seven hogs, which had been brought to that city from Louisville and then killed. The carcasses were destroyed, and extra precautions are being taken to shut out any affected hogs.

Flushing Hospital Finances.—The Flushing (L. I.) Hospital is said to be in financial straits, and the sum of \$5,000 must be raised to prevent its closing. The hospital has no endowment fund, and only receives from the city an allowance of sixty cents daily for each medical, and eighty cents for each surgical, patient. A committee, consisting of James A. Renwick, Albert B. Thayer and I. L. Hicks, has been appointed to try to collect the requisite funds.

To Investigate the Tetanus Cases.—A committee of three members has been appointed by the president of the City Council of St. Louis to make an investigation as to where the responsibility lies for the tetanus cases which recently occurred in that city, following the injection of diphtheria antitoxine made by the board of health. Dr. Starkloff, the health commissioner of the city, proposes that the responsibility shall be more definitely fixed than was done by the coroner, whose verdict charged the health department with negligence. This department includes the mayor, the president of the council, the police commissioner, two physicians, and the health commissioner, Dr. Starkloff.

Small-pox.—A number of cases of small-pox have occurred in Boston, and the newspapers of that city are devoting a good deal of attention to the subject. Every effort is being made to insure vaccination, but the anti-vaccination society is flooding the city with circulars opposing the practice of vaccination. In Montreal the health authorities fear an epidemic of the disease, as

it seems to be spreading steadily. An outbreak has occurred in the Polish quarter of Buffalo and is causing much concern to the authorities. Cases are also reported at Rochester and Syracuse and at several points near that city. In New York city a few cases are reported from week to week, but the number remains about the same as for some time past. In several of the smaller towns of Michigan scattering cases are reported. In Philadelphia forty-six cases and seven deaths were reported for the week ending November 23d, a decrease as compared with the preceding week, and the authorities are quoted as stating their belief that the spread of the disease in that city has been checked by the very general resort to vaccination.

A Proposed Country "Annex" to Rush Hospital, Philadelphia, was the subject under consideration at a recent meeting of the board of directors and managers of that institution. It was proposed to purchase a farm to be used as an annex, or country branch, to the hospital. The farm, consisting of forty-seven acres, is situated in Willistown township, Chester county, Pa., on the main line of the Pennsylvania Railroad, two miles from Malvern Station and three miles from Philadelphia. Malvern is the highest point between Harrisburg and Philadelphia, being 635 feet above sea level.

There is a new three-story frame dwelling, fifty-two by twenty-four feet, containing twenty-one rooms. Attached is a stone dwelling containing nine rooms and the usual and requisite outbuildings.

The house will accommodate seventeen patients, each in a separate room. It is expected that all milk, vegetables, and potatoes will be obtained from the farm for both hospitals, and in this way will reduce the expenses of the city branch.

The Refusal to Admit Consumptives to this Country.—On November 9th an attempt was made to prevent from landing in this country a passenger by the *Lucania*, with his wife and babe, on the ground that he was suffering from tuberculosis, which the authorities at Ellis Island hold comes under an act of Congress, passed on March 3, 1891. This act was designed to keep out of the country idiots, insane persons, paupers, criminals, persons likely to become a public charge and "persons suffering from a loathsome or a dangerous contagious disease."

The passenger at once appealed to the Treasury department and a re-examination was ordered. The Treasury department, alleging that the re-examination had been unfavorable, ordered the patient to be sent back on the next Cunard line steamer, the *Etruria*. The patient has relatives at Philadelphia, who have retained a Philadelphia lawyer to test the ruling. A writ of habeas corpus was obtained.

On November 29th, the United States Court in Brooklyn decided that the patient must be deported, notwithstanding the fact that he had lived in this country for four years.

The Periodical Inspection of Hospitals.—Referring to the report on the recent investigation in the matter of the Emergency Hospital of Detroit, Dr. Emil Amberg has written to the health board and says that while the report, taken as a whole, is satisfactory, he must disagree with the conclusion that "nothing remains for your board to do." Dr. Amberg continues: "It seems to me that this conclusion is rather contradicting your own statements, as you acknowledge the necessity for improvement. I, therefore, suggest that the board examine the hospital again, after a reasonable period of time has elapsed, in order to report on the improvements which are promised to be carried out."

"Furthermore, I suggest that the board of health appoint a committee, consisting of five members of the advisory council, which committee shall inspect, at least twice a year, all hospitals, dispensaries, homes, and similar institutions."

The Pennsylvania State Board of Health on Vaccination.—The Board of Health of the State of Pennsylvania, at its recent meeting held in Harrisburg, Pa., passed the following resolutions: "Resolved, That in view of the very natural public apprehension in regard to the possibility of tetanus following vaccination, as illustrated by recent cases of this accident in a neighboring State, this board desires to state its conviction, founded upon a careful study of the history of vaccination and of the cases referred to, that it has yet to be demonstrated that vaccine virus ever contains or becomes contaminated with the germ of tetanus. When such occurrences as those referred to take place, it is because owing to carelessness, usually on the part of the person vaccinated, the germs of tetanus have gained access to the wound on the arm, as they may to any other wound, abrasion, or scratch upon the surface."

"Resolved, That there is no reason for dreading, or abstaining from vaccination, because of these recent cases. This is sufficiently demonstrated by the fact that more than half a million persons have been vaccinated in and around the city of Philadelphia within the past few months without the occurrence of a single case of tetanus."

"Resolved, That this board condemns in the strongest possible terms the use of any material or medicament administered by the mouth as a substitute for vaccination, and that any physician furnishing a certificate of successful vaccination based upon the administration of any such substance or remedy lays himself open to prosecution for violation of a State law."

The Social Evil and Disease.—The committee of seven, selected by the Medical Society of the County of New York to study the subject of venereal disease in this city, has issued its report. With regard to the question of decreasing the dissemination of these diseases by the direct legal regulation of prostitution the committee agrees that it is out of the question. Segregation of prostitutes as a means of checking the evil, the committee regards as scarcely to be ef-

fectured without some approach to legal toleration of the evil.

The committee believes, however, that moral and immoral tenants should not be allowed to occupy the same premises. Above all, families with children must be protected from contact with the contamination by immoral neighbors. The enforcement in moderation of existing laws will accomplish this purpose very fully. The committee is agreed that all external signs of the presence of evil, all red lights, street or window solicitation, indecent exposure, etc., must be completely suppressed. As to a penalty for the transmission of syphilis, the committee feels that the presence of such a law on the statute books would be of educative value. The board of health, the committee holds, has the duty of controlling contagious diseases. Every dispensary and hospital receiving public aid should provide treatment for venereal diseases. The impression that venereal diseases are easy of cure must be removed. All advertisements of secret "sure remedies," of special infallible prescriptions, and of venereal quacks who never fail to cure, should be absolutely forbidden.

The St. Louis Medical Society of Missouri.—At the last regular meeting, on Saturday, November 30th, Dr. John T. Bryson reported six prostatic cases, with remarks on the technics of operation.

The Medical Society of the State of Pennsylvania will hold its next meeting in Allentown, Pa., on September 16, 17, and 18, 1902. The officers are as follows: President, Dr. Francis P. Ball, of Lock Haven; secretary, Dr. Cyrus L. Stevens, of Athens.

The Brooklyn Medical Society held its annual memorial meeting in the hall of its own building, on Bedford Avenue, on December 2d. The report of the historical committee was presented by Dr. H. N. Hoople, including biographical sketches of twelve members who have died during the past year, and a eulogy on the medical profession was delivered by Father McCarty.

The Jackson County (Mo.) Medical Society has elected the following officers for the ensuing year: President, Dr. William Frick; vice-president, Dr. W. S. Wheeler; secretary, Dr. E. H. Thraikill; treasurer, Dr. L. W. Luscher; librarian, Dr. Fred Van Eman. The new executive committee is composed of D. Nannie P. Lewis, Dr. A. Talbott, and Dr. J. W. Kyger.

Officers of the Chicago Electro-Medical Society.—At the annual meeting of this society, held on November 26th, the following officers were elected for the ensuing year: President, Dr. G. G. Burdick; first vice-president, Dr. H. W. Baer; second vice-president, Dr. Emil H. Grubbe; secretary and treasurer, Dr. R. H. Street. The society proposes to give active aid to the board of health in the suppression of the illegal practice of electro-therapeutics.

The Southern Surgical and Gynæcological Association.—At the fourteenth annual meeting, held in Richmond, Va., 12th-14th inst., officers were elected as follows: President, Dr. W. E. B. Davis, of Birmingham, Ala.; first vice-president, Dr. J. Wesley Bovée, of Washington, D. C.; second vice-president, Dr. J. W. Long, of Salisbury, N. C.; treasurer, Dr. Floyd N. McRae, of Atlanta, Ga.; secretary, Dr. W. D. Haggard, Jr., of Nashville, Tenn. Cincinnati was selected for the next place of meeting.

Medical Society of City Hospital Alumni, St. Louis.—Meet in the Amphitheatre of the City Hospital, Seventeenth Street, between Chestnut and Pine Streets. At the meeting held on Thursday, October 17th, the following papers were read: The Bladder in its Relation to Pelvic and Abdominal Surgery, by Dr. T. C. Wither- spoon; Report of a Case of Appendicitis in a Patient having Transposed Viscera, by Dr. W. C. Mardorf. There was also a presentation of interesting cases from the wards of the City Hospital.

A Proposed Montreal Medico-chirurgical Society.—Application has been made by Dr. J. G. Adami, Dr. George E. Armstrong, Dr. Alfred T. Bazin, Dr. H. S. Birkett, Dr. F. Buller, Dr. J. M. Craik, Dr. J. M. Elder, Dr. William Gardner, Sir William Hingston, and others, to the local legislature for the passing of an act to incorporate them under the name of the Montreal Medico-chirurgical Society, for the purpose of promoting the advancement of medical and surgical science by such means as shall to them appear expedient and proper and also the maintenance of a medical library.

The Medical Society of the State of New York will hold its annual meeting at Albany, N. Y., on Tuesday, January 28, 1902, and will continue in session for three days. The scientific part of the programme is being prepared by the business committee, which consists of Dr. Nathan Jacobson, of Syracuse; Dr. George R. Fowler, of Brooklyn, and Dr. William C. Krauss, of Buffalo. Members and delegates desiring to read papers will please communicate with the chairman of the committee, Dr. Jacobson, 430 South Salina Street, Syracuse. A rebate will be given by the railroads to members and delegates attending this meeting, but it is necessary, in order to obtain this rebate, that a certificate be obtained from the ticket agent at the starting point, which certificate will be given by the agent on request.

Hospital Buildings and Endowments.—The will of Daniel T. Hoag, of New York, leaves practically the entire fortune to his widow, but, upon her death and the death of a grandson without issue, a third of the principal goes to St. Luke's Hospital, which is also a beneficiary to the extent of \$3,000 upon the death of the widow.—The will of Dr. William Spencer Caldwell, of Freeport, Ill., bequeaths \$15,000 to Provident Hospital, Chicago, an institution for colored patients, which is also a training school for colored nurses.—An addition has been made to the plans of the

Mount Sinai Hospital, now building on the block bounded by One Hundredth and One Hundred and First Streets and Fifth and Madison Avenues, New York, in the shape of a nurses' building, which will be eight stories high and located at One Hundred and First Street and Madison Avenue.—A hospital site of three lots and \$1,000 in cash has been received for a new hospital at Port Huron, Mich. The sum of \$20,000 is yet to be raised by public subscription.—The Board of Estimate of New York has appropriated \$275,000 for a hospital in Lenox Avenue, between One Hundred and Thirty-sixth and One Hundred and Thirty-seventh Streets. It will be known as the New Harlem Hospital.—A fully equipped dispensary will be established at the Lutheran Hospital, in Brooklyn, by November 1st. Permission to establish the dispensary was recently granted by the State authorities.—The new Emergency Hospital at Buffalo, N. Y., will be ready for occupancy in six weeks. Its cost will be over sixty thousand dollars.—A site is now being selected for a new Notre Dame Hospital to replace the present structure at Montreal.—The new St. Francis' Hospital, recently finished at Peoria, Ill., with the exception of one wing, was thrown open to the public on October 10th. There were no ceremonies attending the occasion, as the formal dedication will take place later. The new building is one of the finest hospital structures in the State, and has been erected at a cost of \$140,000.—The board of managers of the Long Island State Hospital, at Kings Park, has let the contract for the construction of a home for the nurses and attendants of the hospital. It will cost \$40,000, is to be a three-story brick building, and will accommodate about 120 persons.—The widow of the late Collis P. Huntington will, it is reported, give her mansion in San Francisco to some charity, presumably a hospital.—The directors of the French Hospital, San Francisco, have been authorized to spend \$17,000 on improvements. Two stories will be added to the administration building. The operating room will be remodeled and enlarged, and another will be built.—Funds are being subscribed for a new hospital at Atlanta, Ga.—The new Epworth Hospital, South Bend, Ind., erected at a cost of over \$70,000, has just been opened. The hospital is of red brick, with stone trimmings, and is fireproof throughout. It has three stories and a basement.—The will of Thomas Elkinton, of Philadelphia, bequeaths \$5,000 each to the Jefferson, Orthopædic, Polyclinic, University, and Pennsylvania hospitals upon the death of his widow.

Births, Marriages, and Deaths.

Born.

MÜLLER.—In New York, on Thursday, November 7th, to Dr. and Mrs. Alfons Müller, a son.

Married.

BULLWINKEL—WEBER.—In Brooklyn, on Tuesday, November 26th, Dr. Edward Martin Bullwinkel and Miss Helen E. Weber.

CAMMANN—SPENCER.—In New York, on Tuesday, November 26th, Dr. Donald M. Cammann and Miss Sophie Edwards Spencer.

CRAWFORD—PAGE.—In Baltimore, on Friday, November 29th, Dr. Albert C. Crawford and Miss Mary V. L. Page.

DAVIDSON—APPS.—In New Orleans, on Tuesday, November 19th, Dr. Hugh Crawford Davidson and Miss Corinne Apps.

FALES—HOUSE.—In Washington, on Wednesday, November 27th, Dr. Warren Dexter Fales and Dr. Ella Roy House.

MASSIE—MUNDY.—In Allen's Creek, Virginia, on Wednesday, November 27th, Dr. Joseph Page Massie, of Richmond, and Miss Cynthia Mundy, daughter of Dr. John C. Mundy.

SLEVIN—MCGOVERN.—In New York, on Saturday, November 30th, Dr. John J. Slevin and Miss Jeanette McGovern.

STERLING—SWETT.—In Chicago, on Tuesday, November 19th, Dr. Isaac D. Sterling and Miss Mary Chase Swett.

WELLINGTON—HYDE.—In Georgetown, D. C., on Wednesday, November 27th, Dr. J. R. Wellington and Miss Rebecca Hyde.

Died.

BIBBY.—In Paterson, N. J., on Thursday, November 28th, Dr. James S. Bibby, in the fifty-eighth year of his age.

GIBBONS.—In Baltimore, on Monday, December 2d, Dr. James E. Gibbons, in the fifty-eighth year of his age.

HARTT.—In Brooklyn, on Sunday, November 24th, Dr. John C. Hartt, in the fortieth year of his age.

HOUGHTON.—In New York, on Sunday, December 1st, Dr. Henry Clarke Houghton, in the sixty-fourth year of his age.

MUNCASTER.—In Rockville, Maryland, on Friday, November 29th, Dr. Magruder Muncaster, formerly of Washington, in the forty-second year of his age.

Obituary.

SIR WILLIAM MACCORMAC, BART.,

LONDON, ENGLAND.

Medical science has lost one of its most brilliant ornaments by the death from heart disease, at Bath, on December 4th, of Sir William MacCormac. Sir William was born at Belfast, on January 17, 1836. He was educated in Dublin and at Paris. He graduated at the Queen's University of Ireland as M. A. in 1858 and in 1864 became a F. R. C. S. of Ireland, having previously become a M. R. C. S. of England in 1857. In 1871 he became a fellow of the English College, and was created a M. Ch. of his own university (*honoris causa*) in 1879, and a D. Sc. in 1882, obtaining the university gold medal. He was afterwards a member of the senate and examiner in surgery at the Queen's University. He was surgeon and subsequently consulting surgeon to the Belfast Royal Hospital. He saw service at Metz and Sedan during the Franco-German war, 1870-71, as surgeon-in-chief of the Anglo-American ambulance; and also during the Turco-Servian war in 1876. He was one of the senior surgeons and lecturer on surgery at St. Thomas Hospital for twenty years; and was, at the time of his death, consulting surgeon and emeritus lecturer on clinical surgery to that hospital, and consult-

ing surgeon to the French Hospital and the Italian Hospital in London, as well as to Queen Charlotte's Lying-in Hospital. He was lately an examiner in surgery at the University of London, and also for Her Majesty's army and Indian medical services. He was a member of the council and chairman of the court of examiners of the Royal College of Surgeons of England. In 1881 he acted as Hon. Secretary-General of the International Medical Congress in London, and in consideration of his services in this capacity the Queen conferred upon him the honor of knighthood. In 1897 he was created a baronet, on the occasion of Her Majesty's Jubilee, and was appointed surgeon in ordinary to H. R. H. the Prince of Wales, whom he attended, in July, 1898, when the Prince was suffering from the effects of his accident. He was elected president of the Royal College of Surgeons of England for the third time in July, 1898. In September, 1898, he, with Sir Francis Laking, was made a Knight Commander of the Royal Victorian Order. In December, 1898, on the occasion of the Jubilee of the St. Petersburg Academy of Medicine, he was appointed an honorary member thereof.

His services in South Africa, where he was sent in the earlier part of the Boer war as a civil consulting surgeon, following the precedent set by the United States in the Spanish-American war, were highly valued, and fully appreciated by the troops, the army medical service, and his country. Sir William MacCormac was much loved and respected by all who knew him, and the estimate, throughout the world, of his professional attainments may be to some extent comprehended from the fact that few, if any, medical men ever attained to such a cosmopolitan list of titular distinctions. Besides the honors accorded him in his own country, Italy honored him with the Order of the Crown and an honorary membership of the Royal Academy of Rome; Sweden, with the Order of the North Star and the honorary membership of its Medical Society; Bavaria, with the Order of Ritterkreuz (first class) and the honorary fellowship of the Medical Society of Munich; America, with the honorary fellowship of the American Surgical Association; France, with the corresponding membership of the Académie de Médecine de France and the Legion of Honor; Portugal, with the Order of Sao Thiago; Denmark, with the Order of Takovo of Dannebrog (first class); Egypt, with the Order of the Medjidieh (third class); and, lastly, Germany conferred upon him the Kron Orden.

His published works were numerous and include Notes and Recollection of an Ambulance Surgeon, which was translated into French, German, Dutch, Italian, Russian, and Japanese; also Antiseptic Surgery, its Principles and Practice, translated into French and Russian. His contributions on Gunshot Wounds to Heath's *Surgery*, Diseases of the Bones and Joints to Quain's *Dictionary of Medicine*, and Hernia to Treves's *Surgery*, also call for mention.

Pith of Current Literature.

American Medicine, November 30, 1901.

The Diagnosis of Gall-stones and their Aberrances. By Dr. Charles G. Stockton.—The author enumerates a few facts of great importance in diagnosis: 1. Cholecystitis is often mistaken for gastralgia; rarely, however, is the distinction difficult. 2. We must remember the curious signs of transient pyloric obstruction that follow adhesions of the liver and gall-bladder and of the lower end of the stomach. 3. We should remember that jaundice is a far from necessary accompaniment of cholelithiasis. It is true that it often offers important evidence, especially as to the location of the stone, but, when present, it is often the result of angeiocholitis, and, when intermittent, it probably depends upon the presence of a stone in the terminus of the cystic duct, or a stone free in the choledochus. When a steadily increasing and persistent jaundice is met with, it is safe to attribute the cause to outside pressure exercised upon the common duct by growth in the head of the pancreas or elsewhere, and not by stone in the biliary ducts. As for the chief symptoms of gall-stone disease, they are: 1. Paroxysmal pain; 2. tenderness below the junction of the ninth rib and cartilage; 3. vomiting; 4. ague-like fever; 5. jaundice; 6. the formation of tumor; 7. collapse; 8. the passage of calculi in the stools.

Features Determining Permanency of Cure in Radical Operations for Hernia. By Dr. A. J. Ochsner.—The chief points in this article are: (1) The wound must heal primarily; (2) in order to avoid pressure narcosis, the stitches must be drawn tightly; (3) the edges of the surfaces to be united must be free from fat and other unstable tissues; (4) the tissue should be manipulated with the greatest care during the operation; (5) the wound should be supported by broad rubber adhesive plaster strips; (6) the patient should be kept in bed for two or three weeks; (7) after the operation, abnormal intraabdominal pressure should be eliminated.

The Neurasthenic Spine. By Dr. Robert W. Lovett.—By "neurasthenic spine" the author designates those painful affections of the spine in which the subjective symptoms are out of proportion to the objective signs. This condition may be the result of faulty attitude, severe or slight traumatism, and in a number of cases it occurs without traumatism or obvious faulty attitude in connection with severe grades of neurasthenia. When faulty attitude is concerned, such attitudes must be corrected; gymnastics should be addressed to the weakened back muscles, and such exercises should aim at restoring general mobility to the spine if it is deficient. When severe traumatism is concerned, fixation of the spine is the first requisite. When due to slight traumatism, massage, douches, and hot air are most likely to be of use. The neurasthenic cases belong rather to the domain of neurology. The essential of treatment consists in the progressively increasing use of the spine without too much regard to the subjective symptoms.

Some Thoughts on Rheumatism and Rheumatic Simulants. By Dr. J. J. Walsh.—The differentiation of the various rheumatism-causing simulants will make their treatment comparatively easy. Accurate diagnosis is too much neglected, and it is the rheumatic simulants that have given rheumatism its bad name. True chronic rheumatism, according to the author, is much rarer than has been thought, and when it occurs it is usually found associated with senile and other changes in the tissues, and with various trophoneurotic conditions which require treatment as well as the rheumatism itself.

Diagnosis of Diseases of the Urinary Bladder. By Dr. John R. Wathen.

Shall Massage of the Stomach be Recommended?—A Study of Six Cases. By Dr. Mark I. Knapp.

Tuberculosis of the Sacro-iliac Joint; its Diagnosis and Treatment. Demonstration of a Patient with Sacrocoxalgia Fruste (Delbet). By Dr. C. O. Thienhaus.

The Indications for Operation in Calculous Nephritis and Ureteritis. By Dr. Charles Lester Leonard.

Boston Medical and Surgical Journal, November 28, 1901.

One's Health in Egypt. By Dr. F. Gordon Morrill.—When advised to "go to Egypt," one's destination is a little indefinite; for, while the habitable part of the country south of the Delta is extremely narrow, it is a thousand miles in length, and several varieties of even desert climate can be found there. The wisest course for the invalid to pursue is invariably to consult the English physician resident at whatever place he may find himself, and thus to avoid going wrong. The author has nothing to say in commendation of Alexandria. The winter climate of Cairo, however, compares favorably with that of some of our Southern States, and is better than that of any station along the Riviera. Helouan was regarded as a health resort twelve hundred years ago; and, during the present generation, the merits of its dry climate have again been recognized.

Hernia Epigastrica and Fatty Tumors in the Epigastrium. By Dr. Howard A. Lothrop.—In a series of eighteen thousand cases of herniæ, one hundred and forty-five were of the variety known as hernia epigastrica. They are usually single, sometimes associated with a protrusion of peritoneal fat, which does not contain sufficient sac to allow the escape of the omentum into it. The condition known as "hernia disposition" applies equally to epigastric herniæ. This variety is peculiar to adult life, and occurs more commonly in males, and particularly in the working class. (*To be continued.*)

Abscess in the Posterior Mediastinum in Connection with Pott's Disease. The Report of a Successful Operation for the Drainage of such an Abscess. By Dr. Joel E. Goldthwait.—In the case reported, and in three other cases referred to, the upper dorsal region was the seat of the osseous disease. In such a condition the abscess

lies in front of the spine, usually more to one side than the other, and pushing the heart and trachea forward. In case the abscess does not present under the incision, puncture of the spine at the seat of the disease is probably the safest procedure, even though it drains the abscess through the neck of the sac, theoretically the least favorable position.

Pathological Lesions in Rheumatoid Arthritis. By Dr. C. F. Painter.—The author does not accept the bacterial ætiology of this disease according to Bannatyne, because of the failure satisfactorily to demonstrate the organism itself, and the equally significant fact that the lesions found in the joint tissues are not such as are produced by any bacterial cause. The "chronic" stage in the disease does not present lesions, either gross or histological, which are at all derivative from the "acute" stage, and therefore we must exclude from rheumatoid classifications any disease with hypertrophic bone lesions. The author suggests that the changes in rheumatoid may be due to faulty metabolism, the absorption, from the digestive tract, of toxins, which ought not to be thus absorbed, if all tissues were properly performing their functions.

A Case of Papillary Adenocystoma of the Thyreoid Gland. By Dr. Harry C. Low.

Journal of the American Medical Association,
November 30, 1901.

Chairman's Address, Delivered Before the Section on Pathology and Bacteriology at the Fifty-second Annual Meeting of the American Medical Association. By Dr. Ludvig Hecktoen.

Effect of Direct, Alternating, Tesla Currents and X Rays on Bacteria. By Dr. F. Robert Zeit.—A continuous current passed through bouillon cultures of bacteria produces a strongly acid reaction at the positive pole, and a strongly alkaline reaction at the negative pole. With a current of one hundred milliampères for two hours, it required 8.82 milligrammes of sulphuric acid to neutralize one cubic centimetre of the culture at the negative pole, and all the most resistant forms of bacteria were destroyed at the positive pole, including the spores of anthrax and *Bacillus subtilis*. At the negative pole anthrax spores were killed also, but spores of *Bacillus subtilis* remained alive for four hours. The continuous current alone, by means of Du Bois-Reymond's method of non-polarizing electrodes and exclusion of chemical effects by ions in Kruger's sense, is neither bactericidal nor antiseptic. The apparent antiseptic effect on suspension of bacteria is due to electric osmosis. Alternating currents favor growth and pigment production. Röntgen rays have no direct bactericidal properties.

Laboratory Observations on Hydrophobia in Ohio. By Dr. A. P. Ohlmacher.—Four patients bitten by dogs suspected of rabies were treated by laboratory methods with positive results in two cases. In three cases the patients were treated at the Chicago Pasteur Institute, and the only one positive by laboratory test died of rabies in the midst of treatment, presumably because

the inauguration of treatment was somewhat delayed and because the stage of incubation was remarkably short. In the fourth case, conclusively demonstrated as rabies in the laboratory, the patient was promptly treated in Baltimore and no evidence of the disease was visible six months after the bite.

The Newer Pathology of the Retina, with Special Reference to the Changes Produced in the Ganglion Cells by Certain Toxic Agents. By Dr. Harry Friedenwald.

Atrophy of the Retina. By Dr. Dudley S. Reynolds.

A Case of Blindness from Drinking Bay Rum Compared with the Reported Cases Due to Methyl Alcohol and Essence of Jamaica Ginger, etc. By Dr. H. Moulton.—The important point made is that various substances liable to be drunk may contain wood alcohol, and that we should be able to make a diagnosis from the symptoms, the most important of which are, at first, gastro-enteric disturbances when the dose is small, and coma when it is large, followed by rapid failure of sight, which improves later, but soon relapses; contraction of the fields and, usually, absolute central scotoma, and sometimes total blindness. More than ninety per cent. permanently lose useful vision.

The Indications for Operation in Calculous Nephritis and Ureteritis. By Dr. Charles Lester Leonard.

Acute Cholecystitis and Cholangitis as a Complication of Gall-stones. By Dr. Daniel N. Eisendrath.—The treatment of cases of empyema of the gall-bladder, complicated by gall-stones, should never be one of delay. They should never be treated by internal means, but so soon as a diagnosis of gall-stones in general is made, since we know the danger of infection and carcinoma developing as complications, the surgeon should be consulted and the question of operation considered and in the most cases advised.

Dissecting Abscess of the Abdominal Wall Producing Deformity Simulating Pott's Disease. By Dr. James B. Bullitt.

Ankylostomiasis—Report of a Case. By Dr. R. Lee Hall.

Medical Record, November 30, 1901.

Vaginal Cancer. By Dr. W. Roger Williams.—From cases in which the minute structure of the tumor has been carefully described, it may be gathered that nearly all primary vaginal cancers are of the squamous epithelial type. The author concludes from this that it is to the epithelial elements of the vaginal lining membrane and its derivatives, that we must look for the origin of vaginal cancer. In vaginal cancer—a disease of adult and post-meridian life—death generally results from asthenia, with progressive general enfeeblement, cachexia, and emaciation. A rapid course is the rule. The mean fertility of vaginal cancer patients has been estimated by West at four and seven-tenths children for each marriage. The surgical treatment must be regarded as an

open question. In a general sense, it is desirable to thoroughly extirpate the whole diseased area; but in most cases, owing to the rapid and insidious progress of the disease, this is impracticable with any prospect of advantage to the patient. The cases most suitable for extirpation are those in which the disease is limited to the vagina.

Various Methods of Infant Feeding — Breast Feeding, Bottle Feeding. By Dr. Louis Fischer.—The author is opposed to giving up breast milk, no matter how little may be present, and his aim is to supply by hand feeding whatever deficiency exists. He believes, however, that it is idle to suppose that, because an infant is nursed by its mother, all must be well, and he advises the careful scrutiny of the ingredients of the breast milk. If the milk deteriorates rapidly, and the infant's weight shows no gain or a possible loss of weight, then weaning must be insisted upon. The author objects to sterilized or steamed milk, because of the chemical changes produced by the process; because, also, such milk lacks the element of freshness, and because Oppenheimer has proved by experiment that the albumin in milk is decomposed, as evidenced by the liberation of sulphuretted hydrogen after milk is heated for five minutes or longer in a steamer. The ideal milk is a raw milk that has been secured from a reliable dairy in which all modern sanitary laws are so applied that the hygienic condition of the cow's stable is perfect.

On the Presence of Typhoid Bacilli in the Blood of Typhoid-fever Patients. By Dr. Albion Walter Hewlett.—The author's conclusions are based upon observations of the blood of twenty-four typhoid patients at the New York Hospital. Of these, seventeen showed typhoid bacilli in the first cultures, and three more showed them during the relapse. There is, in the great majority of cases of typhoid fever, an invasion of the blood with bacilli during the early weeks of the disease. It is not, however, properly a septicæmia, for the number of bacilli present is ordinarily very small. During the third week of the disease, or at any rate at about the time the temperature begins to fall, bacilli are no longer to be obtained in blood cultures. With the onset of a relapse, the bacilli reappear in the blood, only again to disappear as the relapse subsides.

Philadelphia Medical Journal, November 30, 1901.

Splanchnoptosis. By Dr. Byron Robinson.—In splanchnoptosis the factors are: (a) Relaxation of the abdominal walls, including the pelvic and thoracic diaphragms; (b) consequent distal movement of viscera; and (c), gastro-duodenal dilatation. (*To be continued.*)

A Case of Pistol-shot Wound of the Stomach, Liver, and Transverse Colon in a Pregnant Woman. Recovery and Delivery at Term. By Dr. Andrew B. Gloninger.—This article illustrates the value of drainage in wounds of this character. The edges of the six orifices made by the bullet were trimmed back to a distance of a quarter of an inch, and brought together with Lembert sutures; the abdominal cavity was thoroughly flushed, a large drainage tube introduced, and the incision closed in the usual manner. The

patient was allowed a little cracked ice on the third day and, later on, a little brandy, nutritive enemata being resorted to at the same time; on the fourth day, two ounces of peptonized milk, and on the fifth day three ounces of malted milk. Beyond a suture abscess, which was opened and drained on the twelfth day, recovery was uneventful.

The Present Status of the Bottini Operation. By Dr. Orville Horwitz.—The author points out that patients, as a rule, fear this operation less than any other procedure for the relief of prostatic hypertrophy. Only a short time is required for the operation; there is little shock, slight loss of blood, rapid convalescence, and low mortality. Marked improvement may be looked for in the large majority of cases, especially if the operation is undertaken early. A valve-like formation contraindicates the operation; pyelitis adds greatly to its danger. The character of the growth has but little bearing on the result of the operation. The operation is specially indicated in the beginning of obstructive symptoms due to hypertrophy of the prostate gland, and may be regarded as a prophylactic method of treatment. When operating early before the prostate has become much enlarged, the safest method to pursue is to perform a preliminary perineal cystotomy, introducing the perineal galvano-cautery incisor of Chetwood, so as to make the incision in the prostate.

The Early Recognition and Management of Arterial Degeneration. By Dr. Louis Faugeres Bishop.—The author lays stress upon the fact that, despite the popular belief, the rupture of a blood vessel is comparatively one of the least common evils of arterial degeneration. Far greater is the danger of the establishment of secondary disease of the heart and kidneys or the interference with the circulation in the brain, even to the extent of thrombosis. There are not a few cases where arterial degeneration has undoubtedly started, and yet a change in the mode of life and proper treatment has brought about an arrest of the condition. The condition once recognized, the management must consist more in hygienic measures than in the administration of drugs. The persistent use of alkalies, the abundant use of water, and the use of bitter tonics in small doses, are all that need be considered as having a direct bearing upon arterial degeneration.

A Case of Poisoning with Oil of Cedar. By Dr. J. T. Clegg.—This case proves oil of cedar to be a very active and dangerous poison. A teaspoonful, taken to produce abortion, produced violent convulsions within thirty minutes, and would have proved fatal but for prompt medical intervention. The treatment consisted in the speedy evacuation of the stomach by emesis and the stomach pump, and the washing out of the stomach with a solution of sodium bicarbonate.

Medical News, November 30, 1901.

Courvoisier's Law. By Dr. Richard C. Cabot.—The author enunciates Courvoisier's law, "When the common duct is obstructed by a

stone, dilatation of the gall-bladder is rare. When the common duct is obstructed by other causes, dilatation of the gall-bladder is common." This law is of value in the diagnosis of cases of chronic jaundice, with or without enlargement of the gall-bladder. Excluding those cases of dilated gall-bladder due to stone in the cystic duct and also those of acute cholecystitis in which we rarely have jaundice, we find a group of cases in which the most important signs are chronic jaundice, more or less intermittent, and the presence or absence of enlargement of the gall-bladder. The author's statistics indicate that this rule can be relied upon to an extent rarely possible in a matter so uncertain as physical diagnosis.

Report of a Case of Diaphragmatic Hernia. By Dr. H. D. Howe.—The condition referred to was the result of traumatism. Upon autopsy, the stomach, transverse colon, upper part of the descending colon and fully one third of the great omentum were found in the left cavity of the chest. The rupture in the diaphragm was one inch and a half square, and was near the centre of the muscular portion, one inch to the left of the œsophageal opening. The edges of the hernial opening were indurated and rolled upward in the thoracic cavity. For seven months after recovery from the original injury, caused by striking the shaft of a wagon while "scorching," the patient never once reported sick, until the crisis which came after violent exertion in a jumping match.

Some Observations, General and Technical, Made at the Craig Colony. By Dr. Smith Ely Jelliffe.—The general method of treatment as noted by the author in its broadest lines seems to lie in whatever will take the mind of the patient from himself and his abnormal state and develop in him the normal qualities of manhood that have almost invariably been neglected in his life. Congenial occupation and the development of the social side of the epileptic are important factors.

Recent Epoch-making in Medicine—Annual Oration Delivered before the Michigan State Medical Society. By Dr. Samuel Bell.

Deformity Arising from Injury to the Lower Epiphysis of the Tibia. By Dr. B. E. McKenzie.

Dangers to Public Health and Morals, Especially to Young Persons, from Quackery, as Promulgated by Public Advertisements. By Dr. E. Stuver.

British Medical Journal, November 23, 1901.

Chest Complications in Abdominal Disease; a Study in Diagnosis. By Dr. J. M. Bruce.—Associated diseases of the abdomen and chest present themselves from one of two sides. More frequently we meet with them as affections of the stomach, bowels, liver, or other of the intraperitoneal viscera, or of the peritonæum itself, complicated with a secondary invasion of the chest; in other instances we are first introduced to a disease of the lungs, pleura, or pericardium, which proves to be secondary to an unrecognized lesion

below the diaphragm. The author cites a number of illustrative cases, such as: Subdiaphragmatic abscess following perforation of the stomach; pulmonary tuberculosis following tuberculous peritonitis; pleurisy and empyema following appendicitis; abscess of the lung from the same cause; and secondary affections of the right lung and pleura in abscess of the liver, inflammatory affections of the gall-bladder and bile ducts; and acute pleurisy following on hepatic colic. From the above cases belonging to the first of the two classes previously mentioned, the author formulates his first practical conclusion: In all obscure diseases within the abdomen, particularly diseases of an inflammatory kind, let it be a clinical rule to examine the chest with special care.

It is more rare, in the course of the investigation of a case of disease of the chest, to discover evidence of disease within the abdomen. Such an observation appears at first to add to the difficulty of diagnosis, but it serves to simplify it. Again, the author cites a number of cases: Pleural effusion found to be due to hepatic disease; pleurisy to perigastric abscess; pleurisy to tuberculous peritonitis; hæmoptysis and pleurisy to hydatid disease of the liver. And the author's second practical conclusion is as follows: Let it be a rule of practice in every instance of pleurisy and pulmonary disease, or of difficulty in connection with the interpretation of pulmonary symptoms, particularly at the base of the chest, to complete our examination with a careful inquiry into the condition of the stomach, the liver, the intestines, the other abdominal viscera, and the peritonæum itself, remembering that affections of the chest often originate below the diaphragm. Two mistakes are to be avoided: 1. Invasion of the pleura and lung from the abdomen is simulated by secondary affections of the same parts in puerperal septicæmia originating in the pelvis. 2. Every patch of dulness and crepitus at the base of the chest must not be considered significant of invasion of the lung or pleura. The author suggests that the usual route by which the pleura is invaded by the tubercle bacillus is through the diaphragm from the abdominal cavity. The author further lays it down never to neglect to examine with special care the state of the abdomen with respect to distention and pressure in every case of acute pulmonary disease.

The Action of Iodides on the Heart and Circulation. By Dr. R. Stockman and F. J. Charteris, M. B.—The authors have investigated the action of iodides on the heart and circulation in men and animals. Potassium or sodium iodides, given to men by the mouth in therapeutical doses, do not modify the physical conditions of the circulation, and, therefore, they neither directly weaken the heart nor dilate the arterioles. The therapeutical effects must be due to some other mode of action, and this is probably true also of some of the rarely occurring poisonous effects. It has been sometimes observed, for instance, that iodides quicken and weaken the pulse, and this has been specially frequent in goitre. Sometimes also their administration is followed by emaciation. There is good reason

for believing that in neither case is this a direct effect, but is due to increased formation or alteration of the iodine-containing thyroid secretion, which has a powerful influence on the circulation and on metabolism. Experiments on animals conform with those on man, and the authors conclude, therefore, that sodium or potassium iodide, when given to man by the stomach in ordinary doses, has no depressing effect on the action of the heart or on the blood pressure in the arteries.

Three Cases of Rupture of the Left Ventricle. By G. A. Rorie, M. B., and J. Findlay, M. B.—In two of the cases there was absolutely no history of any exciting cause, such as excitement or sudden exertion. Two of the cases were in men, aged respectively forty-eight and seventy-nine years, the third being a woman, aged fifty years.

Atheromatous Ulceration of the Heart; Perforation; Sudden Death. By Dr. D. E. Anderson.—The author reports this case on account of the extreme rarity of the condition. The patient, a man aged sixty-two years, had been suffering from severe cardiac pain for five days, and died quite suddenly while sitting quietly in bed. At the autopsy there was found a funnel-shaped ulcer on the inner wall of the left ventricle, and terminating in a perforation. The cardiac vessels were markedly atheromatous.

Acute Rheumatism; Hyperpyrexia; Post-febrile Mania; Recovery. By D. H. Kyle, M. B.—The patient was a man, aged thirty-two years, in whom the temperature reached 106.4° F. on the fourth day of the disease, and 108° F. on the following day. Ice packs were used, the temperature promptly fell to 99° F. and did not rise above 102.5° F. Subsequently the arthritic symptoms were relatively mild.

Tortuosity of both Internal Carotid Arteries. By Dr. G. H. Edington.

Suprarenal Extract as a Hæmostatic. By W. T. Thomas, F. R. C. S.—The author reports two cases of severe hæmorrhage, in which suprarenal extract was used with most beneficial results. The first case was that of a child with a lacerated wound of the upper lip. Even ligatures had failed to check the bleeding, but it was promptly stopped by packing with gauze impregnated with powdered suprarenal extract. The second case was one of an incised wound in the finger of a hæmophilic. The injury had taken place six weeks previously, and bleeding could be temporarily checked only by tight bandaging. The wound was filled with powdered suprarenal extract, and five grains of the extract was given every four hours. The bleeding ceased almost immediately, not to recur.

Lancet, November 23, 1901.

The Ætiology of Beri-beri. By Dr. P. Manson.—Beri-beri is a form of peripheral neuritis which occurs endemically and epidemically, and is specially characterized, as compared to other forms of peripheral neuritis, by proneness to œdema and by implication of the neuro-muscular system of the central organ of circulation; by complete absence of trophic skin lesions, paresis

of the muscles of the head and neck, or marked implication of the organs of sight, hearing, taste, and smell, or of the mental faculties. There are troubles of locomotion, paræsthesia, hyperæsthesia, and absence of the patellar reflex and of the superficial reflexes. The patient complains chiefly of sweating, palpitation, and breathlessness, weakness and swelling of the extremities, and swelling of the legs. The intensity and duration of the disease varies widely; it may be trifling, prove rapidly fatal, or last for months. The *post-mortem* lesions are those of multiple, peripheral neuritis; degeneration of peripheral nerves. The case mortality ranges from five to fifty per cent. There are two theories as to its ætiology: 1. The dietetic theory, advocated by many observers, attributes the disease to a prolonged and uniform rice diet. 2. The microbic theory, to the author's mind, conforms best to all the known facts. It is to the effect that this disease is purely an intoxication produced by a toxine elaborated by a germ, whose nidus is located outside the human body; that, in this respect, beri-beri corresponds with alcoholism, the germ of which is the yeast plant; the nidus, solutions of sugar; the toxine, alcohol; and the pathological effect, a peripheral neuritis. There is no evidence to show conclusively that beri-beri can pass directly from man to man, like the ordinary infectious disease, yet that it is produced by a living germ is certain. The cause can be transported from place to place, and when so transported, can multiply and spread. But we cannot say what the toxine is, what the germ producing it is, or where the germ resides.

Twenty-five Years' Experience of Urinary Surgery in England. By G. B. Browne.—(*The second of the Harveian lectures*). In this lecture the author considers enlargement of the prostate and its treatment. He begins with a consideration of the practicable antiseptics of catheterism. There is no perfect antisepticism; we strive after an ideal. The author provides the patient with a box holding seven gum elastic or rubber catheters, each in its own compartment, a supply of bichloride tablets (one to a pint of water giving a 1-1,000 solution), a pint bottle, a glass tube in a stand, long enough to hold the catheter upright, and a bottle of plain vaseline. After catheterizing himself at bedtime, the patient prepares his bichloride solution in the pint bottle, from which he fills the glass tube. The catheter is then washed in soap and water, and placed in the tube over night. In the morning it is rinsed in boiled water, dried, and put away in its compartment, not to be used again for a week. Instrumentation by the surgeon must be gentle and skilful, and the patient be kept warm and quiet. In acute retention the bladder must be emptied as soon as possible. The author asserts most emphatically that there are no cases of prostatic disease where it is impossible to pass a catheter into the bladder. For successful introduction the catheter must hug the anterior urethral wall, so avoiding the two prostatic sinuses. The rubber catheter is by far the safest, and its value may be increased by the use of a metal stylet. In cases of chronic retention the bladder should be

emptied gradually, and with all antiseptic precautions. Every six hours is often enough to catheterize, drawing off not more than seventeen ounces at a time. In some cases a calculus may be present, which must be sought for and removed by lithotrity. The author does not believe in either vasectomy or castration, though he has never performed either operation. The only thing to do, in his opinion, is to open the bladder suprapubically in order to explore digitally for stone or tumor, and at any rate to obtain drainage and rest for the organ. No attempt should be made by the perinæum. It is remarkable how often a hidden calculus is found, but, should stone be absent, prostatectomy is indicated, the operation to be performed according to McGill, who first introduced it. But prostatectomy should never be performed as long as the ordinary catheter life is a tolerable one. And cases where regular catheterism is impracticable are very rare.

Anatomical Preparation-making, as Devised and Practised at the University of Edinburgh and at the Hunterian Museum of the Royal College of Surgeons of England. By Dr. J. B. Pettigrew.—(*A continued article.*)

A Note on Neisser's Test for Diphtheria Bacilli. By Dr. L. Cobbett.—The author recommends the following method of applying Neisser's stain to a particular group of already stained bacilli, without removing the slide from the microscope. A drop of five-per-cent. acetic acid is applied to one edge of the cover-slip and drawn under the glass by means of a small piece of filter paper placed on the other side. The diphtheria bacilli, if such they are, will then show the characteristic polar bodies as if stained in the way Neisser recommended; only the bodies of the bacilli are not brown, but pale blue. A check preparation is not necessary. Neisser's stain fails to show polar bodies in a small proportion of true diphtheria bacilli, but this fact detracts very little from the value of the stain as a differential test, because the exceptions to the general rule are so few.

Some Practical Points in the Treatment of Cases of Fractured Pelvis with Ruptured Bladder and of Cases of Ruptured Urethra. By C. J. Bond, F. R. C. S.—In the treatment of the severe injuries above mentioned, if the symptoms point to an injury to the bladder in the anterior wall, an attempt should be made to close the rent in the same way that we close wounds of the posterior wall. If this is impossible, owing to the low situation of the wound, it is essential to prevent extravasation and to drain the bladder by a perineal route. This is best done by passing a tube through the internal meatus and out at the urethral rupture. If the urethral rupture can be repaired, the tube from the bladder should emerge through an incision in the floor of the membranous urethra. But a catheter should not be left along the whole urethral route. Where owing to delay, relief by suture is impossible, extravasation should be relieved by free incision and perineal drainage.

Sulphur in the Treatment of Dysentery. By G. E. Richmond, M. B.—The author recommends the use of sublimed sulphur in cases of dysentery, and cites five cases in which it was used with beneficial results. Sulphur is, from its solidity and non-absorbability, an ideal intestinal antiseptic; that it passes along the whole intestinal tract is shown by the fact that it can be seen suspended as a yellow powder in watery motions. With sulphur the stools become less offensive and no trouble arises from flatulence. Whatever is the true cause of dysentery, sulphur seems capable of controlling and curing it, and it is possible that it may be found of service in cases of summer diarrhœa and perhaps in cases of typhoid fever. The dose recommended is twenty grains three times a day, which may be combined with five grains of Dover's powder.

The Treatment of Congenital Hip Displacement, with Special Reference to the Ambulatory Method. By H. A. Reeves, F. R. C. S.—The author holds the view that no operation can remedy the above-mentioned malformation. He has never been able to satisfy himself that any cutting procedure—except, perhaps, tenotomy of the muscles attached to the great trochanter—offers anything like a permanent prospect of a practical cure. He has seen three cases which had been submitted to the open operation; none were improved in the slightest. He recommends in its stead, treatment by the ambulatory method, i. e., reposition without cutting. It consists in first reducing, if possible, the femoral head into the deficient acetabulum by the methods of Bigelow and Paci, and, while the limb is kept in place, the author's extension instrument is applied. This consists of a pelvic band and a double iron, with joints at the hip and knee. The leg is extended and abducted, and a high-soled boot worn on the sound limb. He does not profess to succeed in reducing all cases into the rudimentary acetabulum, but contents himself with converting iliac displacements into the anterior dorsal or supracatylod. This considerably diminishes the shortening and lordosis and improves the walk.

Journal des praticiens, October 5, 1901.

Early Diagnosis of Scarletina.—M. H. Gillet says that an early diagnosis permits of an early prophylaxis. A rapid loss of weight during the first five days is one of the early symptoms, as is a great increase in the neutrophilic polynuclear leucocytes, which, on the appearance of the eruption becomes transformed into a hypoleucocytosis. A violaceous, erythematous stomatitis with considerable swelling is also noted early in the disease, or there may be small, irregular patches, of a whitish-bluish color, upon the mucous membranes of the mouth, as early as three days before the eruption appears. The sore throat of scarlet fever is described and a pharyngeal adenitis is spoken of by the author before the cutaneous symptoms appear. Diarrhœa and general gastro-intestinal disturbances are frequent, and there may sometimes be a rash which anticipates the scarlatinal eruption.

The Rationale of the Use of Acids in Hæmorrhages. By M. Liégeois.

Treatment of Slow Pulse.—M. Deguy says that persons with habitual slow pulse must avoid all excessive excitement, exercise, and emotions; they must not climb mountains or use toboggans, and must eschew cold baths. Massage is not good for them, but simple friction is harmless. They should not smoke or use strong alcoholic liquors. Digitalis, ergot, and other vasomotor constrictors, must be avoided. Strychnine, ammonia, and the nitrites, are the drugs to be employed; the digestive system must be kept in order, and the nervous system kept from overstimulation.

Centralblatt für Gynäkologie, October 5, 1901.

Eclampsia.—Dr. Herzfeld says that, out of eighty-one post-mortem examinations, 22.3 per cent. of the cases showed a bilateral compression of the ureters. He adds that, in primiparæ who give evidences of eclamptic seizures during the period of cervical dilatation, ureteral compression is exceedingly common. The author inclines to the belief that eclampsia is the expression of an intoxication due to the circulation in the maternal blood of toxins developed from her own and the fetal catabolism. This theory, which to his mind is equally tenable with that of uræmic poisoning, points the way, the author believes, to prophylactic measures.

October 19, 1901.

So-called Physiological Slowing of the Pulse in the Puerperium.—Dr. Otto Aichel says that the only justification for speaking of a physiological slowing of the pulse in puerperal women is when it is slower than it was during or before pregnancy and when the pulse-rate of puerperæ is established. He has examined the pulse-rate of 130 pregnant women, taking the pulse twice daily, at 6 p. m. and in the morning, and counting for a full minute. Seventy-nine of the women could be called free from all suspicion, as their pulses could be counted for twenty successive days and they never had abnormal temperatures. Among the primiparæ, there was no change in the puerperal pulse-rate in twenty-five, in nine the pulse was a little higher; it was lower in but a single instance. Of the forty-four multiparæ, thirty-six had the same pulse-rate as before the birth, three had somewhat higher rates and five had a slower rate. The author says that his figures show that there is no such phenomenon as a physiological puerperal slowing of the pulse-rate. The few cases in which the pulse was slower may be attributed to the peace of mind of the patients. The author noted that in primiparæ, a few days in advance of the birth, the pulse became slightly more frequent, so that, in some instances, he was able to predict the confinement within twenty-four or forty-eight hours. He attributes this to the slowly beginning but not painful labor pains.

Posterior Vertical Position. By Dr. Arthur Mueller.

Riforma medica, September 10, 1901.

On Pancreatic Cytotoxines. By Dr. Attilio Cevidalli.—Specified cytotoxines have now been prepared from most of the organs of the body, but the pancreas has as yet not been made the subject of such investigations. The author has therefore instituted a series of experiments in order to prepare a substance which would be specifically pathogenic for the cells of the pancreas of one species of animals, by injecting into this animal an emulsion of the pancreas of another species of animals. The animals used in these experiments were the dog and the goose. The author injected emulsions of the pancreas of the dog into the peritoneal cavity of the goose. These animals were selected because other observers had noted that, in dogs, the destruction of the pancreas was always easy to follow clinically by observing the glycosuria that resulted. The goose was chosen because it was an animal sufficiently remote from the dog in a zoological sense. The serum of the goose was taken after the emulsion of the dog's pancreas had had an opportunity to produce its effect in this bird for a few days, and this serum was injected into another dog. The urine of this last dog was watched to see whether glycosuria would develop, as the result of the specific influence of the cytotoxine of the pancreas which was supposedly developed in the body of the goose after the injection of the emulsion of the pancreas of a foreign species. The general theory of cytotoxines, as worked out by Metchnikoff, Ehrlich and Morgenroth, and Bordet, was the basis of the experiments. The author's conclusions, after carefully weighing his results, are summed up in the statement that, inasmuch as there is not always a glycosuria following the injections into dogs of the serum of geese that had been previously inoculated with the emulsion of the pancreas of a dog, the toxic substances developed in the serum aforesaid are not absolutely specific for the pancreatic cells, although the lesions point to the fact that this serum acts exclusively, or at least most prominently upon the cells of the pancreas.

Vratch, October 20 (November 2, New Style), 1901.

On the Influence of Various Heavy Metals on the Morphology of the Blood and the Formation of Hæmoglobin. By Dr. M. A. Ilyischeff.—In this preliminary communication the author announces that his experiments have shown the following results: The salts of copper, mercury, and manganese, when introduced in small quantities into the body *per os*, do not influence noticeably the percentage of hæmoglobin and the number of red blood cells. The salts of iron, however, when introduced under the same conditions, produce a marked increase, both in the number of cells, and the quantity of hæmoglobin. Iron, in the form of salts, therefore, not only acts as a stimulant to the blood-forming organs, but is also assimilated and becomes absorbed as a part of the molecule of

hæmoglobin. The increase in the number of red cells and in the quantity of hæmoglobin takes place in such a manner that the maximum number of cells appears first, then the maximum amount of hæmoglobin. The use of iron is always followed by an increase in the number of eosinophile cells in the blood. This increase is not observed under other conditions. The eosinophile granules contain iron, apparently in a stable organic compound; they give a reaction for iron with ammonium sulphide, only after from twelve to twenty-four hours.

Relative Insufficiency of the Tricuspid Valve.

By Dr. A. F. Eckkert.—Relative insufficiency of the tricuspid valve presents a comparatively frequent and important manifestation in organic valvular disease, and it is important to recognize its presence from a prognostic and therapeutic point of view. More attention should, therefore, be paid to this phase of heart disease. In cases of relative insufficiency of the tricuspid, i. e., where there is no organic change in the valve itself, but where the tricuspid ring is so stretched that the valve cannot close properly and regurgitation occurs, percussion will show a more or less marked increase in volume on the part of the right ventricle, which is closely connected with the nature of the disease itself. Auscultation is not so valuable, however; for there may not be any systolic murmur at the tricuspid. When present, this murmur is low in pitch, and heard most distinctly at the left of the sternum near the attachment of the fourth and fifth ribs. It is usually stated that in relative tricuspid insufficiency the second pulmonary sound is weakened, but the author found in his cases, that it was, on the contrary, increased in force in patients in whom other signs pointed undoubtedly to the existence of such insufficiency. The occurrence of this insufficiency is a sign that the heart has entered into the stage of weakness—the stage of asystolia. The author found in 2,188 cases of heart disease admitted to his hospital that 3.6 per cent. had relative insufficiency of the tricuspid as a complication of the endocarditis. The two important signs of this complication are, according to the author, liver pulsation and systolic pulsation of the veins of the neck.

A Case of Hereditary Syphilis of the Eyes in the Second Generation.

By Dr. I. I. Strjemin-sky.—A boy, aged twelve years, had had weak eyesight and photophobia from birth. On examination, he was found to have a parenchymatous keratitis and a small, elongated optic disk, with a considerable amount of pigmentation of the fundus, in one eye, while the other showed areolar chorioiditis and precocious atrophy of the retinal pigment. The boy's father showed unmistakable signs of hereditary syphilis, and there was a history of acquired syphilis in the grandfather, who was seventy-eight years old at the time of the examination, but had no trouble with his eyesight. Antisyphilitic treatment had the effect desired and expected.

Drop by Drop Narcosis with Chloroform. A New Drop Bottle. By Dr. A. M. Koulagine.—With the drop bottles in general use, such as that

of Esmarch, and others, it is impossible to drop chloroform regularly and continuously upon the mask as the approved method of "drop by drop" narcosis requires. The author has devised a flask which obviates the disadvantages of the other bottles. It is easily held by the anæsthetizer, and it is not necessary to keep the eyes upon the stream of drops, for the flow is regulated automatically. The bottle is pyriform or cylindrical. At the top a ground glass stopper is fitted, which has a small opening in the side of the part fitting into the neck of the bottle. On the neck of the bottle is another opening corresponding to the first when the stopper is in a certain position. This admits the air into the bottle from the top, and drives the chloroform downward. The bottom of the bottle is elongated into a narrow tube, which is provided with a glass stopcock by means of which one can regulate the rate of dropping. Once adjusted, the bottle may be held in any position, and the drops will fall with perfect regularity. Flannel should always be used on the mask, and it is better to have a double layer. No cotton should be placed under the flannel.

The Sterilization of Milk in the Artificial Feeding of Infants.

By Dr. N. Daniloff.—The author does not give anything new, but presents the status of the sterilization question. He believes that the improvement of the methods of obtaining the milk, of transporting it, etc., are more important than all the modifications of the method of sterilizing. Sterilization is not really necessary; in fact, it is impossible of attainment. From a bacteriological viewpoint, sterilization has not accomplished what was expected.

On the Use of Atropine in the Treatment of Intestinal Obstruction.

By Dr. O. Iakovleva.—A man, aged forty years, a farmer, came with the symptoms of advanced obstruction of the bowels, including fæculent vomiting. He had been in this condition for two days when admitted. Operation was refused. At 7 o'clock in the evening he was given a hypodermic injection of atropine, the dose being 0.003 (grain 1/20) followed by a high enema. After two hours, his general appearance improved, the pulse became stronger, after having been thready and weak, and the vomiting ceased. At 10 in the evening he became very restless and received one sixth of a grain of morphine subcutaneously, after which he became quiet, and slept all night. At 9 in the morning the symptoms of acute obstruction again appeared; the vomiting reappeared, and the general condition became worse. A second injection of atropine was given, the dose being 1/10 grain. The general condition then improved, and the vomiting once more ceased, but there still was no movement of the bowels. The patient received another injection of atropine at 4, and another at 7 p. m., but, in spite of this, his condition began to grow rapidly worse after the temporary improvement in the morning, and he died at 10 o'clock in the evening of the same day. (In view of the published successes with Bastch's method of treatment of intestinal obstruction by means of atropine subcutaneously, it is important to note the fatal result of delay in this case.)

Proceedings of Societies.

SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

*Fourteenth Annual Meeting, Held in Richmond,
November 12, 13, and 14, 1901.*

The President, DR. MANNING SIMONS, of Charleston, in the Chair.

Laceration of the Cervix and its Consequences.

—Dr. E. S. LEWIS, of New Orleans, read a paper thus entitled. He said that lacerations of the cervix were productive of more functional and organic disturbances than had heretofore been supposed. Emmet had been the first to draw attention to the more frequent occurrence of cancer upon a lacerated than upon a nulliparous cervix. The fascination of abdominal surgery and brilliant results achieved and the increasing scope of this work had, in a measure, diverted attention from these minor injuries which, when neglected, proved most serious, and had an important bearing upon the health, happiness, and life of women. It was not the author's intention to add anything to the literature of this subject, but simply to awaken attention to the importance of the topic, which had, in a measure, been lost sight of, and to emphasize what had been so graphically described by Emmet. Lacerations of the cervix were of frequent occurrence. There was no question as to the course to be pursued by the accoucheur in lacerations of the perinæum, although they were of less significance than tears of the cervix as to final results. The different forms of cervical lacerations were described. In moderately recent cases the classical Emmet operation could not be improved upon; yet in certain long-standing cases, where the cervix had become thickened enormously from hyperplasia, the Emmet operation would fail to afford relief. In such cases he had used the Schroeder operation or a modification of it with gratifying results.

Vaginal Puncture or Incisions for Puriform Disease or Exploratory Purposes are Unsururgical Procedures.—Dr. JOSEPH PRICE, of Philadelphia, read a paper with this title. He said the members were familiar with the results of an ideal and complete suprapubic procedure. He had been asked frequently during the past year to see and reoperate on patients upon whom vaginal incisions or puncture methods had been practised. In three very recent operations for the removal of pelvic contents puncture and vaginal incisions complicated the sections that would have been otherwise comparatively easy. The vaginal fixation, closure of the openings, refilling of puriform or serous sacs were only local complications; the general condition of the patient became rapidly unfavorable for successful abdominal work. He was satisfied that the ancient method of evacuating puriform accumulations, that of cautery or caustics, was much more scientific than the present methods of vaginal incision. Operators who practised vaginal incisions never knew the precise pathological conditions; they punctured or incised a puriform accumulation and guessed at a name, ovarian abscess, pus-tube, or pelvic abscess; if the fluid evacuated was serous in nature, they

called it encysted serous effusion. The probabilities were that it was a dropsy of the tube, or hydro-salpinx. Puriform tubes as large and tortuous as one's flexed thumb should never be overlooked or punctured, in his estimation. The error of puncturing an ovarian abscess or a small dermoid, two conditions very commonly found, should never be made. He had never known a patient cured by the methods referred to. The general condition of patients, the rapid restoration to health following clean extirpations from either above or below, were striking when compared with the patients travelling around, seeking relief and health, after the timid, incomplete procedures under discussion.

Dr. GEORGE H. NOBLE, of Atlanta, stated, as a contrast to the experience of the essayist, that he had treated six cases by vaginal incision and drainage with very good results, but favored operating through the abdomen and doing more complete procedures where the condition of patients permitted.

Dr. RUFUS B. HALL, of Cincinnati, said he had practised vaginal puncture and drainage in cases in which it was not prudent to do more radical operations on account of the condition of the patients. He had always emphasized the fact to both the patient and the friends that this operation was not done for curative purposes, that it was a makeshift, and that a more radical operation by the abdomen would have to be done later to afford permanent relief. It was his experience that a large majority of such women returned for radical operations sooner or later.

Dr. W. D. HAGGARD, JR., of Nashville, said there were patients who completely recovered from vaginal incision and drainage, and cited an interesting case in point. He had fully expected to do an abdominal section in this case to remove a diseased tube and ovary, but apparently the disease had expended its force.

Dr. LEWIS S. McMURTRY, of Louisville, spoke of the great change that professional opinion had undergone of late years in regard to the operative treatment of pus in the pelvis in women. He referred to the early history of the vaginal operation and its great popularity for years, but now French and German surgeons were resorting to the suprapubic route in dealing with puriform collections in the pelvis. These operators were compelled to adopt this route, as their patients only partially recovered from vaginal incision and drainage.

Dr. EDWIN RICKETTS, of Cincinnati, had done vaginal puncture in a case in 1886. After her first delivery, the woman had a severe pelvic inflammation, with the formation of pus, and her condition was such as to contraindicate an abdominal operation. She recovered and subsequently bore four children. When patients did not get well from vaginal puncture and drainage, the abdomen should be opened and the diseased appendages removed.

Dr. GEORGE S. BROWN, of Birmingham, Ala., held that vaginal puncture and drainage in some cases should be practised as a life-saving measure. He mentioned six cases that he had had in the last four or five years, in young or recently married women, of gonorrhœal infection of the tubes. In these he had resorted to vaginal puncture; so far as he knew, only two or three of them had been operated upon again.

The Treatment of Pelvic and Abdominal Tumors Complicating Pregnancy.—Dr. RUFUS B. HALL, of Cincinnati, read a paper with this title, in which he reported four cases. The conclusions arrived at from the cases narrated may be summarized briefly as follows:

In the very small percentage of cases in which malignant tumors are the cause of the obstruction, they should be dealt with according to the well-established principles of modern surgery. The operation should be done at once without any reference to the child, if by so doing there was any additional chance of saving the life of the mother. If the ovarian tumor is thin-walled, of large size and rapid growth, and the patient is not near her full term of gestation, an operation should be advised, even if the uterus is below the tumor. If the tumor is thick-walled and of slow growth, is not causing much if any inconvenience, and rides above the enlarged uterus, an operation is not urgently demanded. If the tumor is small, is situated below the uterus, and is fixed either by adhesions or by impaction, an immediate operation is demanded. Tapping the tumor for temporary relief should not be done. In fibroid tumors of the uterus associated with pregnancy, where there are but one or two large nodules, and they are situated in the upper half of the uterus, an operation should be advised only in rare instances. These patients can be delivered safely and be operated upon later, if necessary. If the tumor is below the uterus, and a large nodule blocks up the passage, an operation should be advised and done early. Myomectomy is usually not to be considered in these cases, on account of the increased blood supply. The writer would advise it only when an exceptionally favorable tumor for this method is encountered.

Dr. VIRGIL O. HARDON, of Atlanta, said he had had some experience with the tumors described complicating pregnancy, and that his conclusions were essentially the same as those enunciated by the essayist. He mentioned two cases of ovarian tumor complicating pregnancy in which he had thought it advisable to operate. These cases were singularly alike; both were in primiparæ and detected during the fourth month of pregnancy. The tumors were removed; the women recovered, went to full term, and the children were now living. He had seen many cases of fibroid tumors complicating pregnancy; but where the fibroid was so situated as to exert no pressure upon the uterus, and thereby not interfere with pregnancy, he thought there was no indication for an operation until pregnancy had been completed.

Dr. GEORGE H. NOBLE, of Atlanta, said his observations were practically the same as those that had been given. The removal of a fibroid tumor complicating pregnancy should be based upon mechanical obstruction to labor ordinarily. Of course, there were exceptions, such as a twisted pedicle, inflammatory conditions, etc.; then the tumor should be removed. If the tumor or tumors were in the lower segment of the pelvis, in advance of the fetus, it was necessary to remove them, or the uterus must be evacuated, and, as these tumors could be removed with considerable safety and with a chance of saving the life of the child, it was a

feasible operation. Dr. Noble narrated cases in point.

Dr. W. D. HAGGARD, of Nashville, cited a case which he had seen with Dr. Fort in which a myomectomy had been done. The patient was a colored woman who had been married ten years and was sterile. She was three and a half months advanced in pregnancy, and had two subserous fibroid tumors, one of about the size of an orange, on the right side on the anterior face of the uterus, the other one of about the size of a baby's head on the left side and near the fundus. Both tumors were removed easily without any deleterious effects; the woman was subsequently delivered of a full-grown living child.

Dr. HALL said there were some fibroid tumors complicating pregnancy, also ovarian tumors, that had better not be operated upon during gestation, for the reasons given in his paper. The case mentioned by Dr. Haggard was a favorable one for myomectomy.

A Unique Case of Extra-uterine Pregnancy.—Dr. H. TUHOLSKE, of St. Louis, contributed a paper with this title, which was read by Dr. Jonas in the absence of the author. The following is a résumé of the case: Tubal pregnancy (ampullar) of the right side. Tubal abortion with complete extrusion of the gestation sac, unruptured and containing the fetus; hæmorrhage and position had carried the sac up to the diaphragm, between the right lobe of the liver and the upper end of the kidney. Implantation on the parietal peritonæum of the diaphragm as far forward as the attachment of the coronary ligament and on the liver from its upper border to the transverse fissure, down the diaphragm posteriorly and on the upper end of the kidney. Establishment of placental connections, allowing the development of a well-grown living child, pushing the liver in its growth toward the left and turning it upon its axis, with the coronary ligament as a fixed point, until the right margin of the liver became the anterior. Histological examination showed the original implantation to have been in the ampulla of the right tube, and the formation of a placenta by efficient transformation of the peritonæum and the liver tissue adjacent. The diagnosis of the case from its history was confirmed by clinical, operative, pathological, and histological evidence.

The Surgical Treatment of Painful Menstruation.—Dr. HENRY D. FRY, of Washington, D. C., read a paper, of which the following is his own abstract:

Pain should not occur at the menstrual period in a healthy woman with healthy pelvic organs. This dual relationship between the general health and the generative organs must be constantly kept in mind. One or the other may be at fault or the trouble may be with both in the same cases. The treatment of purely medical cases does not come within the scope of this paper. In such as demand both medical and surgical cure, it is important not to overlook the former. The concentration of the attention too closely upon the surgical aspect of the case is often the cause of failure to give relief.

Surgical treatment carries with it the necessity of making an examination of the pelvic organs. As these sufferers are nearly always young girls and

unmarried women, the indications must be clearly manifest. The character and severity of the pain, its duration, and the condition of the patient during the inter-menstrual period must be considered.

What results can be expected from surgical treatment? If we judge by the pessimistic statements of some men of large experience, it is nothing to be proud of. In the discussion of this subject at the last meeting of the American Gynecological Society, held in Chicago, the reflected opinions presented a gloomy picture for the women. My object in presenting this paper is to protest against that verdict, rather than offer any original method. My experience has been just the opposite. Failure to give relief has been due, as a rule, to some complication the removal of which subsequently resulted in cure.

The line of treatment followed with such satisfactory results is that pointed out in the main by Dr. Gill Wylie: First, thorough dilatation of the cervical canal; then the endometrium is gone over carefully with the sharp curette; irrigation and often a second curettage; the application of pure carbolic acid; irrigation and dilatation, repeated if necessary. A Wylie drainage-plug as large as will readily pass is inserted into the cervical canal and kept in position by a Smith pessary. For a number of years I was accustomed to leave the plug *in situ* six days, but following the suggestion of Dr. Wylie, I now allow it to remain from three to six weeks. I usually keep the patient in bed two or three weeks after the operation, and if no discomfort is experienced, permit her to get up and go around wearing the plug several weeks longer. I believe the use of the hard-rubber plug does much to add to the permanency of the relief obtained. It causes the formation of a cicatricial ring of tissue at the point of constriction which insures patency. I have not seen any bad results follow its use. In a few cases it causes pain, and on that account must be removed sooner than the time mentioned.

I attribute the failure of those who deplore their results to the omission of some important point in the technique of the operation. For instance, they simply dilate the cervix or dilate and curette. Another cause of failure is the unfortunate division and subdivision of the disease into varieties, each variety being described, with its appropriate method of treatment. The desire to avoid empiricism has made the subject complex and unpractical.

For all necessary purposes, dysmenorrhœa can be divided into two classes, simple and complicated. The simple comprises about eighty per cent. of the cases that come under our care, and the treatment described cures or greatly relieves three out of every four. The conditions usually found on examination are as follows: The external genitalia are undeveloped; the vagina, cervix, and uterus are small. There is stenosis of the cervical canal and there is endometritis. The uterus is normal in position or in a state of exaggerated ante flexion; it is movable and the appendages are healthy. The accompanying endometritis is chronic in character and due to deficient drainage of the cavum uteri, in consequence of stenosis of the cervical canal. The undeveloped condition of the generative organs in young women is very common and parallel to deficient growth of the mammary gland and its consequent failure to perform the function of lactation.

The second class comprises the cases in which some complication exists. It may be displacement, small fibroids in the body of the uterus, or disease of the tubes or ovaries. These complications must be recognized and corrected. In a very small proportion of cases, as in cirrhotic ovaries, we are driven to produce the menopause artificially. In such cases, I believe it advisable to amputate the uterus at the same time, as the subsequent reflex nervous symptoms are diminished and the period of suffering is shortened.

I maintain that the surgical treatment here described as applicable to a large percentage of cases of painful menstruation is not empiricism. We must recognize and exclude cases due to constitutional causes, and must recognize and give other treatment appropriate to any complication that exists in other cases.

Repair of a Complete Laceration of the Perinæum in a Girl of Nine Years.—Dr. H. A. ROYSTER, of Raleigh, N. C., reported this case. The laceration was produced by the finger of the obstetrician at the patient's birth. The patient was a well-nourished girl of nine years. At her birth her perinæum was torn completely through the recto-vaginal septum, and the explanation of this occurrence was stated to be as follows: The child's grandfather, a very aged physician, acted as accoucheur. Owing probably to dimmed eyesight and infirmity, a breech presentation was evidently mistaken for a vertex position, and the obstetrician, introducing his finger into what he thought was the child's mouth, but which was really its vagina, exerted traction, and the result was a complete laceration of the baby's perinæum. No immediate harm came from the accident, and it was resolved not to attempt a restoration of the injured region until the girl was considerably older. During the fall of 1900 she came first under the observation of Dr. Hubert Haywood, who related the above-mentioned facts and kindly referred the patient to the speaker for operation.

The parts, on examination, showed a quantity of dense scar tissue. The tear extended into the vagina to the depth of half an inch, and the sphincter end was plainly seen on either side. No incontinence of fæces had occurred. On November 15, 1900, under chloroform anæsthesia, a butterfly-shaped denudation was made in the vagina and the exposed edges of the rectum were pared, pains being taken to dissect out the torn sphincters. The rectal tear was then united with catgut sutures, which were tied inside the bowel and cut short. Silkworm gut was used for closing the vaginal surfaces and bringing together the ends of the sphincter muscle. Perfect apposition was obtained and rigid asepsis observed in all the details of the operation. In spite of these precautions, only partial success resulted, due to the fact that the patient's bowels became unmanageable just at the beginning of the operation, and the denuded area was constantly and unavoidably bathed by a stream of fæces. This unlooked for disaster was brought about by faulty preparation of the patient before her admission. A purgative had been administered the day before, and on the morning of the operation an enema was given, with the report that the bowels had been thoroughly emptied. The continual dis-

charges were a source of much annoyance, but it was considered best to complete the operation. At the end of two weeks it was found that the external sutures did not hold, although union of the upper part of the denuded tissue was secured.

A second operation was attempted on April 18, 1901. The same method of procedure was employed, but modified to suit the changed relations. The child was prepared under the author's direct personal supervision, and no faecal contamination occurred. The parts healed promptly, and the result was perfect. The author had not been able to find any parallel to this case in the literature of the subject.

(To be continued.)

Book Notices.

A Manual of Determinative Bacteriology. By FREDERICK D. CHESTER, Bacteriologist of the Delaware College Agricultural Experiment Station, etc. London and New York: The Macmillan Company, 19001. Pp. iv-401.

The purpose of this work is to aid the student in the identification of an unknown culture. A large series of tables has been prepared in which practically all the bacteria already described have been classified according to their morphology and cultural characteristics. The general plan of the work is similar to that of Eisenberg, published some ten years ago.

The first fifty pages are devoted to a general description of the morphology of bacteria and their cultural peculiarities; incidentally a few staining methods are given and a brief description of the preparation of the more common culture media. To a beginner in the study of bacteriology these instructions can hardly be of any value and might have been omitted from a book of this kind. The method described by the author for staining flagella is Loeffler's, not Löwit's, method.

The body of the book is devoted to the tables, which have been carefully prepared and may be referred to with profit in the study of an unknown organism. The index is not accurate. *Bacillus aerogenes capsulatus*, for instance, cannot be found on page 269, as indexed. A table of contents will be of the greatest service in a future edition.

A Manual of Surgical Treatment. By W. WATSON CHEYNE, C. B., M. B., F. R. C. S., F. R. S., Professor of Surgery in King's College, London, etc., and F. F. BURCHARD, M. D. and M. S. (Lond.), F. R. C. S., Teacher of Practical Surgery in King's College, London, etc. In Seven Volumes. Volume V. The Treatment of the Surgical Affections of the Head, Face, Jaws, Lips, Larynx, and Trachea; and the Intrinsic Diseases of the Nose, Ear, and Larynx. By H. LAMBERT LACK, M. D. (Lond.), F. R. C. S., Surgeon to the Hospital for Diseases of the Throat, Golden Square, etc. Philadelphia and New York: Lea Brothers & Company, 1901. Pp. xxvi-470.

The fifth volume of this excellent work is devoted mostly to the surgical affections of the head, face, jaws, lips, larynx, and trachea. Not only are the affections commonly met with in these situations

fully described and depicted, but many conditions which are usually given but little space in works on general surgery we find carefully and skilfully considered. Worthy of special comment are the chapters on plastic surgery, to which the authors have devoted considerable space.

One of the main features of the book, and one to which nearly half the volume is devoted, are the chapters on the diseases of the nose, ear, and larynx. For the consideration of these subjects the authors have obtained the services of a specialist, Dr. H. Lambert Lack, who has admirably performed his task. Not only are the diseases of each particular region fully considered, but the anatomy and the proper methods of examination are also given sufficient space. The absence of all attempt at padding is noteworthy, and is especially marked in the succinct and lucid description of intubation, the whole method being fully described in less than a page.

In conclusion, we can but congratulate the writers on their successful efforts, and we further feel that the fifth volume has added still another useful and instructive volume to those that have appeared earlier, to which we have already offered a hearty welcome.

BOOKS, ETC., RECEIVED.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Second Series. Volume VI. G to Hernette. Washington: Government Printing Office, 1901. Pp. 1051.

Typhoid Fever and Typhus Fever. By Dr. H. Curschmann, Professor of Medicine, Leipzig. Edited, with Additions, by William Osler, M. D., Professor of the Principles and Practice of Medicine, Johns Hopkins University, Baltimore, etc. Authorized Translation from the German, under the Editorial Supervision of Alfred Stengel, M. D., Professor of Clinical Medicine in the University of Pennsylvania. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 7 to 646. (Price, \$5.)

A Treatise on Surgery. For Students and Practitioners of Surgery and Medicine. By American Authors. Edited by Roswell Park, A. M., M. D., Professor of the Principles and Practice of Surgery and of Clinical Surgery in the Medical Department of the University of Buffalo, etc. Third Edition, Enlarged and thoroughly Revised. With 692 Engravings and 64 Full-page Plates in Colors and Monochrome. New York and Philadelphia: Lea Brothers & Company, 1901. Pp. 5 to 1408.

The Mental State of Hystericals. A Study of Mental Stigmata and Mental Accidents. By Pierre Janet, Litt. D., M. D., Professor of Philosophy at the Collège Rollin. With a Preface by Professor J. M. Charcot. Translated by Caroline Rollin Corson. New York and London: G. P. Putnam's Sons, 1901. Pp. xviii-3 to 535.

Memoirs and Letters of Sir James Paget. Edited by Stephen Paget, One of his Sons. With Portraits and Illustrations. London and New York: Longmans, Green & Company, 1901. Pp. 438.

A Manual of Volumetric Analysis. By Virgil Coblenz, Ph.D., Phar. M., F. C. S., Professor of Chemistry in the New York College of Pharmacy. Illustrated. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. viii-9 to 181.

Microbes and Health. By Samuel J. Wilson, M. D., Member of the Michigan State Medical Society, etc. Published by the Author, 1901. Pp. viii-230.

The Medical Record Visiting List or Physicians' Diary for 1902. New Revised Edition. New York: William Wood & Company, 1901.

Transactions of the Medical Society of the State of New York, for the Year 1901.

Twenty-eighth Annual Report of the Secretary of the State Board of Health of the State of Michigan, for the Year ending June 30, 1900.

Miscellany.

A Curious Case of Multiple Wens.—Dr. Samuel B. Lyon, of Bloomingdale Asylum, has kindly



Dr. Lyon's Case of Multiple Wens.

sent us the accompanying photographs of a patient with multiple wens. He has, says Dr. Lyon, upon



Dr. Lyon's Case of Multiple Wens.

his body, 666 wens, distributed as follows: On the head, 107; on the body, 458; on the arms, 53; and on the legs, 48.

Different Points of View in Medical Controversy.—The need of making allowance for a different point of view in medical controversy is well illustrated by the *British Medical Journal* for October 12th in an editorial comment on the Imlach Controversy in England. Dr. Imlach, it may be remembered, was in 1886 removed from the Liverpool Medical Institution in consequence of his treatment of pelvic hæmatocele, which was in advance of his age, his method which then provoked so much opposition as being dangerous, being now admittedly legitimate surgery. Dr. Imlach has been long insisting on the deletion from the records of his censure of expulsion. The authorities, while admitting their mistake from a scientific point of view, and recognizing his success in being before his time, contend that the censure was not for performing the operation, but for doing so without properly explaining to the patients the nature and effects of the operation. The *British Medical Journal* thinks "that Dr. Imlach will do well to rest content with the acknowledgment of his claims to have been a better gynæcological surgeon than most of his contemporaries, and let the report be forgotten."

But it is not with the merits of his case that we have to do here, but with the following practicable and admirable *obiter dicta* of the *Journal*:

"Those involved in this dispute do not see eye-to-eye, because they look at the matter with minds prejudiced in different ways. Those who study the criminal law (if the illustration may be pardoned) know that there are two principles upon which it may be administered. One is, that it is better that any number of guilty should escape than that one innocent should suffer. The other is, that it is better that an innocent person should now and then suffer than that a number of guilty should go scot-free. These opposing views often lead to diametrically opposite practice. In surgery, also, there are two different principles which influence the judgment of different people. Some hold fast to the maxim *primum non nocere*, and think it is better for many to remain unrelieved than that one should be injured or robbed of life by an innovation in treatment not certain to do good. Others think that it is better that now and then a mistake should be made than that surgery should stand still and disease at one time incurable always remain so. Persons of tact and judgment can in most cases find a course which will commend itself to almost every one. But extremists will never agree, and no amount of argument will make them. When this is the case the wisest plan is to drop the subject. This is especially so when that subject is a piece of almost ancient history, having at the present day an importance of sentiment only."

The Heathen Chinese is (not) Peculiar.—The *Chemist and Druggist*, for October 26th, cites the following translation of a native advertisement from the *North China Herald*:

"The receipt for these pills has come down to us from the great physician, Hsii Ch'un-fu, in the time of the Ming dynasty. A Controller of Salt, Ch'ên-ta-jeu, was journeying on the Ch'ing-Ch'êng hill when he saw a woman passing southward over the mountain tops, as if she was flying. Her age appeared to be about thirty years, and in her hand she

carried a staff. She was pursuing an aged man of one hundred years, whom she beat with the staff continually. The Controller of Salt, touched with pity, said, 'Woman, why dost thou beat that aged man?' 'He is my grandson,' answered the woman, 'and I beat him because he will not purify himself nor take his medicine. So I beat him, for he is known to your Excellence I am 500 years old, and he is only 111 years.' Then the Salt Controller got off his horse and knelt before the woman, and did obeisance to her, saying, 'Give me, I pray thee, O reverend lady, this precious drug, that I may hand it down to posterity and the salvation of mankind.' That is the way this medicine got its name. It will cure all affections of the three intestines, all derangements of the seven emotions, constitutional debility, feebleness in movement, dimness of the eyes, frigid pains (*i. e.*, rheumatism) in the loins and knees, and cramp in the feet. A dose is two mace. Take it five days and the body will feel light; take it ten days and your spirits will become brisk; for twenty days and your voice will be strong and clear, and your hands and feet supple; for one year and your white hairs will become black again, and you will move as though flying upon wings. Take it constantly every day, and the one hundred ills of the aged will vanish, and you will pass a long life without growing old. Price, per flask, 10 yen."

In the matter of patent medicine advertisements, at least, China has little to learn from Occidental methods.

Peritonitis Consecutive to Vulvo-vaginitis in Little Girls.—Comby and Gadaud (*Gazette des maladies infantiles*, June 13th; *Archives of Pediatrics*, October) report the cases of three little girls attacked with peritonitis, probably of gonorrhœal origin, in whom a diagnosis of appendicular inflammation was first made. The first child, twelve years old, was attacked suddenly, during convalescence from typhoid fever, with abdominal pain and vomiting. Laparotomy was determined upon, but delayed because the consent of the parents had not been obtained. The postponement was fortunate, for next day improvement was noted and recovery followed rapidly. The absence of precise localization of the abdominal symptoms and the existence of a purulent vaginal discharge justify the belief that the peritonitis was traceable to this cause. The two other observations are similar and show that a diagnosis of appendicular inflammation should not be made in the case of little girls until an examination of the genitals has been made.

Hypertrophy of the Breast.—A woman, eighteen years old, came to A. Grasmück (*Centralblatt für Gynäkologie*, 1901, No. 3; *American Journal of Obstetrics*, August) during the last month of her first pregnancy, with breasts whose greatest circumference was: Right, 73 centimetres; left, 69 centimetres. The enlargement had begun at about the second month. Potassium iodide was prescribed. Ten days after labor the breasts were secreting scantily and measured: Right, 58 centimetres; left, 55 centimetres. A month later they had still further decreased in size.

The literature of this subject is increased by the publication by H. Zarukow of two cases of simple

hypertrophy of the breasts of multiparæ during pregnancy. The circumference of the breasts at the base was 57 and 58 centimetres and 62 and 46 respectively. In one case, potassium iodide, massage, and bandaging were employed. The breasts became of normal size after ten months. The end of pregnancy seemed to have no effect upon the hypertrophy.

The "Flint Murmur" in Aortic Insufficiency.—Dr. W. Sidney Thayer (*American Journal of the Medical Sciences*, November) concludes an article on this subject with the statement that "One may be justified in saying that in uncomplicated aortic insufficiency a rumbling, echoing, presystolic, or mid-diastolic murmur limited to the region of the apex of the heart is very common, occurring, when carefully looked for, in fully half of the cases. The characters of this murmur are in no way different from that commonly observed in true mitral stenosis, with the exception of the fact that it is usually of moderate intensity. It is, however, rarely associated with a tapping systolic impulse and a snapping first sound, which are the rule in true mitral obstruction, while the pulse is large and characteristic of uncomplicated aortic insufficiency. In the absence of these signs and with a large pulse, the functional character of an apex presystolic murmur in aortic insufficiency is to be suspected, especially in cases where there is no history of acute infectious processes such as are ordinarily associated with endocarditis, and where there is evidence of well-marked arteriosclerosis. A Flint murmur may, however, be associated with many of the clinical features of a true organic mitral obstruction."

Is Psoriasis Parasitic?—Hallopeau (*Annales de dermatologie et de syphiligraphie*, May, 1900; *Quarterly Medical Journal for Yorkshire, etc.*, August, 1901) quotes an experiment on this subject which, in his opinion, points very strongly to the parasitic nature of psoriasis. Coming from such an authority as M. Hallopeau, it necessarily carries some weight. On May 9, 1890, M. Destot, aged 25, with no previous history of skin affections, or any family tendency to such, had his right arm scarified and grafted with a small plaque of psoriasis removed from the arm of a child. This was kept in place by a piece of plaster for a space of twenty-one hours. At the time of the operation a careful examination of the whole body showed not a suspicion of any psoriasis.

On May 11th a few papules appeared on the left elbow. May 12th, a few similar but less numerous papules appeared on the right elbow. May 16th, a few scales covered the papules. May 25th, the papules are distinctly psoriasis. May 29th, the psoriasisiform nature of the plaques is confirmed at a meeting of the Medical Society of Lyons. The spots disappeared spontaneously in three months, but reappeared during the next two years on four separate occasions; twice without any antecedent cause, once after taking Fowler's solution sixty minims a day, and once from the irritation of the parts in the region of the umbilicus. Since then up to the present time there has been no further outbreak.

Special Articles.

LARYNGEAL PARALYSES
AND THEIR
IMPORTANCE IN GENERAL MEDICINE

By J. W. GLEITSMANN, M. D.,

NEW YORK.

Laryngeal paralysis is undoubtedly the most interesting chapter in the whole domain of laryngology and cannot help possessing a fascinating influence on the studious mind for more than one reason. It brings the laryngologist into intimate contact with the most intricate questions of neurology, and also requires of him a more thorough knowledge of general medicine than all the other affections in rhinology and laryngology, nasal reflex neuroses not excepted. At the same time it is the most difficult subject in our specialty, and the questions involved have given rise, not only to the most painstaking, elaborate investigations of the highest order, but also, unfortunately, to animated controversies not always free from personal reflections caused by the zeal of the authors to uphold their views. In spite of the earnest work by our best scientists, many points still await their ultimate solution and are yet undecided. In a short essay like the present, disputed questions must necessarily be left out of consideration; but, for a better understanding by the uninitiated, it has been deemed advisable to precede the clinical part with a résumé of our present knowledge of laryngeal neurology.

The larynx has to perform two functions, which are antagonistic to each other in so far that, for one, viz.: phonation, the glottis has to be closed; for the other, respiration, it has to be open. Phonation is an entirely voluntary act, subject to the will power, except at the occurrence of certain reflex actions, such as crying, laughing, and coughing, and as one of the highest attributes of man its laryngeal centre is represented in the cortex cerebri. Respiration, a vital process, is subject to the will only in a very limited degree; it is involuntary and its centre is located in the bulbus. In addition, both functions have subordinate centres in the reverse order, viz.: phonation in the medulla oblongata and respiration in the cortex.

The phonatory cortical centre is, as Krause¹ discovered, located in animals, e. g., dogs, at the descending surface of the prefrontal convolution, which observation was confirmed by Semon and Horsley,² who have both conducted extensive investigations and experiments and contributed many

valuable essays to this subject. Irritation of one of these areas, for example, with electricity, is always followed by symmetrical bilateral adduction of the vocal cords, phonetic movements which also take place when one phonatory centre has been experimentally removed or destroyed by disease, and a positive indubitable case of unilateral paralysis due to cerebral lesion (hæmorrhage, softening, etc.) has not yet been reported. Therefore the phonatory motor centre is not analogous to other cortical motor centres, and, further, the extirpation of both phonatory centres has no influence on the respiratory office of the larynx. Adduction of the cords (phonatory act) can also be elicited from a small area in the bulbus, which, combined with the fact that acephalous monsters are able to utter a cry, shows that phonation has a limited centre in the bulbus.

In the alacinerea of the medulla there are two localities, irritation of which produces typical abduction of the cords, proving the bulbus to be the centre for respiration. In the cerebral cortex there are areas for acceleration and deepening of the respiration. Risien Russell³ found in the dog below the phonatory centre a locality from which abduction could be produced. That the principal and by far the predominant representation of respiration is in the bulbus is proved by the fact that extirpation of the phonatory centres, of the whole cerebrum to the base of the fourth ventricle and of the cerebellum has no material influence on the respiratory movements of the larynx. The centre of reflex for closure of the larynx, for example, on the inhalation of irritating gases and the entrance of foreign bodies, is also located in the medulla.

The question of the motor nerve of the larynx was considered settled for many years after the careful experiments of Schech⁴ in favor of the accessory nerve. But recently the investigations of Grabower⁵,⁶ and Ouodi⁷ point with great force to the vagus as the motor nerve, although a number of writers and some clinical facts are not in full harmony with this latter view. The vagus carries sensory and motor fibres, while it is generally conceded that the recurrent is purely a motor nerve, although also on this latter point some diversity of opinion exists. The observation showing that irritation of the recurrent is followed by a bilateral response in the larynx stands isolated and is proffered by only a few investigators, while it is a fact known for many years, first reported by Johnson⁸ and confirmed by others, that by pressure upon one vagus bilateral response, either in the form of spasm or in that of

¹*Proceedings of the Royal Society*, Vol. lviii, 1895.²*Experimentelle Untersuchungen über die Function der Nerven und Muskeln des Kehlkopfes*, Würzburg, 1873.³*Archiv für Laryngologie*, ii, p. 143.⁴*Ibid.*, x, p. 320.⁵*Ibid.*, xii, p. 70.⁶*Medico-chirurgical Transactions*, lviii, 1875.¹Krause, *Archiv für Anatomie und Physiologie*, 1884.²F. Semon and Victor Horsley, *Transactions of the Royal Society*, London, Vol. clxxxi, 1890.

paralysis will be elicited, according to the character of the irritation.

As the superior laryngeal nerve is the sensory nerve of the larynx and only sends motor fibres to the cricothyroid muscles, the recurrent is the motor nerve for all the intrinsic muscles of the larynx and innervates adductors as well as abductors. It is not many years ago that Risien Russell^{9, 10} found that these nerve fibres serving two antagonistic functions ran in separate bundles throughout the whole length of the recurrent, the fibres for the abductors running on the inner, those for the adductors on the outer side of the nerve trunk. As the normal action of the abductors during life is, as will be shown later, the result of a reflex, manifesting itself in a permanent state of partial contraction, the glottis is wider during quiet respiration than in the so-called cadaveric position, resulting from a total paralysis of the recurrent. As in such a lesion the action of the external tensor, the cricothyroid muscle, which is innervated by the superior laryngeal, and by stretching the cords produces their slight approximation toward the median line, is still preserved, the glottis is slightly narrower in the cadaveric position in the living than in the dead. In this connection it may be mentioned that opposing views about the action of the cricothyroid muscle have been held up to the present time, but that Iurasz¹¹ has quite recently proved that it draws the cricoid toward the thyroid cartilage, as its origin is at the latter and its insertion at the former, and as the cricoid has not the firm muscular fixation possessed by the thyroid cartilage (sterno-hyopharyngo-thyroid muscles).

Semon¹² in his article on the reflex tonus of the abductor muscles, analyzes the cause of the greater width of the glottis during normal respiration than in the cadaveric position in consequence of recurrent paralysis. He shows by physiological and pathological reasons and on the basis of experiments made by Horsley that this dilatation of the glottis is exclusively due to a tonic innervation of the abductors. The experiments undertaken lead him to the conclusions that the greater width of the glottis during life is the result of a permanent activity of the abductors, which, therefore, belong to the class of respiratory muscles; that the action of these muscles is produced by tonic impulses which receive their ganglia centres from the neighboring respiratory centre in the medulla; and that these impulses reach the medulla in rhythmic form in consequence of excitation of certain centripetal fibres the regular action of the abductors, therefore, being a reflex process, but that in spite of their subsidiary innervation the abductors are physiologically

weaker than the abductors. The latter play primarily no part in the respiratory act, and their principal function is tone production.

The most important chapter in the pathology of laryngeal paralysis, which we have to treat more fully on account of its bearing on clinical medicine, is the discovery by Semon of the proclivity of the abductor fibres to disease,¹³ a subject which has given rise to a host of investigations and publications and, although severely contested up to the most recent times, is almost universally accepted as an established fact now. While Rosenbach,¹⁴ on the occasion of a case of œsophageal cancer, accompanied in the beginning by a paralysis of both abductors, and later of both recurrent nerves, was the first to state that on compression of the recurrent the function of the abductors suffered first, and that the adductors became affected later, it was Semon, who by the above-mentioned publication and numerous others, of which only the article in Virchow's *Festschrift*¹⁵ may be mentioned here, has proved on the strength of many recorded cases that in all organic progressive paralyzes of the laryngeal nerves, be they of central or of peripheral origin, the abductor muscles become exclusively affected first, and in the majority of cases the adductors exclusively in all functional paralyzes.

The assertion that the position of the vocal cords in the median line is due to a paralysis of the abductor muscle was opposed by Krause,^{16, 17} who endeavored to explain it by a primary neuropathic spasm and later by a reflex spasm of the adductors; and recently by Grossman,¹⁸ who assumed that a complete recurrent paralysis did not produce the cadaveric position of the cords, but a position of adduction near the median line. The cadaveric position arising later he attributes to the supervening paralysis of the cricothyroid muscle. The reason of the untenability of both theories cannot be entered into here, but neither of them has more than one or two adherents.

Of the many arguments brought forth to substantiate the greater vulnerability of the abductor muscles, the most important ones may be enumerated. Since we know by the work of Risien Russell that the recurrent is not a homogeneous nerve, but contains separate fibres for the adductors and abductors, the isolated paralysis of one group of muscles in affections of a nerve which provides also their antagonists is easier to comprehend than formerly. It is also not surprising to find from what was said of the location of the phonatory and respiratory cen-

⁹*Archives of Laryngology*, Vol. ii, 1881.

¹⁰*Breslauerzeitung*, Nos. 2 and 3, 1880.

¹¹Semon, F. Die Entwicklung der Lehre von den motorischen Kehlkopfparalysen seit der Einführung des Laryngoscops. *Virchow's Festschrift*, Bd. iii, 1891.

¹²Verhandlungen der physiologischen Gesellschaft, Berlin, 1883, 1884.

¹³Virchow's *Archiv*, 1884, and several other publications.

¹⁴*Archiv für Laryngologie*, Bd. vi, p. 282.

⁹*British Medical Journal* June 18, 1892.

¹⁰*Proceedings of the Royal Society*, Vol. v, 1892.

¹¹*Archiv für Laryngologie*, xii, p. 61.

¹²*Proceedings of the Royal Society*, Vol. xlviii, 1890.

tres in the cortex and medulla, respectively, that laryngeal paralyses based upon central causes or psychical disturbances, such as hysteria and shock, affect the phonatory, the adductor muscles, and bulbar lesions the respiratory, the abductor muscles. Further, we know from the experiments of Zederbaum¹⁹ that by pressure the reflex irritability of a nerve disappears, while the motor action remains intact. The greater width of the glottis during normal respiration than in the cadaveric position has been shown to be the result of a reflex tonus which, emanating from the respiratory centre, acts continuously upon the abductor. If we, therefore, take the abductor tonus, which is, as stated, a reflex process, as an analogon to the reflex irritability of a nerve, we can conceive that, for example, by pressure upon the pneumogastric the motor function of the adductors continues undisturbed, while the abductor becomes paralyzed.

Passing over the differential influence of ether upon the laryngeal muscles, studied by the late Hooper,²⁰ we will confine ourselves to the most potent facts supporting Semon's discovery. There are quite a number of cases reported in which abductor paralysis was observed, which, with the progress of the lesion producing it, for example, aortic aneurysm, turned into recurrent paralysis. On the other hand, an equally large number of cases has been published in which in the beginning a complete recurrent paralysis was observed, which, with an amelioration of the patient's ailment, gradually developed into an abductor paralysis, showing that with an improvement of the exciting cause the adductors recuperated earlier and quicker than the abductors. Quite recently the writer²¹ has recorded a remarkable unilateral case of this nature in which the voice, having been completely lost by a recurrent paralysis combined with such of the thyreoarytæ-noid muscle, was entirely restored, even with the ability to sing; and which also presented unusual interest from a diagnostic point of view on account of the ætiology. That in such cases the primary abductor paralysis is not observed before the patient presents himself with a fully developed recurrent paralysis is easily understood when we consider that unilateral abductor paralysis produces in the majority of cases no inconvenience to the patient and does not necessarily interfere with his voice. Another and one of the most forcible arguments is the either isolated or earlier occurring fatty degeneration and atrophy of the abductor muscles in organic progressive disease, affecting the motor nerve; while so far no case is known in which in such lesions the adductor muscles

alone or in a greater degree have undergone such changes.

Finally, experiments have been carried on showing a different biological structure of the abductor from the adductor, e. g., in so far that they lose their electrical excitability after death much sooner than the adductors, Grabower²² has found by a new method of staining that the ultimate terminal fibres of the recurrent show a differentiation between those ending in the abductor and those ending in the adductor muscles, a subject which certainly encourages further investigation and is calculated to throw additional light on this question.

If I have devoted an undue amount of space to the subject of abductor paralysis, it has been done with the full knowledge of how necessary it is for the laryngologist as well as the physician to understand fully its far-reaching bearings for both, in order to judge correctly the whole subject of laryngeal paralysis. It also simplifies considerably the remaining task of analyzing the different paralyses individually and the lesions producing them. When, for example, we observe a case of recurrent or abductor paralysis, we shall think at once not of a functional, local causation, but look for a lesion affecting the nerve trunk somewhere along its whole course; and we shall not rest satisfied from a diagnostic as well as therapeutic point of view till we have found out the ailment accounting for the paralysis; by the way, often one of the most difficult problems for the laryngologist.

Beginning on the clinical part, in which I follow mainly the treatise by Semon in Heymann's handbook, with paralyses of central origin, we have the prototype of cortical paralysis in hysterical aphonia, in which the muscles subject to the will power, viz.: the adductors and their adjuvants, do not respond to attempted voice production, but in many cases retain their function for reflex acts, such as coughing, laughing, and crying for pain and during sleep, with ability to sing but not to talk, etc. Besides hysteria, lateral adductor paralysis is also brought about by sexual events—puberty, or pregnancy—by psychical influence, fright, anger, or suggestion; by direct traumatism, and also in the way of reflex action, as from adenoid vegetations, nasal polypi, etc. But often the exciting cause cannot be determined. All the lesions enumerated produce bilateral paralyses, though it must be conceded that a number of excellent writers profess to have observed unilateral paralysis from a unilateral affection of the opposite side of the brain; but, as many of these cases are not beyond reasonable doubt and opinions are still divided, a definite decision of their actual occurrence has to be left for the future. Cases of cortical

¹⁹Reymond, *Archiv für Physiologie*, 1883, p. 161.

²⁰Transactions of the American Laryngological Association, Vol. vii.

²¹Laryngoscope, St. Louis, October, 1901.

²²*Archiv für Laryngologie*, Bd. vii, p. 128.

paralysis can also be due to symmetrical tumors, syphilis, tuberculosis, softening, etc., although their true character is difficult to prove. Hæmorrhages destroying both phonatory centres are so severe a lesion that death generally supervenes; but in the one well-known case of Eisenlohr²³ the patient survived the attack. Besides other paretic symptoms, he was completely aphonic, one vocal cord being completely paralyzed, the other making only slight movements on the attempt at phonation. The post mortem showed destructions in the brain; but bulbar and peripheral lesions of the nerves were positively ascertained to be absent. Pseudo-bulbar paralysis is more frequently observed, and, although resembling the symptoms of bulbar paralysis proper, the laryngeal muscles undergo no fatty degeneration in the former. All the organic affections named can attack the deeper parts of the brain as well as the nerve tract leading from the phonatory centre to the medulla; but in either case the result as to the adductor paralysis will not be altered.

As the diseases producing paralysis of the pneumogastric, recurrent, and posticus cover the same field, these paralyses will be treated of conjointly. As to the pneumogastric, we have to keep in mind that if, for instance, by traumatism or severance during an operation, the dissection is made above the superior laryngeal, in addition to the symptom of recurrent paralysis, also paralysis of the cricothyroid muscle takes place, and, as the superior laryngeal is also the sensory nerve for the larynx, anæsthesia of the interior of the larynx is the result, with the consequences that food and foreign bodies can enter the larynx without being expelled by the patient, exposing him to the danger of "Schluck" pneumonia. We observe, further, tachycardia, and a one-sided affection of the vagus can produce bilateral paralysis (Johnson).

The pneumogastric is liable to be paralyzed by tumors at the base of the skull or neck, such as goitre, by pachymeningitis from syphilis, by severance at a surgical operation, etc. The lesions to be enumerated, but of which only the most important and frequent ones will be stated, can affect either the pneumogastric, the recurrent nerve, or the abductor muscles alone, according to their location, their character, dignity, and duration. If, for illustration's sake, a goitre presses upon one vagus above the separation of the superior and inferior laryngeal nerves, we have, in addition to the symptoms produced by their paralysis, also those pertaining to vagus paralysis, such as tachycardia and possibly also bilateral paralysis. If the goitre exerts its pressure lower down, upon the recurrent only, we shall observe either total unilateral recurrent or abductor paralysis.

For this reason, and to avoid unnecessary repetition, it has been thought best to give the ætiology of these three paralyses together; the more so as the laryngologist is often called upon and able to facilitate the diagnosis and prognosis of the primary disease by the laryngeal image and its changes occurring during the course of the malady (recurrent turning into abductor paresis, and *vice versa*).

The organic causes have to be considered under two distinctly separate divisions, viz.: those emanating from the bulbus and spinal column and peripheral ones. The former are softening processes, hæmorrhages, syphilis, tumors, diphtheria, progressive bulbar paralysis, amyotrophic lateral sclerosis, syringomyelia, and locomotor ataxia. Peripheral causes are tumors of the neck (cancer of the œsophagus) aneurysm of the aorta, of the innominate, or of the right subclavian (on account of the greater frequency of aortic than subclavian aneurysm the left recurrent is oftener paralyzed than the right), mediastinal tumors, such as malignant growths, infiltration of the peritracheal or bronchial glands in syphilis, pericarditis, pleuritic adhesions, as in tuberculosis, traumatism and injuries; further, infectious diseases, influenza, scarlet fever, typhoid fever, toxic influences (recently studied by Heymann²⁴) principally lead, which is apt to produce also adductor paralysis or rheumatism, both causing peripheral neuritis, although the diagnosis of rheumatism ought not to be made hastily and before an earnest and conscientious search for other factors has been made.

The paramount importance of these paralyses, especially of the abductor muscle, for the practitioner results from the fact that it has very often been accidentally discovered at a laryngoscopic examination and is also frequently observed before the underlying grave affection has been recognized or caused any perceptible symptoms. To cite only two examples, cases are known in which abductor paralysis antedated all the other usual symptoms of locomotor ataxia and, further, in which the position of one vocal cord in the median line in an otherwise apparently healthy person was the incentive to a careful examination of the entire organism, and an aneurysm was found. Another equally important point for practical medicine consists in the absence of any laryngeal subjective symptoms in many cases, when only unilateral abductor paresis is present. It does not produce dyspnoea under ordinary circumstances, or any alteration of the voice, as a perfect approximation of the cords at phonation takes place, and to the patient himself his serious affection is unknown or causes him no inconvenience.

That all the lesions enumerated greatly interfere with health and that some of them are of the gravest character is obvious, and the advice cannot be too

²³Deutsche Zeitung für Nervenheilkunde, Bd. i, p. 388.

²⁴Archiv für Laryngologie. Bd. v, p. 256.

strongly proffered to examine in all obscure and doubtful troubles the larynx, as well as a conscientious physician is wont to make a thorough examination of the urine.

Recurrent and abductor paralysis does not, as a rule, come on suddenly, but develops slowly and gradually. The usual process is a progressive loss of the abductor power, showing itself by the inability of the cord to assume its normal position on the outer side of the larynx on attempted deep inspiration, resembling the cadaveric position. The latter will be more pronounced in the course of the disease, but for the approach and stationary position of the cord in the median line an additional element is necessary, which is supplied by the paralytic contraction of the antagonists, the adductor muscles. When anywhere in the human system a group of muscles is paralyzed, their antagonists assume a state of permanent contraction, and the same law holds good also for the larynx, as Fraenkel²⁶ very plainly and appropriately stated in his answer to Grossman.

Of the affections named, only locomotor ataxia deserves special consideration, as it gave the initiative to the doctrine of the greater liability of the abductor to disease, and as abductor paralysis is the typical laryngeal paralysis observed in tabes. Burger,²⁶ to whom we are indebted for one of the best treatises on laryngeal motor disturbances in tabes, found in seventy-one tabetics thirty-three cases of bilateral posticus paralysis, while the other patients had unilateral abductor and a few posticus of one side and recurrent paralysis of the other. The authors agree that the danger of suffocation in bilateral abductor paralysis is so imminent on the slightest provocation that tracheotomy should be performed, even if the patient does not suffer from dyspnoea at rest. In locomotor ataxia we also observe atactic movements of the cords and the so-called laryngeal crises, which it will be sufficient to have mentioned in this connection.

It is not the aim of this essay, and it would greatly transgress the space allotted to it, if I were to treat the adductor paralysees at the same length as the abductor paralysees. It is also not necessary, as the views laid down in this article have shown that their pathological importance is decidedly inferior to the paralysees of the recurrent or abductor. It is true that the interference with or less of tone production presents more obvious symptoms, more annoying to the patient and often as difficult to cure as an abductor paralysis. But the lesions producing it bear a more or less subordinate character and are in most cases of a local nature, such as catarrhal laryngitis, faulty use of the voice, over-exertion, prolonged use of the voice, and psychical influences, such as hys-

teria, which has already been mentioned. It has also, finally, to be stated that the thyreo-arytæ-noid muscle, the internal tensor, is generally the first muscle of this group to become paralyzed in progressive laryngeal paralysis from organic affections.

Original Communications.

CONCERNING AN INTERNATIONAL SYSTEM OF QUARANTINE.

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Quarantine is a vital subject at the present time to every country with a sea coast. The interpretation of what quarantine should be has been made by nearly every nation in the world. Webster's definition—"a restraint of intercourse"—has been twisted until sometimes it means the stoppage of all intercourse between nations, while at other times absolute freedom of the same is enjoyed. The importance of quarantine was recognized so far back as the Middle Ages. The Crusaders diffused leprosy throughout the nations of Europe to such an extent that the clergy made a demand for a forcible restriction to be put on lepers entering Europe from the East. Even in Biblical times, the "unclean" were quarantined without the city gates. But in those days the world was small and the same system of quarantine easily embraced the known world. With the coming again of the pestis bubonica in the nineteenth century, the pendulum has swung from the simple segregation of the ancients to the modern idea of quarantine in its thousand forms and features. Quarantine has run riot at times and commerce was then paralyzed. Countries were arrayed against countries and the health of travelers was often injured by injudicious systems, while their baggage was often needlessly destroyed. At the present time each nation establishes its own quarantine stations and conducts them independently of every other nation. In many cases it seems that spite has influenced quarantine regulations more than the needs of health. "If you dare to put a quarantine against me, I will put in a heavier one still against you" seems to be the unspoken motive. Consequently a quarantine comes and goes like the changing weather-vane, and commerce suffers accordingly. Some of the different systems, as seen by the writer, will be mentioned.

Commencing with the far east, Japan has a most efficient system. Upon the arrival of a steamer from an infected port, five medical inspectors board her and a careful examination of crew and passen-

²⁶ *Archiv für Laryngologie*, Bd. vii, p. 402.

²⁶ *Die laryngealen Störungen der Tabes Dorsalis*, Leyden, 1891.

gers is made. If there have been no infectious diseases on the ship, the passengers are allowed to land, no matter whether the infected port was left one day or ten days ago. If there have been infectious diseases on board, the steamer is fumigated, and passengers and steamer detained ten days. Japan has had the bubonic plague in only one island this year, Formosa, and has succeeded in keeping it there. Steamers from Manila and Hong Kong, both infected ports, call at Nagasaki, Japan, which is but four or five days away, yet no plague has been carried there. There is no medical inspection upon leaving Japan for another country.

In China, commencing at Taku, which is the port of entry for Peking, I have found no medical inspection; in fact, no sanitary service has been organized, and no quarantine regulations of any kind have been enforced. At Shanghai, no sanitary officers could be found. At that time (June 20, 1901) there was one case of plague there, and the daily papers were endeavoring to raise a public sentiment in favor of a quarantine service. Hong Kong is the hotbed of infectious diseases. She has had spasmodic quarantines against other ports. In the spring one was declared against Manila, at which time the number of plague cases in Hong Kong in a week exceeded those in Manila in a month. When at Hong Kong in June, there was no examination of incoming or outgoing passengers. Commerce and passengers pass to and fro without restriction between Hong Kong and Canton, which is but a night's journey distant. Canton, at that time, was having thousands of cases of plague each month and the Chinese government did nothing. Hong Kong was probably supplied daily from that source with reinfection. In Manila there is a Marine-Hospital station, which, so far, has mainly confined its efforts to sprinkling the effects of passengers returning to the States with a strong solution of formaldehyde. So that, on the voyage, if any of the sprinkled clothes are worn, a laryngitis, pharyngitis, and probably a violent rhinitis, will be contracted. No restrictions are placed on incoming passengers, though they be from that incubator, Hong Kong. The internal management of the plague in the city is on the same system of isolation and disinfection of buildings, with closure of the same, as is used in the United States in small-pox cases.

Singapore has a medical inspection of all incoming passengers. Their addresses are kept and they must report once each day of their stay to the health officer, Dr. Middleton, if he so wishes it. There have been a few sporadic cases of plague there, but no epidemic.

Penang, another of the Straits Settlement towns, has no inspections or restrictions. In Burmah, however, at its chief port, Rangoon, there is spas-

modic quarantine. No regulations at all were enforced upon our vessel, though on its previous voyage a ten-day quarantine against Singapore had been declared.

Calcutta, having endemic plague, does not bother about quarantine regulations, but the cities in the interior of India look askance at arrivals from Calcutta. A medical officer inspects you and takes your address. The medical officer at Moghal Sarai informed me that within two weeks he had taken over thirty cases of plague out of the trains from Calcutta. Three times, in the interior of India, I have had my pulse felt for about ten seconds, and have been then pronounced free from the pestis bubonica. Fortunately for me there was no acceleration of the pulse, or I might have been put off the train as a suspect case. Bombay, the present centre of trouble, welcomes all travelers, but she does not speed the parting guest. It is harder to leave Bombay than it is to leave most of the countries of the world. An elaborate examination of each person is made; the neck, axilla, and groin are examined for buboes and the pulse is felt. Then a written statement is produced, which the passenger is required to sign, the gist of which is, that to the best of his knowledge and belief, he has no living microbes of the bubonic plague upon his person or in his baggage. In my case I am sure I hoped that it was so, but after a stay in Bombay, in all its filth and foulness, it was hard to make that statement conscientiously. Some microscopic slides in my baggage caused great uneasiness to the sanitary officers and, when all the laws upon the subject had been consulted, I was asked to throw the slides overboard, as they contained dead microbes. Upon my refusal to do so on the ground that, as shown by serum experimentation dead microbes were curative, or rather preventitive, than infective, I was informed that I should not be allowed to land from the P. and O. steamer in Europe; and so it is very difficult to leave Bombay. You can have plague there, however, with no restrictions. If you wish, you can have it at home, and be nursed by your family. The house, it is true, will be disinfected by bichloride of mercury, but your family will not be isolated; in fact, no restrictions are put upon them, and all the neighbors can come in, as the house will not be closed up. If you belong to the Parsees and should die, the plague bacilli will be distributed over the city by the birds which perform the last sad rites for Parsees. There are fewer regulations concerning the plague in Bombay than in any other plague city I have visited. At Aden, Arabia, there is a ten days' quarantine against Bombay. The quarantine station is across the straits in Africa.

Egypt has a system of its own. Several years ago the nations of Europe thought it would be a

good plan to make Egypt the quarantine station for Europe, so a convention at Venice arranged the matter so that each European nation has sanitary officers stationed in Egypt. These are not physicians, but police, who make the trip through the Suez Canal on every boat arriving within ten days from an infected port, their duties being to prevent intercourse between ship and shore. The passengers who land in Egypt must do so at Suez, after a rigid medical inspection. They have the option of being sent over to Moses' Wells, on the Arabian side, where the quarantine station is located, or of sitting in a sail-boat out in the harbor till the ten days are up. As the P. and O boat from Bombay arrives a little before the ten days expire, it is an amusing sight to watch the Bombay passengers waiting in the harbor till the clock strikes twelve, when all make for land as fast as possible. That clock is a splendid disinfectant and renders all innocuous. The soiled clothing only of the passenger is steamed. These formalities I witnessed August 20th; while the Cairo papers of that same date gave accounts of plague cases in Port Said and Alexandria.

Upon leaving Egypt from Alexandria, for a few piastres, a label is put upon your baggage, which states that it has been disinfected. The label may have been disinfected and the act of pasting it on may convey that property to the baggage, but that was all the disinfecting process I could find. For the same fee a clerk gives you a notice which informs the captain of the vessel that your baggage has been passed, and that therefore you are a proper person to leave the port of Alexandria. And so the farce goes on!

While at Suez, I was informed by an English sanitary officer that there would be no trouble in going to Europe from Egypt if I landed in Italy, while, if France were chosen as a destination, there would be a strict ten days' quarantine at Marseilles. Upon arrival at Naples, Italy, there were no restrictions or detentions, but if any infectious diseases had broken out during the voyage, detention would have occurred.

The system in America is known to all medical men. Not having the plague near, the measures taken are not so severe as in the East. However, we have yellow fever instead to watch. Coming up from Cuba to Savannah, Ga., in the spring of 1899, all our baggage was disinfected with formaldehyde. The coryza which resulted from the soldiers sleeping in their blankets after this method of disinfection, was often so severe that permanent throat trouble resulted. Some of the best work of the Marine-Hospital Service is not done at home, but by the surgeons stationed in foreign lands, who carefully watch all passengers embarking for the

States. It is but another application of the "ounce of prevention" theory.

After seeing the preceding systems in operation, the following points were observed: (1) Variations in quarantine in the same country, as seen in Calcutta, Bombay, and inland cities of India; (2) variations in quarantine between different countries; (3) because of these numerous variations, the liability of the spread of the infectious disease is increased; (4) danger to travelers detained at quarantine stations from infection received there. In certain South American countries, I am informed, the quarantine has been carried out with more energy than judgment, and persons free from disease have been cooped up on the same ship with the infected until they survived or perished; (5) injurious effects on commerce, from variation in quarantine systems. This has become a leading question since American commerce has expanded around the world. Infectious diseases follow the lines of trade. A uniform system, both at the port of export and at the city of import, will save millions of dollars' worth of goods, whether it be coffee from South America in New York harbor, or tobacco from Manila somewhere else; (6) the use of pernicious disinfectants; formaldehyde not only ruins all leather goods, but is a violent irritant to all mucous membranes; (7) the absurdities of different systems, such as is seen when a city, an incubator of the plague, quarantines against one it has infected, and where plague is not endemic. The burlesque on quarantine which is now seen in Egypt would be obliterated were a rational international system adopted.

It is my hope that I have shown the need of a uniform basis for restriction of the spreading of infectious diseases. Many of the minor disagreeable features seen have not been spoken of and some of the good features may have been unintentionally omitted. In my conversation with Dr. Haffkine, in his laboratory at Bombay, on August 9th, he spoke of the change in opinion of medical authorities in the East on the subject of restriction of infectious diseases. The ideas now are running toward more freedom of intercourse between infected and non-infected places. The time quarantine, he thought, was superfluous. In this respect he agrees with Montenegro, who, in his monograph on the epidemic of pestis bubonica in Portugal, points out the better results secured by allowing free intercourse but keeping the travelers under observation by a system of careful medical inspections, and having the traveler report himself to a medical officer for a certain period of time. Dr. Haffkine would be strongly in favor of a rational basis for quarantine, to be adopted by all civilized nations.

Dr. Robert Koch, who is the director here of the Royal Prussian Institute for Infectious Diseases at Berlin, and is probably at the head of that work in Europe, told me recently that the absurdities of the different systems in Europe alone had caused him to believe that unless some international, common-sense system was adopted soon, it would be far better to abolish all quarantine system and let commerce and travel be without restrictions of any kind. He detailed his experiences in coming from Egypt to France last year. Then, Italy lost so much commerce by her rigid restrictions on Egyptian commerce and by France's open door, that this year Italy has removed her restrictions and the positions of the two nations are reversed. Koch thinks no intelligent system for Europe can be enforced until Turkey and Greece, the backward countries, are brought up to the standard on this subject.

The need of an international understanding, Koch asserts, is urgent, and, though no one had approached him on the subject before, he thought it should have been brought up at the beginning of the plague epidemics and before they had spread so far.

Professor Kolle, Koch's assistant, who has charge of the plague laboratory, agrees with his chief's ideas concerning the diversities of the systems now in use. He spoke of the acute measures taken to quarantine people when the rats, the active conveyors, were not sufficiently watched. A quarantine on rats, which he thought, however, was not likely to succeed, would be better than one on people, who were but passive agents.

The preceding account and the opinions of scientists eminent in infectious diseases, show, I believe, the need of a conference of medical men from all civilized nations to consider a proper system which should be free from the absurdities of excited and spasmodic quarantines: A system which should consider climatic conditions, as influencing the spread as well as the stoppage of infection; the needs of commerce and the safety and comfort of those who are required to travel; the question of proper and improper methods of disinfection; and plans for the establishment of a bureau for the issuance of bulletins on infectious diseases and for the spread of these bulletins throughout the world. In this manner, it is to be hoped, better results would be attained than by the present haphazard systems, and intelligent information on this subject would be distributed from one central bureau. In this way all countries would be in touch with the central station and a system worked up which would be useful in epidemics, as the United States Weather Bureau now is in changes of weather and climatic conditions. Were such a meeting held in the United States, it would be of great advantage, not only to

the visitors to see our own country and our wonderful Marine-Hospital Service, but also to the medical men of America through their contact with scientists from the East, who rarely lend their presence to the gatherings of their Western brothers. Dr. Koch and Dr. Haffkine speak English, as also does Dr. Hada, chief assistant to Dr. Kitasato, of Tokyo, Japan.

If such steps are not soon taken, we shall not only have more opera bouffe on this subject, but the damages to commerce will increase and the bubonic plague will continue to reach out for more countries to come under its sway, as it has done from year to year, till it will no longer be endemic in the torrid zone only, but will compel the temperate zone to bow down before it in submission.

BERLIN, GERMANY.

ETHYL BROMIDE
AND CHLORIDE, RESPECTIVELY, AS
SURGICAL ANÆSTHETICS,
WITH A
DESCRIPTION OF AN APPARATUS
FOR THEIR
SCIENTIFIC ADMINISTRATION.*

By S. ORMOND GOLDAN, M. D.,

NEW YORK.

The history of the newer agents for the production of surgical anæsthesia has been, interestingly enough, almost universally the same—great advantages were always claimed for them which most frequently consisted simply of mixtures of the old anæsthetics. Careful observations in almost if not all instances have relegated these newer (?) agents to well-merited obscurity.

Ethyl bromide as a surgical anæsthetic has been used more or less in minor operations, the claim for it as well as the ethyl chloride being greater safety, rapidity in action, and absence of after-effects. Ethyl chloride until recently has not been used except for local anæsthesia, because of its impure state. Recently, however, a pure product has been produced for inhalation. Both these agents have also been used to some extent to precede ether in general narcosis.

To determine the value of these anæsthetics we must subject them to the same course of inquiry as our other anæsthetics, nitrous oxide, ether, and chloroform. While they may be considered from various standpoints, that which has always appealed to me, and I am sure must appeal to all who give the subject of anæsthesia proper consideration, is:

*Read before the New York State Medical Association, October 22, 1901.

1. Safety.
2. Adaptability.
3. Convenience.
4. Economy.

In this consideration comparisons must of course be made with our three general anæsthetics, nitrogen monoxide, ether, and chloroform. Hence arises the question, Are we justified in classing either the ethyl bromide or chloride with our other anæsthetics—to be specially selected according to the requirement of the case? Here I am again afforded the opportunity of emphasizing that no one anæsthetic should be used to the exclusion of all others, but each selected to meet the requirements of the case in hand.

Regarding nitrogen monoxide, ether, and chloroform, we have three anæsthetics possessing peculiar physical, chemical, and physiological properties, each having directly opposite modes of administration, gas on the one hand requiring entire exclusion of air up to a certain point, chloroform requiring the greatest quantity of air possible, ideally 98 per cent., whereas ether occupies a position between the two, with simply more or less restriction of air, possible with the so-called closed method of administration which experience proves to be the best method. Immediately we note the middle position of ether with its evident safety generally.

Ethyl Bromide (C_2H_5Br) and ethyl chloride (C_2H_5Cl) are both halogen anæsthetics, never to be considered except in the same class as methynil terchloride, or chloroform ($CHCl_3$). Their physical, chemical and physiological properties are quite similar. Their physiological properties as compared with chloroform, owing to a difference in boiling point, differ rather in degree than in kind. As they both, as well as chloroform, which is said to be seven times as poisonous as ether, have a halogen derivation, they must be classed as intense poisons and the greatest care observed in their administration. Both these agents are said to be safer than chloroform, owing to their lower boiling point. Now, an agent having as low a boiling point as ethyl bromide and chloride will, remembering the body temperature, be inhaled and exhaled more readily. This does not necessarily mean that on this account they can be considered safer than an agent of a higher boiling point, such as chloroform. In fact, it is in this rapidity of action that the danger lies, for in order to secure the required profundity of anæsthesia for surgical purposes, concentration of the anæsthetic by exclusion of air beyond the bounds of safety would be necessary and with either of these anæsthetics would be, to say the least, dangerous.

While an anæsthetic is more readily exhaled, it may also be more readily inhaled, and so very easily

cause death by overdosage. It can easily be seen that these anæsthetics are only applicable to minor operations, and comparisons cannot properly be made with chloroform, an agent used for all kinds of surgical work by many operators. Everything considered, chloroform is less safe than either gas or ether, and the ethyl bromide and chloride are both less safe than chloroform, were they used in the same class of cases.

That chloroform is responsible for many fatalities in minor operations is due largely to the fact that the operation was begun before the patient was thoroughly anæsthetized or not in the recumbent position.

Both of these anæsthetics under consideration have been used by me with ideal results as to rapidity in induction of anæsthesia, rapid return of consciousness, and absence of nausea and vomiting. This is also practically true of chloroform, provided cases of the same duration are used for comparison. But many writers will compare chloroform in a long operation with one or both of these agents for a very brief anæsthesia. If we consider the question of convenience and economy, neither ethyl bromide nor chloride would rank first, for a more convenient and economical anæsthetic generally than chloroform does not exist. But we are not justified in sacrificing safety to either convenience or economy.

It may be said that in minor operations of *very brief duration* both these anæsthetics are probably superior in safety and other respects to chloroform, but particularly less so, in my estimation, than is nitrous oxide, especially when combined with oxygen. As to skill required in the administration of these agents, there is just as much skill requisite as with our three other anæsthetics, and in inexperienced hands their administration is mere guesswork. If their administration is too long continued without interruption, they can cause death as rapidly and as surely as will nitrous oxide if air is not admitted at the proper time. This death may not only be asphyxial (respiratory), similar to that caused by nitrous oxide, but also vasomotor, similar to that caused by chloroform.

Ethyl bromide and chloride have features resembling nitrous oxide, physiologically on the one hand, and physiologically, chemically, and physically, chloroform on the other, and this similarity should always be borne in mind.

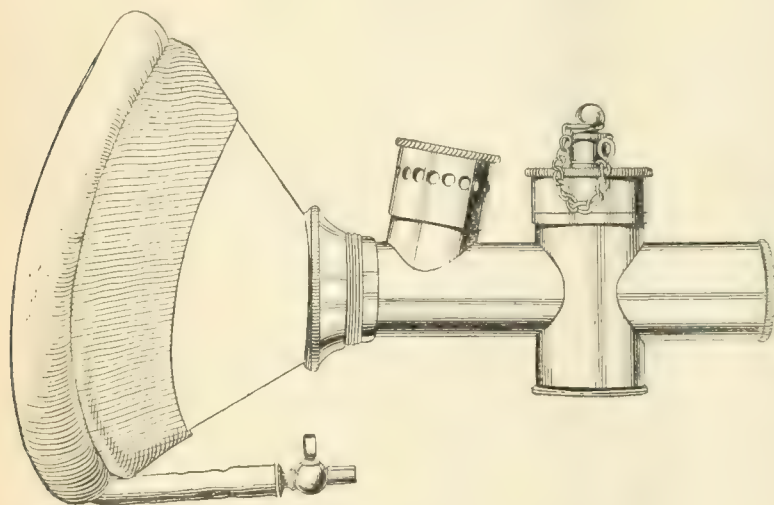
Both of these agents may be considered together. I should say the ethyl bromide was safer than the ethyl chloride, for the reason that it does not require the same concentration as does the latter agent, is quite the same in convenience, rapidity in action, and absence of after-effects, and is more economical, and I would suggest the use of both agents in separate

series of cases, as it is only by this plan that the exact value of these anæsthetics can be determined.

Compared with ether, these anæsthetics are inferior in adaptability and safety, for the same reason as chloroform. They are probably superior in many slight operations for the same reason as in the case of chloroform.

As both the ethyl bromide and chloride are inferior to chloroform in adaptability, there is but one anæsthetic with which comparisons can be made, that is the so-called nitrous oxide gas, and like that agent useful only in operations of short duration; while it is true that these agents can be used in the longer operations, the same is equally true regarding nitrous oxide alone or with oxygen; all depends upon the experience of the administrator.

Both the agents are so similar to nitrous oxide in many respects that it will be of interest to note the points of resemblance. Both the ethyl bromide



Dr. Goldan's Inhaler. The complete apparatus.

and chloride have, as well as chloroform, an odor or taste somewhat similar, it seems to me, to nitrous oxide. Anæsthesia is induced very rapidly, consciousness is regained very quickly, absence of after-effects, such as nausea, headache, etc., occurs in the three agents with about the same frequency, though generally more so, with ethyl bromide and chloride. A condition of analgesia with consciousness has very frequently been noted with the ethyl bromide and chloride, and the same, while not generally known, occurs with nitrous oxide. This I have observed often when administering gas for tooth extraction, when the patient frequently felt what was being done though no pain was experienced. Both these agents, as well as nitrous oxide, are particularly valuable as precedents to ether in general anæsthesia. The ethyl bromide and chloride as precedents to chloroform are quite unnecessary, if not dangerous.

The question of position requires consideration. We know chloroform fatalities often occur in the dental chair, the patient having been in the sitting posture. As halogen anæsthetics, the ethyl bromide and chloride should always be administered with the patient in the recumbent posture and remaining so; consequently these anæsthetics are less applicable to that minor operation so frequently performed—tooth extraction—than is nitrous oxide.

It was long the belief, if not to a great extent at present, that in order to produce anæsthesia with nitrous oxide it was necessary to partially asphyxiate the patient. We now know that nitrous oxide combined with oxygen produces perfect anæsthesia with no cyanosis.

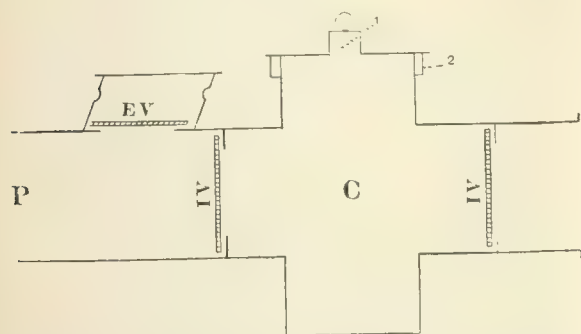
Ethyl bromide and chloride produce their effects similar to nitrous oxide, by replacing the oxygen in the blood. To produce profound anæsthesia with these anæsthetics would undoubtedly lead to asphyxia or circulatory paralysis, if the latter, so rapidly that cyanosis and asphyxia would not have time to be manifested.

Both these anæsthetics have been administered by what may be called air-restrictive methods. The ethyl bromide is generally placed upon gauze or a handkerchief and closely applied to the patient's nose and mouth; anæsthesia is almost instantaneous. With ethyl chloride various devices have been employed for restricting the waste of the anæsthetic; at the same time they also restricted the amount of air. As both these anæsthetics are extremely volatile, especially the latter, a certain amount of concentration must be practised, but this should never be at the expense of the air inhaled. It is far better and safer to use a larger quantity of the anæsthetic with a free complement of air than a small quantity with a small proportion of air. The devices used for ethyl chloride are tending toward this latter method, a particularly dangerous one.

It occurred to me, after experience in the use of these anæsthetics, that in making comparisons with others crude methods must be entirely eliminated. It was desirable to restrict both active and passive evaporation, which occur with every apparatus heretofore employed. I may say, then, that the apparatus presented is the most scientific and efficacious ever before made for the administration of either of these anæsthetics, alone or as precedents to general etherization, the latter of which is accomplished

without change of inhalers and quite similar to nitrous oxide.

The device, while possessing valves, is the perfection of simplicity, as a glance at the diagram will show. Instead of the gas-valved device with inspiratory and expiratory valves, the one shown has this essential difference, one anæsthetic chamber with two valves, one placed anteriorly, the other posteriorly. The inhaler may be described as follows: A thin metal horizontal cylinder into the centre of which is set a chamber for gauze upon which the anæsthetic is placed; upon the superior surface of the horizontal cylinder is placed an expiratory valve protected by a metal box perforated with small apertures to give vent to the expired air. Immediately anterior and posterior to the anæsthetic chamber is placed an inspiratory valve, and it is by these valves that both active and passive evaporation of the anæsthetic is completely avoided, thereby affording the greatest possible economy in the quantity of the anæsthetic used. Both ends of the apparatus are open, affording the freest passage of atmospheric air with the anæsthetic during inspiration,



Diagrammatic representation of the apparatus showing position of valves.

while during expiration the anæsthetic chamber is entirely closed, the expirations passing through the expiratory valve.

When ethyl chloride is used, the small opening in the centre of the cap covering the chamber is opened. This affords an aperture just large enough into which the capillary end of the graduated tube fits. Ethyl bromide may be introduced through this opening or the entire cap may be removed.

The valves are made of mica discs perforated in the centre with springs just strong enough to effectually close the openings and not impede in the least either inspiration or expiration. The face-piece is made of transparent celluloid with a pneumatic rubber rim; this celluloid feature permits a perfect view of the nose and mouth during administration.

Procedure.—Depending upon the nature and duration of the operation, activity of respiration, the type of patient, weight, etc., from two to five cubic centimetres of either anæsthetic is at once placed in

the chamber, which is tightly closed and the inhaler applied to the face. After from three to five or six inhalations, anæsthesia is induced for the performance of the operation.

The phenomena resulting from the inhalation of ethyl bromide and chloride are exactly the same, and occur with great rapidity; after the first few inspirations there are a feeling of numbness occurring throughout the body and congestion of the face and neck with perspiration, owing to the paralysis of the cervical sympathetic. Increased flow of saliva, with movements of deglutition and a condition of analgesia, occurs with consciousness of the patient. He can feel, though he is not conscious of pain, or he will answer questions, though afterward will have no knowledge of having done so.

Voluntary motion is possible, much the same as with spinal anæsthesia, though sensation is abolished. The pupil dilates, with the globes fixed, respiration is deep and slow, the pulse is full and slightly more rapid than the normal, and muscular rigidity supervenes with complete unconsciousness.

Caution.—Before a second application of the anæsthetic is made, the patient should become at least partially conscious. Neither of these anæsthetics should ever, under any circumstances, be administered as chloroform is.

As precedents to general anæsthesia with ether (they are quite unnecessary with chloroform), both these agents may be considered as practically safe, as the quantity of the anæsthetic used is amazingly small and the stimulating effects of ether very quickly succeed upon the anæsthesia of ethyl bromide or chloride. In using these agents before ether, the same aseptic separable ether chamber devised by me for use in connection with nitrous oxide is interposed between the face-piece and the ethyl bromide or chloride inhaler; about one ounce of ether is introduced into the chamber with the index placed at 0, and from one to four cubic centimetres of either ethyl bromide or chloride is introduced into the other chamber for that purpose. The patient is encouraged to breathe, and after three or four inspirations, or almost immediately, the ether chamber is very gradually revolved from 0 to 4; deep etherization succeeds that of the ethyl bromide or chloride quite as rapidly as with nitrous oxide, and is continued exactly the same as when used in conjunction with the latter agent, except that air restriction is not so quickly practised, thereby permitting elimination of the ethyl bromide or chloride.

The rapid introduction of ether anæsthesia upon that of either ethyl bromide or chloride makes the use of these agents for that purpose particularly satisfactory, decidedly more convenient and economical, and probably as safe. I say probably, as my

experience with these agents is by no means as large as that with nitrous oxide and ether; those with large clinical advantages could quickly decide this question of safety.

225 WEST FORTY-FIFTH STREET.

THE DAILY MEDICAL INSPECTION OF SCHOOLS.

By D. S. LAMB; M. D.,

WASHINGTON, D. C.

(Concluded from page 1051.)

The sanitary supervision of schools was urgently brought to the attention of local boards of health in New Jersey as early as 1882, and the benefits which would result from frequent inspection had often been pointed out.²⁸

A number of cases of diphtheria having occurred in Monmouth county, N. J., in 1896, the following action on the part of some of the boards of health of that county and the board of school trustees was taken: They ordered a daily medical inspection of each school, for three weeks. Every scholar who had a sore throat was excluded from the school until a laboratory examination of a culture from the child's throat showed that it was free from diphtheria. The presidents of the several health boards were appointed a committee with full power to employ medical services and arrange for carrying out the daily inspection of the public schools. Dr. John Taylor was employed and began his duties September 25th. There were nine school buildings with fifty-four class rooms to be visited daily. Every case of sore throat or sickness of any kind observed by a teacher was recorded on an appropriate blank, and the scholar was excluded from school until the medical officer reported. The report contained the name of the scholar, its address, age, sex, number of children in family, and number and names of those attending school, stating also the school and class, as well as the Sunday school attended. The teacher stated on the blank the reason for thinking the scholar ill. These reports were placed in the hands of the medical inspector daily, and each case was investigated by him and a daily report made by him to the health office on an appropriate blank.

One hundred and fifteen cases of suspected diphtheria were investigated and 32 were found to be true diphtheria. Specimens from all suspected cases were sent to the State bacteriological laboratory at Princeton and diagnoses were not announced until they were verified by reports from the bacteriologist. All suspected cases were isolated pending final diagnosis, and the isolation restrictions in the cases of

convalescents were removed only when the cultures showed that the diphtheria bacilli were no longer present. The cost of the work was \$186.30, or \$1.62 for each investigation.

"The medical inspection of schools promises to become one of the most useful branches of the public health service, and New Jersey should delay no longer in giving to child life the protection which this defense affords. Daily medical inspection, supplemented by disinfection of infected articles and thorough cleanliness, is capable of rendering a well-constructed school building a safe retreat for children during the prevalence of an epidemic, and the closing of schools for preventing the spread of communicable diseases would rarely be found necessary if these precautions were employed."²⁹

In their *Twenty-second Annual Report*, for 1898 (p. 38), the board remarked that the medical inspection of schools had attracted some attention in New Jersey during the year, but a more general movement among boards of education toward the adoption of a systematic method of inquiry into the health and strength of pupils in public schools was exceedingly desirable. The final establishment of an innovation of this nature would doubtless require considerable time, and experimental trials must first be made before the details of the work could be satisfactorily adjusted. The progress made in this work in the cities of Boston and New York, and the beneficial results already attained, afforded encouragement to every person charged with the responsibility of guarding and protecting the children who were admitted to school buildings and grounds.

The following suggestions for inaugurating medical and sanitary supervision of pupils and school premises had been offered:

1. That the board of education in each municipality and township should employ a physician in the same manner that teachers are employed, and assign to him certain duties.

2. That this medical officer should visit each school to which he was assigned once every school day and examine every pupil referred to him by any teacher.

3. That he should, at least once during every school year, examine every pupil to learn whether any physical or mental defect existed, a record being kept from year to year of each pupil's growth and development.

4. He should also lecture at stated intervals to the teachers, advising them concerning the methods employed to detect the first signs of the appearance of communicable diseases, and presenting the recognized measures for the promotion of health and the prevention of disease. An outline of thirteen lec-

²⁸*Twenty-first Annual Report of the Board of Health of New Jersey*, for 1897, p. 17.

²⁹*Twentieth Annual Report of Board of Health of New Jersey*, for 1896, p. 154, et seq.

tures for the instruction of the teachers was also given.

Under the proposed system the medical officer would not supply remedies, but would notify the parent or guardian whenever he discovered any physical defect or illness in the child, and would take measures to secure isolation if the disease belonged to the dangerous communicable group.

The movement toward the daily medical inspection of schools in Philadelphia was said by Dora Keen, in a paper read at the fifth annual meeting of Associated Health Authorities of Pennsylvania, at Lancaster, Pa., May 18, 1898,³⁰ to have begun in the parochial schools some years prior to 1898, but was abandoned because of opposition.

In discussing her paper, Dr. W. W. Keen, of Philadelphia, said that the State owed two duties to its children: that they should have a good common school education; and that, so far as possible, their health should not be endangered at school. In order to attain the former, compulsory school attendance had been provided by law. We had no right, however, to force children to go to school unless we protected them from infection from some of the more loathsome and deadly diseases. On June 7, 1898, the Board of Health of Philadelphia adopted the following resolution: "Resolved that the Chief Medical Inspector be instructed to require each assistant medical inspector to visit daily two schools in his district, one at the opening of the morning session and one at the opening of the afternoon session, and to report daily to the Chief Medical Inspector the names of the schools visited and the existence of any of the following diseases: Diphtheria or membranous croup, scarlet fever, small-pox, measles, whooping-cough, mumps, contagious eye diseases, parasitic diseases of the head or body, chicken-pox, or chronic otitis."³¹

It is appropriate here to quote Dr. P. J. Eaton, of Pittsburgh, Pa., who, at a meeting of the State Medical Society of Pennsylvania,³² stated: "During the past year my own practice showed no case of measles not directly traceable to one of the public schools in my neighborhood."

The report of the Chief of the Bureau of Health of Philadelphia for 1899 (page 40) stated that the assistant medical inspectors had visited the public schools daily as directed. The results of their work were highly beneficial. The force, however, being small, and their duties having greatly increased, the board of education had cooperated with the bureau of health and appointed a number of physicians who volunteered to visit the schools daily and examine

any children showing symptoms of illness. When a case of contagious or infectious disease was discovered by these physicians the fact was immediately reported to the Bureau of Health, which at once took measures to prevent the spread of the disease. This was of great assistance to the regular force of inspectors, and the Board of Public Education deserved many thanks for its effective cooperation.

The Chief Medical Inspector also reported (page 50) that among the duties of the assistant medical inspectors was the examination of the pupils of the schools to ascertain if any children in attendance presented suspicious evidence of contagious sickness. Such children were sent home to be treated by the family physician. These inspections were made daily. The inspectors were greatly assisted by a large corps of physicians appointed by the Board of Public Education to visit daily the schools in the city. Much good resulted from such an inspection, and it was confidently believed that the coming year would furnish a great reduction in the number of cases of contagious sickness. He added (page 86) that the recognition of incipient cases of contagious sickness would anticipate any action that otherwise might take place at a later period, when the disease would be definitely known, thus reducing the time of personal contact. It was hoped that the examinations would prove so beneficial that this temporary corps of examiners would become a permanent organization. The report for 1900 is not yet published.

Dr. William L. Robins, of Washington, D. C.,³³ who has thus far written the best brochure on the subject, of which I have knowledge, states that in thirteen school weeks, in Philadelphia, 1,464 visits were made to 350 schools; 62 cases of contagious skin diseases were found; 77 of diphtheria; 18 of whooping-cough; 13 of chicken-pox; 66 of lice; 6 of scarlet fever; 60 of ringworm, etc.

The history of the movement in Chicago is as follows: Prior to the beginning of the school year of 1896-7,³⁴ the public schools were divided into eight districts, afterward increased to nine, to each of which a medical inspector was assigned by a letter dated September 1, 1896. The duties of the inspector included:

First, the verification of vaccination; children who had not been satisfactorily vaccinated should not be admitted or readmitted to the schools, except that a child could be admitted provisionally on having been vaccinated, and permanently, if the operation proved successful.

Secondly, if a pupil was reported as having diphtheria or scarlet fever, the inspector should visit the

³⁰*Fourteenth Annual Report of the State Board of Health of Pennsylvania*, for 1898, Vol. i, p. 356.

³¹From *Fourth Annual Message of the Mayor of Philadelphia*, for 1898, p. 46.

³²*Pennsylvania Medical Journal*, 1897, i, p. 145.

³³*Medical Review of Reviews*, February, 1900; also Reprint.

³⁴*Biennial Report of the Department of Health of Chicago*, for 1895 and 1896, pp. 75 to 79; note by Assistant Commissioner F. W. Reilly.

schoolroom where the child had been attending and find out if there were other cases of "sore throat." Such cases should be referred to the family physician, or, if thought necessary, the inspector himself should take a culture. Any child found too ill to remain at school should be sent home by the teacher, for the care of the family and family physician. If ill from contagious disease, the inspector should order the child to go home and notify the family and the chief medical inspector, who would enforce the regulations as to isolation, etc. The inspectors should not assume the professional care or treatment of any case. The inspections should be made so as to cause the least possible interruption to the routine of the school.

Thirdly, inspection of the general sanitary condition of the school and its surroundings. Special attention should be paid to the quality of the water supply as shown by the prevalence, or not, of acute intestinal diseases among the children. Weekly reports of inspections should be made on blanks furnished by the department.

The principals and teachers of the schools were furnished with copies of the instructions that had been given to the medical inspectors and other information, to which the commissioner of health, William R. Kerr, added the following: "No principal or teacher in our public schools needs to have pointed out the importance of the physical welfare of the children in his or her charge. I regard it as an imperative duty of the department to use every available effort to promote their health, to improve their sanitary surroundings, and to guard against the interruption of their studies, by enforcing precautions against the spread of the contagious and infectious diseases, especially that loathsome pest, the small-pox. The active cooperation of all engaged in our public system is confidently anticipated."

During the four months ending December 31, 1896, the medical inspectors of the health department detailed for this purpose formally inspected 233 public schools, making 350 inspections and re-inspections. They investigated at the homes of the patients and at the schools attended by children from the houses in which the diseases were located, 1,417 cases of diphtheria and 306 cases of scarlet fever. Insanitary defects were found in 19 schools, including overcrowding, defective heating, lighting, plumbing and ventilation, damp basements, and insufficient or uncleanly toilet accommodations. This led to a general sanitary inspection of the schools, in which it was reported that 39 other schools required attention.⁸⁵

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From time to time there appeared in the schools many cases of the milder contagious dermatoses, such as scabies, impetigo contagiosa, ringworm, etc. Such cases were invariably isolated and referred to their physicians. If the child was poor, the medical inspector advised and prescribed remedies that could be obtained at some free dispensary, and many such cases had been treated by the medical inspectors. From one school alone more than 60 subjects of impetigo contagiosa were sent home at one time. It was due to the active efforts of the medical inspector that all these cases were recognized, treated, and were able to return to school, in less than two weeks. No other outbreaks of the kind occurred during the year.⁸⁶

October 26, 1899, Dr. W. S. Christopher, of the Board of Education, made a special report to the chairman of the Committee of School Management, Mr. Brennan, in regard to the large number of contagious diseases in the schools, and on the basis of this report, at the meeting of the board on November 1st, the chairman recommended that the Civil Service Commission should be requested to hold a special examination and certify to the board fifty medical school inspectors; that the board should appoint these at a monthly salary of \$—— and attach them to the Department of Compulsory Education, and assign them to duty under direction of the commissioner of health; the inspectors to continue on duty through the school year except during vacations and the month of June. The board should direct that pupils absent from school continuously for four days or more should be examined by the medical school inspectors, and cultures made from their throats for examination by the city health department, and should be pronounced free of infection before being allowed to resume class work. The report was adopted. The following instructions were given to the inspectors by the commis-

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The commissioner of health, Dr. A. R. Reynolds, reports that under this new arrangement, medical inspections began January 8, 1900. Up to April 12th, 76,805 children were detained by the principals of the schools for medical inspection; 4,539 of these were excluded, including diphtheria 170, scarlet fever 401, measles 648, whooping-cough 55, chicken-pox 670, tonsillitis 689, mumps 1,160, purulent

sore eyes 55, impetigo 193, lice 241, ringworm 76, eczema 48, other transmissible diseases 133. He noted the less number of deaths from diphtheria and scarlet fever and considered it due to the inspections.

For March, 1901, 17,337 pupils were examined, 927 excluded, including 117 chicken-pox, 21 diphtheria, 6 eczema, 77 impetigo, 155 measles, 196 mumps, 23 ophthalmia, 70 lice, 26 ringworm, 28 scarlet fever, 56 whooping-cough and 22 of other diseases.³⁷

Dr. John R. Neely, of the Chicago Health Department, who sent me information and blanks, added that the department also employed ten medical inspectors to visit the homes where there were contagious diseases, to see that proper isolation was enforced, to notify neighboring schools, and thus to protect the neighborhood.

In St. Louis, Mo., an inspection covering eleven weeks, from October 10, 1898, was made in certain selected representative schools, by the members of the Medical Society of the City Hospital Alumni, and under the sanction and with the cooperation of the Board of Education. There was an average enrolment in these schools of about 10,000 children; 1,565 were found to be sick; 156 had to be sent home. There was a total of 1,601 cases of disease, consisting of 76 specific infectious diseases, including diphtheria, measles, whooping-cough, mumps, chicken-pox, influenza, etc., 787 of diseases of the oral and respiratory tracts, 37 of diseases of the ear, 382 of the eye, 45 of the skin, and 274 miscellaneous.³⁸

Apparently as a result of this inspection, the Board of Education of that city at a meeting February 14, 1899,³⁹ passed a resolution requesting the Medical Society of the City Hospital Alumni to submit to the board for its consideration a plan for the medical inspection of all the public schools of the city, that the board might determine whether its means would permit the introduction of such medical inspection as a branch of the regular service.

Dr. N. W. Sharpe (*loc. cit.*) says that the plan of medical inspection of schools should embrace a daily inspection, by an accredited physician, of all the sick children found in every public school. He should have authority to examine such scholars and under favorable surroundings and, if necessary, to dismiss the child from school with advice to the parents to consult the family physician, and restrain the child from actual attendance at school until well.

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second, the early institution of treatment; third, the checking of many diseases in the early stage; fourth, the lessening of chronic diseases; fifth, a less number of days' absence from school; sixth, the limitation if not actual stamping out of endemics and epidemics, and, seventh, better scholarship.

The inspector should have the use of a suitable room, with ample daylight and a good artificial light, running water and sink, small table and other facilities necessary to the proper carrying out of his work. Arrangements should be made with the health department for bacteriological examinations and reports.

The school inspectors should associate themselves together for mutual improvement and cooperation. Remuneration should be by monthly or yearly salary.

The inspections should include the kindergartens, because they are, if anything, more dangerous than the higher grades, and for obvious reasons. And the same dangers threaten the parochial as the public schools.

Dr. Sharpe concluded that the daily medical supervision of the children would counteract many unfortunate conditions and would eradicate many more. The right of the child to hygienic surroundings in all that that implies at this day was paramount. Any selfish, partisan, or otherwise narrow-minded act, was a crime.

It has been stated that a medical inspection of schools had been established in St. Louis, but a letter to me from Mr. Max Kaufman, of the health department of that city, dated May 15, 1901, says that the statement is not true.

Some writer has stated that there is regular medical inspection of schools in Denver, Col. A letter to me, however, from Dr. G. E. Tyler, secretary and executive officer of the State Board of Health, May 14, 1901, says that several attempts have been made to secure medical inspections of schools there, but all have failed, except that, during the past year, the eyes and ears of pupils have been examined gratuitously by the Denver and Arapahoe County Medical Society.

It has also been reported that Dr. Joseph A. O'Hara, of New Orleans, had been appointed medical inspector of public school children.⁴⁰ But Dr. Edmond Souchon, of the Louisiana State Board of Health, replies to me that Dr. O'Hara was appointed "Inspector of Infectious and Contagious Diseases," without any reference to school inspection, but with the hope, however, that part of his time would be devoted to school inspection work, should the board of health at any time, by proper ordinance, carry on such inspection.

No such ordinance is now in force and no school inspection made by the board of health.

The draft of an ordinance submitted to the consideration of the City Council by the board of health was unfavorably acted upon.

The medical inspections of schools began in Minnesota on March 11, 1901. Dr. H. B. Fay, of Minneapolis, writes to me that there are two physician-inspectors in that city, without salaries, who pay much attention to contagious diseases.

According to the *Journal of the American Medical Association* for June 1, 1901, p. 380, the authorities of Newton, Mass., are considering the question of the daily medical inspection of schools.

Since 1893 there has been attached to the Philadelphia High School a woman physician who attends from 9 to 2 o'clock daily and cares for the girls during the session.⁴¹

From a remark (*supra*) made by Dr. Tuckerman, of Cleveland, Ohio, it may be inferred that there is a systematic medical inspection of schools in that city. This, however, is not so. Dr. L. K. Baker, supervisor of school hygiene, writes me May 30, 1901, that the school buildings, children, and the work of the teachers are inspected by him as occasion seems to require.

It has also been stated that there is daily medical inspection of schools in Buffalo, N. Y. Dr. Ernest Wende, the health commissioner, writes May 23, 1901, as follows: "No provision is made for a medical inspector of schools, and realizing the importance of such inspection, I have detailed the physician in charge of the Quarantine Hospital to do such work when he is not otherwise engaged. He manages to make thorough semi-annual inspections of the schools, noting and reporting to his department all conditions which are a possible source of danger to the teachers and pupils, and we in turn take up the matter with the Board of Public Works, to the end that all unsanitary conditions may be removed. The general sanitary conditions of public schools is good."

According to Dr. W. C. Woodward, health officer of this city, the need of medical supervision of the public schools has been forcibly indicated by the fact that two cases of scarlet fever were accidentally discovered in children who were attending school, and in the stage of desquamation. The cases had never been considered as scarlet fever, but the parents, when questioned, gave a good clinical history of the disease, and the fact that other children in the schools were taken with the disease demonstrated its nature. After these children were isolated and the school disinfected no other cases occurred.⁴²

⁴⁰*American Medicine*, June 1, 1901, p. 376.

⁴¹*Journal of the American Medical Association*, March 23, 1901, p. 821.

⁴²*Report of the Health Officer of the District of Columbia*, for 1899-1900, p. 34.

In his annual address, December, 1900, Dr. George N. Acker, president of the Medical Society of the District of Columbia (*National Medical Review*, 1901, p. 661), stated that the board of education had recommended that eleven medical inspectors be appointed, one for each school district, at a salary of \$500 per annum. This had been strongly endorsed by the health officer in his report. It would be advisable for the society to take some action on the subject, as it was a step in the right direction. The cost of the service would be trifling compared to the benefits which would accrue to the community through the inspection. Medical inspection in the public schools of a large city is absolutely essential as a measure of public safety. In order that the work should be done in a thorough and conscientious manner it would be necessary to employ physicians of special skill and they should receive a reasonable compensation.

HYSTERICAL DISSOCIATION OF TEMPERATURE SENSES, WITH REVERSAL OF SENSIBILITY TO COLD.

By G. W. McCASKEY, A. M., M. D.,

FORT WAYNE, IND.,

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WAYNE COLLEGE OF MEDICINE.

Sensation is now known to be a very complex series of functions, each manifested in minute contiguous skin areas supplied by special nerves, which probably travel to the brain along independent conduction paths. Indeed the assumption of independent paths to the brain appears necessary in explanation of the clinical phenomena of syringomyelia, as well as for other reasons. There are at least four kinds of sensorial areas—viz., those of touch, pain, cold, and warmth. The term thermo-anæsthesia implies abolition of the last two functions. In the case about to be reported, there was a functional involvement of the sensorial areas concerned in the reception of the sensations of pain and “cold”—the former being impaired and the latter “reversed” and morbidly acute. As indicated by the title it was a manifestation of that protean phenomenon, hysteria.

The patient, J. D., was a man, aged forty-two years, a laborer, and was referred for diagnosis by Dr. L. P. Drayer, of Fort Wayne. He complained of weakness, especially in the lower extremities, pain in the back (lumbar region), impaired appetite, troubled sleep, and “dizzy staggering spells.” There was also complete loss of sexual power and, at times, difficult urination—*i. e.*, difficulty in starting the flow of urine. There was profound malnutrition, his weight having fallen from 148 pounds

to 102 pounds. Urine analysis was negative in result, except for the presence of some skatol, pointing to an intestinal toxæmia, which was not investigated further.

There was slight Romberg symptom; knee jerk somewhat exaggerated with slight ankle clonus. Pupils symmetrical and responsive to both light and accommodation. No motor weakness anywhere, except the debility of paraplegic distribution above referred to. This was not at all severe. The stereognostic sense was perfect. He was subjected to the usual sensory tests by my assistant, Dr.

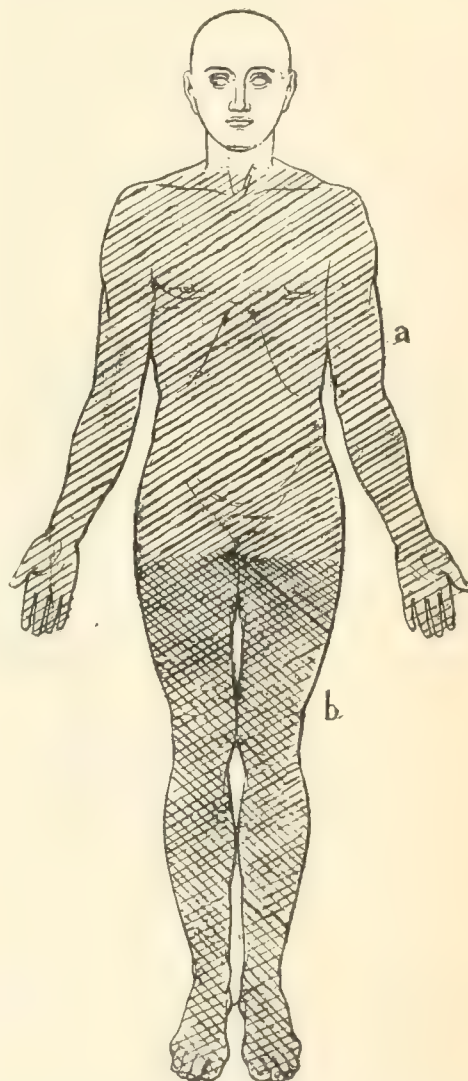


FIG. 1.—Diagram showing the distribution of sensory disturbance. The diagonal shading (a), cold impressions perceived as sensations of heat. The hatching (b), the same as a, with addition of analgesia. The conditions posteriorly correspond precisely to those in front, so that an additional diagram is unnecessary.

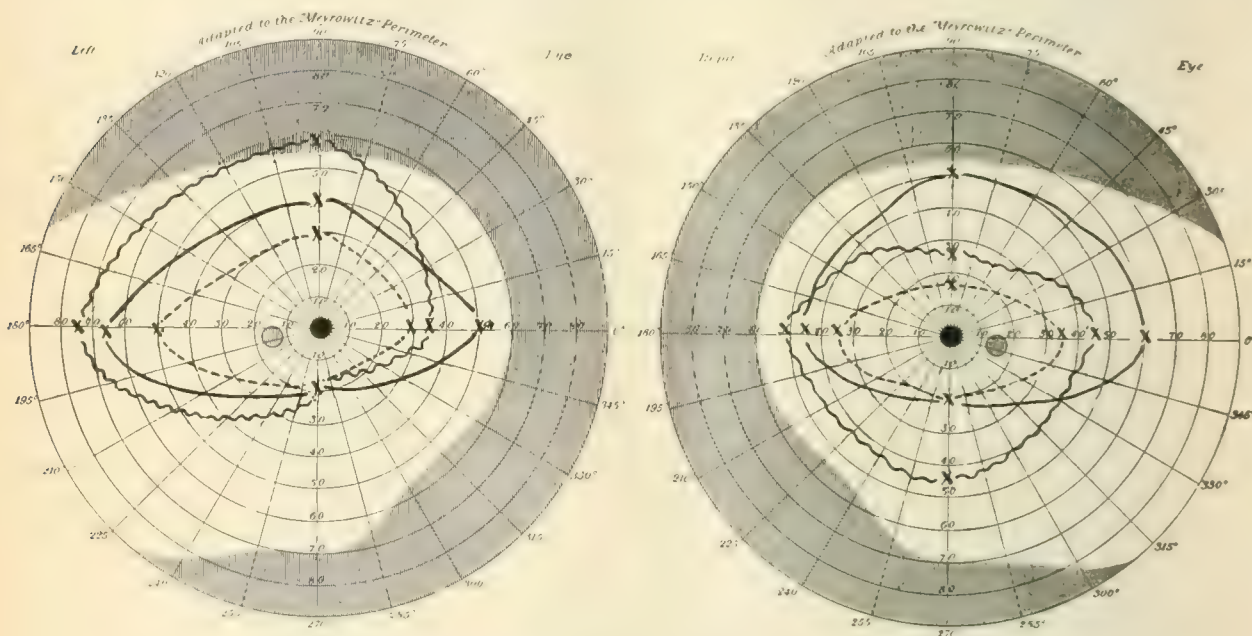
Rhamy, who reported disturbance of the temperature sense in the lower extremities. This, coupled with the other symptoms, led me to suspect organic disease—possibly syringomyelia—and he was directed to return the next day for further investigation.

The muscles of the lower extremities, though somewhat flabby, were found to respond normally to electrical stimulation. There was no reversal of the galvanic formula at any place.

Tactile sensation and the perception of warmth were found to be perfectly normal throughout the body. The pain sense was absent over the entire area of the lower extremities. The result of the test for thermal sensation was, however, entirely unique in my experience. Two large test tubes, eight inches long and one inch in diameter, were filled with hot and cold water respectively and applied to the skin, the patient's eyes being closed. As already stated, the perception of warmth was entirely normal. Different degrees of heat were correctly recognized without hesitation. But when the tube of cold water was applied to the skin, he invariably said it was hot; and, the colder the water, the more he would flinch from the sensation of "heat." If the tube contained iced water, he would very nearly jump off the table. If, on the contrary, it was 55° or 60° F., he would simply designate it as hot or warm. No cold impression was recognized as such anywhere, except over the face and neck. Figure 1 shows the distribution of the sensory disturbance.

sensory disturbances were not nearly so extensive, and fluctuated greatly from day to day, cold perception later being normal over the front of the chest and the right thigh.

Such vagaries in sensory conditions and visual fields could not be due to anything else than hysteria. At the same time the possibility of the coexistence of organic disease should always be kept well in mind, and in this case the patient is expected to return for further observation before positively excluding the last named condition. The loss of sexual power and a slight disturbance of the equilibrium, with increase of knee jerk and ankle clonus, may all be the result of toxæmic and nutritional disturbances upon a hysterical background. On the contrary there is at least the possibility of their being due to something else, and further time will be



FIGS. 2 AND 3.—The visual fields, showing irregular contraction and partial reversal of the color fields.

The character and distribution of the sensory disturbance at once pointed to hysteria, although there was nothing in the history of the case indicating that condition. I then proceeded to search for other stigmata. The first thing discovered was a very nearly complete conjunctival anæsthesia.

The visual fields were next examined, revealing irregular contraction and partial reversal of the color fields, as shown in the accompanying diagrams, Figures 2 and 3.

The different fields were only delimited at four points—two vertical and two lateral—as I deem this quite sufficient for a general neurological diagnosis. The patient was found to be color blind for green, which explains the omission for this field.

No further evidence was considered necessary in explanation of the nervous phenomena, and a positive diagnosis of hysteria was made. The nutritional disturbances need not be discussed here, as the hysterical phenomena were the only features worth recording. At a subsequent examination the

required to determine these points. This has, however, no bearing upon the interesting phenomena before recorded, as it would not in any degree affect the diagnosis made.

No appropriate opportunity should be lost in directing the attention of the general practitioner to the frequent coexistence of hysteria and organic nervous diseases. My first lesson in this direction was learned in about the first or second year of my practice. A young girl, some sixteen years of age, was the subject of hysterical paroxysms undoubted in their character. They finally became quite severe and were associated with considerable headache. Two or three of my older colleagues were called in consultation in the case, and we all agreed upon the diagnosis of hysteria, but made the mistake of resting our case at this point. The diagnosis, so far as

it went, was absolutely correct, but the sequel showed that it was only a part of the truth. A few weeks later choked disc appeared, followed by complete atrophy and absolute blindness, and the patient died a year or two later with a brain tumor, which was undoubtedly responsible for some of the symptoms present at the time of the consultation.

The principal interest in the case just reported centres in the remarkable disturbances of the sensibility to cold. Thermal anæsthesia in cases of hysteria is not perhaps so very rare, but is nearly always associated, according to Oppenheim, with analgesia, as was indeed the fact over the lower extremities in this case, although there was no analgesia over the trunk and upper extremities. So far as I can recall, dissociation of the sensibility to heat and cold has not been reported in hysteria, although it has been recorded as the result of organic disease. Dejerme and Thuilant, for instance, have reported a case of syringomyelia,¹ with complete dissociation of sensibility to heat and cold. In their case, however, there was complete loss of sensibility to heat over a large area. As a matter of fact, in my own case above reported, thermo-anæsthesia in the proper sense did not exist at all. It was rather a hyperæsthesia of the sensations excited by cold, the perception being recognized as that of heat instead of cold. Associated with it, however, were other phenomena of the true anæsthetic type.

107 WEST MAIN STREET.

MYCOSIS OF THE TONSIL AND BASE OF THE TONGUE.

By E. HARRISON GRIFFIN, M. D.,
NEW YORK,

LECTURER ON DISEASES OF THE NOSE AND THROAT IN THE NEW YORK UNIVERSITY AND BELLEVUE HOSPITAL MEDICAL COLLEGE, ATTENDING SURGEON TO THE THROAT AND NOSE CLASS OF BELLEVUE HOSPITAL OUTDOOR DEPARTMENT.

Miss X., aged twenty-four years, a native of New York, by occupation a school teacher, applied at my office, complaining of a sore throat.

Six months previous to this visit she had noticed that her voice would crack or become hoarse while she was talking to her pupils. She had been under treatment ever since. The first physician she had consulted had diagnosticated her trouble as diphtheria. She was under treatment for this disease for some weeks without any change in her condition. Her throat continued to give her more trouble, and she began to lose weight.

She was recommended to go to the mountains. Here she again sought the advice of another physician, who diagnosticated her case as follicular amygdalitis. She was placed under appropriate

treatment without any relief, the patches increasing all this while and greatly interfering with the proper enunciation of words. She was constantly losing weight, and when September came and Miss X. arrived in the city, after having spent two months in the mountains, she weighed less than she did before her departure.

She had been under different medical men, who had variously diagnosticated her trouble as diphtheria, follicular amygdalitis, consumption, anæmia, and croupous amygdalitis.

When she applied to me for treatment, an examination of her throat showed the right and left tonsils, uvula, and lower margin of the soft palate, covered with small pointed masses of a milky white color, projecting from the mucous membrane to the extent of one eighth of an inch. These projecting points were so intertwined that they looked like a fine moss or fungus over the surface. If the color had been green, they would very closely have resembled the moss that is commonly found in the damp part of the garden. The growth on the palate and uvula was of a finer texture than that which sprang from the tonsil. The stem was heavier and not so prone to intertwine as that situated on the palate.

An examination of the larynx showed that the growth extended downward and was generously implanted on the base of the tongue. The growth here was heavier than that which grew from even the palate or the tonsil. In comparison it might be said that it was twice as heavy as that which found its root from the tonsil. It varied in color. Some of the projecting points were black, while the majority were of the cream color found on the palate. The black ones looked more like a necrotic condition or, in other words, as if they were being strangled by the heavy surrounding growth. The color was not due to any medicine, as the patient had given up all hope of being relieved and had entirely abandoned medicine some time previously.

This growth did not involve the larynx or the epiglottis, but ended abruptly on the base of the tongue.

The presence of these patches of fungi greatly impaired her voice, and this was the reason she applied for treatment. Miss X. was on leave of absence and was uncertain whether she would ever again be able to teach.

During her last month in school her voice would break and it would be some seconds before she would be able to continue a conversation she might have been having with her pupils. She was unable to read aloud for more than a few minutes without an impairment of her voice. At times her power of speech would entirely leave her, but at other times it would continue for a longer space of time.

The appearance of the growths led to a diagnosis of mycosis.

The treatment of these cases as laid down in the text-books is so varied that a résumé might be *à propos*. Chiari has used in one case the galvanocautery and in another case a local application of a solution of bichloride of mercury (1 to 1,000). He reports good results in both cases. Guinier has used nitrate of silver, tincture of iodine, and calomel insufflations in connection with the forceps for re-

¹*Médecine moderne*, February 5, 1891. *Lo Sperimentale*, March 15, 1891. Abstracted in *Journal of Nervous and Mental Disease*, 1891, p. 449.

moving the growth. Semon has reported a case cured by tannin and chlorate of potassium applications. Damaschino reports a case cured by a borated lotion. Heryng has made use of the galvanocautery, first having excised the tonsils. The excision of the tonsil in this affection is an excellent expedient, but, in a practice of twenty years devoted to the nose and throat, I have never seen a case of mycosis of the tonsil in which the tonsil itself was hypertrophied so that it could possibly be excised.

In all the cases that have come under my notice, in which the tonsil itself was involved with this affection, this organ was more of a suggestion than a reality. I do not say that mycosis cannot exist on a hypertrophied tonsil, but I have never seen such a condition.

Bosworth uses the sharp curette, scraping away not only the mycotic growth, but also the mucous membrane. He follows this by the application of chromic acid. The curette is hardly feasible, where the growth involves the base of the tongue, as here the plant has a deeper root and its extirpation would mean a loss of too much tissue.

Klebs reports a case where the growth involved the base of the tongue, when a cure was obtained by the patient smoking cigarettes.

Mycosis of the tonsil, palate, or tongue, is a very tedious disease to treat, especially when it involves the base of the tongue; as here the growth seems to flourish in a soil that enables it to grow luxuriantly. It is comparatively a rare disease. I have seen and treated over fifty cases, but this is a small number in comparison with the other ailments of the buccal mucous membrane.

I cannot recollect a case of mycosis occurring in the male. All my cases have occurred in females. The habit of smoking in the male may be the means of preventing this plant from involving the mucous membrane.

The growth in Miss X.'s throat was treated in succession by the application of chromic acid, carbolic acid, nitric acid, and sulphuric acid. These acids seemed to irritate the growth and produced an extension. The parts were then treated by boric acid, nitrate of silver, and various other applications; but these seemed to act as fertilizers, and the growths sprang up more vigorously.

I had my patient smoke a cigar or a pipe of tobacco as often as circumstances permitted. The tobacco had the effect of retarding the growth of the plant, and greatly diminished the growth on the palate.

I then began evulsion with a forceps, picking out each root. My laryngeal mirror was used, when I operated upon the base of the tongue. The parts were then cauterized by a bent probe with chromic acid. The membrane was carefully sprayed with an alkaline solution to limit the action of the acid.

This treatment had a marked effect in diminishing the growth of the plant, but was not entirely satisfactory. I had my patient on an iron preparation for an anæmic condition. This I now changed to:

℞ Tinct. ferri perchloridi..... 3 drachms;
Glycerin. 2 ounces;
Aquæ, q. s. ad..... 3 “

M.

One drachm every three hours, without water, to be used as a gargle and then swallowed.

This solution had more effect upon the remaining growth than any preparation I had previously used.

I do not believe that this solution would have any effect at the start, but it was very effective, when used in conjunction with tobacco and the chromic acid applications, after the growth had been torn out by the forceps.

This patient was under my care, with five others, during the past winter, and it was only after vigorously pushing the above treatment that I was enabled thoroughly to destroy the fungous growth and prevent its reappearance.

Miss X. returned to school last winter and taught without any trouble. I saw her again this September, and, after a most careful examination, I failed to observe any particle of the plant. Miss X. has also stopped smoking.

112 WEST FORTY-FIFTH STREET.

Therapeutical Notes.

A "Malarial Mixture."—An error crept into the formula printed at the foot of the first column of page 1013, in the *Journal* for November 30th (in Dr. McIntosh's article). The correct prescription is as follows:

℞ Magnesium sulphate. ½ ounce;
Solution of ammonium acetate. . . . 1 “
Quinine sulphate. 14 grains;
Camphor water, enough to make. . 12 ounces.

M. S. Two tablespoonfuls every four hours.

To Prevent Development of Herpes Febrilis.—Dr. S. A. Agatston says that the following treatment may be administered, but only in the early stage, i. e., just as soon as the little vesicles appear.

Take a fairly rough towel or a piece of gauze, saturate a part with pure alcohol; apply moderate friction to the vesicles until they are converted into little ulcers. Follow this by an application of corrosive sublimate (1 to 1,000), allowing it to dry. If done properly, and at the right time, the little ulcers simply dry up in a day, without developing into a disagreeable-looking sore.

The Treatment of Locomotor Ataxia.—Dr. R. T. Williamson (*Medical Chronicle*, September) says it is well always to give antisyphilitic treat-

ment a trial in cases of tabes, in order that no complaint may be made later concerning its omission. Sir William Gowers and Dr. J. Taylor recommend liquor arsenicalis, which seems to cause improvement in many cases. Motschutkowski has again strongly endorsed the suspension treatment; the patient should be suspended at least 100 times, the duration of each suspension being from half a minute to five minutes, repeated from three to four times a week. Motschutkowski has never seen any bad results. Crocq has employed Faradaism successfully; but the author thinks that the greatest advance in the palliative treatment of tabes is to be found in Frenkel's method (*Die Behandlung der tabischen Ataxie mit Hilfe der Uebung*, Leipsic, 1900) of re-education of the movements of the ataxic limbs. There can now be no doubt that the ataxia of tabes can be often greatly diminished by this system of careful training, in which the patient performs methodically coordinated muscular exercises. By repeated practice the patient learns to perform definite movements with care and precision. Even in severe cases of ataxia good results may be obtained. In carrying out the treatment, over-exertion should be avoided. As a rule, these exercises should not be carried out while the patient is undergoing bath treatment; and Frenkel recommends massage of the muscles during the course of treatment. The exercises should be performed two or three times a day. For the arms special apparatus are necessary, but for the legs no special apparatus is required. Muscular exercises of the legs are performed, first, while the patient is in the recumbent posture; then exercises are carried out while he is in the sitting posture and while standing, and finally walking exercises are practised. The movements are arranged so that care and precision are needed in carrying them out. Objects are touched by the toe or heel, and, in the walking exercises, lines are drawn on the floor, and careful movements mapped out. The treatment is carried out at many special institutions on the Continent, and much time and patience is necessary. It is not possible in an abstract to give the details of the various movements planned out by Frenkel.

The Treatment of Diabetic Coma.—Dr. R. T. Williamson (*Medical Chronicle*, August), in an article on the Treatment of Diabetes Mellitus, says that in the severe forms coma is specially liable to develop; hence everything which is known to have any influence in exciting this complication should be avoided if possible (as for example long railway journeys, sudden change of diet, a very rigid diet, constipation, mental anxiety and worry). The onset of coma is indicated by rapidly increasing weakness and loss of flesh, by a rapid pulse, by the sudden appearance of a very large number of granular or hyaline casts in the urine, by nausea and epigastric pain, by deep breathing ("air-hunger") and by drowsiness.

In three cases he has seen these early comatose symptoms subside after the administration of very large doses of sodium bicarbonate. In one of these cases the patient died four or five weeks

later, of phthisis; in the second case death occurred three months later, and in the third, after ten weeks. In three other cases of diabetic coma he has seen decided temporary improvement under this treatment. But, in the latter three cases, after the temporary improvement, comatose symptoms soon returned and death occurred. He believes it is important in all cases of incipient coma to give large doses of sodium bicarbonate—two ounces in the twenty-four hours. The sodium bicarbonate should be given at frequent intervals dissolved in water or soda water. If this alkaline treatment is commenced early, the progress of the comatose symptoms can occasionally be arrested.

It is advisable in these cases of beginning coma to give brandy and small doses of digitalis. If the bowels are constipated (and this is usually the case), a mild purgative or an enema should be given. A rigid diet should be discontinued. Milk and cream are the most useful articles of diet. He has not tried oxygen inhalation, but, from reports published, it appears to be occasionally of some slight temporary service.

When the patient becomes quite comatose, transfusion of alkaline fluids occasionally succeeds in causing him temporarily to regain consciousness, and if the patient has not seen his friends for some time, then transfusion may be worth performing. But transfusion often produces only a slight improvement in the pulse, and the benefit is only temporary at the best. In nearly every case recorded the patient has soon relapsed into coma.

The Treatment of Furuncle of the External Auditory Meatus.—Mr. Connal (*Glasgow Medical Journal*, July) recommends early incision of the furuncle, and the application of an ointment which Dr. Barr recommends, and which experience has shown to be of value:

R. Iodoform. 4 grains;
Menthol. 2 "
Vaseline. I drachm.
M.

Smeared on cotton plugs, and introduced into the canal of the ear twice or thrice daily. Gruber's gelatin bougies containing morphine are also of service, more especially in the earlier part of the illness, or if the patient will not allow the boil to be incised.

Poultices, he says, do harm by causing sodden tissues favorable to microbic growth. Of course, middle ear mischief, impacted cerumen, etc., if underlying causes, demand treatment.

The constitutional treatment of this affection is of prime importance, and more especially where there is a tendency for the boils to recur in crops. In such cases the dietary must be carefully regulated—starchy and sugary foods should be withdrawn. Each individual patient should be treated according to his requirements. Tonics and aperients may be necessary. The aim in view should be a plain, wholesome, nourishing diet, with plenty of outdoor exercise.

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HUMAN AND BOVINE TUBERCULOUS DISEASE.

The British Congress on Tuberculosis was opened in London on July 22d of this year. On the second day of the congress, July 23d, Robert Koch presented the memorable address in which he maintained that human tuberculous disease was practically not communicable to cattle, and that there was good reason to infer that bovine tuberculous disease was communicable to man with such difficulty, if at all, and such communication was, if it did occur, so rare, that precautions against the ingestion of food products from tuberculous bovine animals were virtually unnecessary. This we chronicled in our issue for July 27th. While we felt that such comment as it might be incumbent on us to make should be prompt, we felt also that it should not be hasty. We therefore allowed a week to elapse, but in our next number, the one for August 3d, we expressed decided dissent from Koch's main contention, and gave our reasons for dissenting, although certain important data that would have strengthened our position were not accessible at such short notice, and consequently we were obliged to rely on our general impression, thereby taking no little risk of saying some things that might be challenged and that we might find it no easy matter to substantiate. We took the risk, however, without hesitation, just as, ten years before (unsupported at the time, so far as we yet know, by any other journal), we had ventured to caution our readers against trusting too implicitly to the curative use of Koch's tuberculin. It soon became apparent that in what we had said on the 3d of August we had made no false move, and we were correspondingly gratified; but sev-

eral weeks later, on September 16th, such a high authority as Dr. Salmon, chief of the Bureau of Animal Industry and chairman of the Committee on Animal Diseases and Animal Food of the American Public Health Association, read before that association the committee's report on The Relation of Bovine Tuberculosis to the Public Health, which has recently been published by the Department of Agriculture, and it is with no little satisfaction that we now observe that, with such amplification of detail as the veterinarians are readily able to bring forward, the report sustains our contention in every particular.

Besides confirming all the statements that we made last August, the committee bring to notice several considerations which make it probable that, while infection of cattle with the germ of human tuberculous disease is difficult, the pathogenic action of the bovine bacillus on the human subject is easily set up, owing to the greater virulence of that germ. They cite a number of instances in which the transmission of tuberculosis from cattle to man, while not absolutely proved, has been shown to be so probable that nobody aware of the facts would be willing to use food products known to have been furnished by tuberculous cattle or to permit a child of his to be fed on such products. Finally, after having shown the unconvincing character of Koch's arguments, they say: "To ask the medical profession at this time to adopt sweeping generalizations on inconclusive experiments and on mere hypothesis is absurd. To expect that the definite and positive evidence from accidental inoculations, clinical observations, vital statistics, and post-mortem records will be discarded in order to adopt such hasty generalizations is ridiculous."

MORE AUTHORITY FOR THE ARMY SURGEONS.

The authority of the commanding officer is and ever must be paramount in military affairs, and it would be a difficult if not impossible task to evolve a system calculated to give any sort of direct authority to the medical staff in which the disadvantages of a divided authority would not, on the whole, outweigh the advantages of proper sanitary control. The principal business of war is war, and so inhuman a business is it that all sentiments of humanity have to be subordinated to the main issue of mili-

tary necessity. It is in recognition of this principle that the commanding officer is made, for the time being, supreme in his authority. But this great authority carries with it a corresponding degree of responsibility, and the commanding officer who, through either ignorance or neglect of proper precautions, sacrifices his command is, or should be, dealt with summarily. If his men are sacrificed by being led into ambush, the commander is promptly disciplined, but when through a disregard of sanitary precautions the lives of the men are sacrificed, the seriousness of the offense has always been palliated. It is this aspect of the case which has called forth from Dr. Charles A. L. Reed, a former president of the American Medical Association, a vigorous protest against the existing army regulations and an earnest plea for the vesting of greater authority in the medical department.

Unfortunately, the daily press has in some instances evidently misquoted, and even where it has not misquoted has quite as evidently misconstrued, Dr. Reed's remarks as being in the nature of a criticism of the army medical service, whereas they contained a criticism, not of the medical service, but of the army regulations in general, for their failure to accord to the surgeon direct authority to enforce his orders regarding sanitation. That grave sanitary crimes were committed at Tampa and at Chattanooga is clearly shown by the mortality and the hospital reports, but Dr. Reed asserts most vigorously that these crimes cannot be laid at the door of the medical officers, whose orders were disregarded and whose recommendations were ignored. This deplorable state of things is what Dr. Reed must have had in mind when he said that the medical department was practically without authority. We are told that in one camp of 50,000 men 12,000 were invalided and nearly 1,000 died from preventable diseases. This camp was in our own territory, of our own selection, and free from any danger of molestation by an enemy. This consideration suggests a *modus vivendi*. Possibly some regulation according full powers of direct control to the sanitary authorities would be feasible, if safeguarded by the condition that, when the force is in touch with the enemy on active service, it may become necessary for the commanding officer formally to take all control into his own hands for the time being on the ground of military necessity, subject to

the responsibility of subsequently justifying his action, as in the case of any other extraordinary measures dictated by military emergency, for instance, the proclamation of martial law in a disturbed territory.

THE TREATMENT OF ORIENTAL PLAGUE WITH LUSTIG'S CURATIVE SERUM.

Many of our readers are doubtless aware that for two or three years past a rather large experience has been accumulating in the treatment of the Oriental plague with a curative serum prepared after a method devised by Professor Lustig, of the University of Florence, and that the general result is encouraging. Among the more precise data that may serve for a general estimate of the degree of efficiency to be expected of the treatment is a recent publication entitled *Papers and Statistics relating to the Experiments made in Bombay with Professor Lustig's Curative Plague Serum*, compiled by William Ernest Jennings, M. B., C. M., a major in the British Indian Medical Service. The epidemic of the winter 1900-1901, in which the experiments were made, is described as one of unusual virulence; nevertheless, a decided improvement was noted in the recovery rate among those who were treated with the serum, as compared with the rate among the other patients, the proper exclusion of the moribund and the convalescent having been made in each class.

According to Dr. G. Polverini, one of Professor Lustig's assistants, when plague microbes are cultivated on large agar-agar plates, they form a thin layer. This is scraped off from the surface of the solid culture medium and treated with caustic potash. This not only kills the microbes, but completely disintegrates and dissolves them. To the resulting solution, which is of a mucilaginous consistence, acetic acid is added until a white flocculent precipitate is thrown down, which changes on drying to a brown amorphous mass. This precipitate is an albuminous substance, a so-called nucleoproteid, "free from the metabolic products of the plague bacteria." Dissolved in a solution of sodium carbonate, it is injected into the horse, an animal proof against the plague, twice a week for four weeks. The horse is then ready to be bled to ob-

tain its serum, which has now acquired an anti-toxic virtue that becomes more pronounced in the proceeds of subsequent bleedings, which, however, must be of quite limited number, for the animal soon fails to regain its condition.

The improvement of the recovery rate from the use of this serum seems to vary from a gain of ten or twelve per cent. to one of nearly thirty per cent. Dr. N. H. Choksy, medical officer in charge of the Arthur Road Hospital, says of it that it is "the only known method of treatment that holds out any hope of reducing the high mortality from plague." Where it does not avert death, he adds, it ameliorates the symptoms considerably and prolongs the patient's life. In a paper read before the Bombay Medical Union on April 21, 1900, the author, Dr. A. Mayr, of the Municipal Laboratory of Parel, made use of the following enthusiastic words: "I have but few more remarks to make, and they bear on the future of the serum treatment of plague. Going over its history, in this city, and recollecting the exaggerated expectations with which Dr. Yersin was received in 1897, I should not be surprised to hear some one exclaim: 'Only twelve per cent.! That is nothing to speak of!' There is no arguing with such a cold-blooded arithmetician. Twelve per cent. is a handsome profit in business; should it be otherwise where human life is concerned? Let him ask the twelve per cent. who owe life and health to the serum if they agree with him, or let him go to our plague hospitals and look at the poor plague-stricken inmates, and he may perhaps begin to wonder that even one per cent. could be saved by human intervention. Would he not change his views if he or his family or friends were threatened? And if we are to adopt Mr. W. M. Haffkine's statistical method of calculating the benefit of plague prevention, the serum shows an increase of fifty-eight per cent. on the actual recovery rate by ordinary treatment. In other words, for every hundred who recover by ordinary treatment a hundred and fifty-eight recover by serum treatment. The serum cures one third, and Nature but one fifth, of those attacked. Is that not worth while?"

The success obtained by the use of the serum does, indeed, seem to be encouraging, but, as Dr.

Mayr himself says, it would be a great error to rely entirely upon the curative serum and neglect the prophylaxis; "no one," says that writer, "would be careless in handling fire just because there was a fire-engine round the corner." The extermination of rats is among the foremost prophylactic measures, and to accomplish this Lustig suggests their inoculation with the microbe of an infectious disease destructive to them but not communicable to man, for example, *Lasar's* microbe.

THE SADDEST FEATURE OF THE ST. LOUIS ANTITOXINE TETANUS.

As we go to press, there comes the news, in a form, unfortunately, that makes it difficult to look upon it as in any way untrue, that the serum taken from the horse "Jim" on the occasion of his last bleeding was knowingly issued for use by a subordinate who feared to disobey the order given him to that effect. A new aspect of this sad affair has been brought to light every few days, but this is the saddest of all.

THE RÖNTGEN-RAY DIAGNOSIS OF TARSAL INJURIES.

It is in the diagnosis of fractures and dislocations of the bones of the tarsus that the Röntgen-ray examination is, we think, likely to prove exceptionally useful. An example is reported by Wodarz (*Deutsche Zeitschrift für Chirurgie*, lxi, 1; *Münchener medicinische Wochenschrift*, November 26th) in which such an examination made possible the diagnosis of a dislocation of the astragalo-navicular articulation, a rare form of injury.

IDIOPATHIC PERITONITIS.

The assertion that there is no such thing as idiopathic peritonitis would probably not meet with wide acceptance, much as we have of late years been indoctrinated with the idea of its rarity. H. Nothnagel has recently discussed the subject (*Wiener klinische Rundschau*, xv, 23; *Fortschritte der Medizin*, November 1st), and he seems to deny absolutely that peritonitis is ever idiopathic. "Rheumatic" peritonitis figures in the nosology of the present day, however, though not so prominently as rheumatic pleurisy, pericarditis, and endocarditis. But, then, a microbic element is getting to be more and more recognized in acute articular rheumatism, and "rheumatic" peritonitis may consequently be said not to be idiopathic. That being the case, Nothnagel is probably correct in his contention.

THE TUBERCULIN TEST OF IMPORTED CATTLE.

This is the title of *Bulletin No. 32 of the United States Department of Agriculture, Bureau of Animal Industry*, by Dr. D. E. Salmon, chief of the bureau. Dr. Salmon effectually refutes the objections to the tuberculin test that have been raised by certain importers. Incidentally, it is of interest to note that he says, after speaking of the great infectiousness of tuberculous disease among cattle: "The weight of medical authority favors the conclusion that it may be communicated from animals to man with fatal results."

THE REPORTING OF ONE'S OWN CASE.

Much might undoubtedly be added to our knowledge of subjective symptoms, as to their origin and as to their import, if physicians oftener reported cases of disease and injury affecting themselves. Such reports, we know, are apt to be prolix, but they could be judiciously pruned. Prolixity is still more likely to burden the report of one's own case if the reporter is a non-medical person, but even then a unique value may attach to the record. There has recently been published (*Archiv für Psychiatrie und Nervenkrankheiten*, xxxiv, 3; *Münchener medicinische Wochenschrift*, November 26th) an account of a case of acute mania, written by a lady who was the subject of the attack, from which she recovered perfectly ten years ago. It seems to us that in the field of psychiatry histories of their own cases by persons who have recovered must be particularly valuable.

THE ACTION OF THE BILE ON MICROBES.

It has long been known in a general way that the bile is capable of antagonizing pathogenic bacteria, but there has been rather a lack of definite knowledge concerning its bactericidal action. An important contribution by Talma (*Zeitschrift für klinische Medicine*, xlii, p. 354; *Centralblatt für innere Medizin*, August 17th), who experimented by injecting various organisms into the gall-bladder of the rabbit, shows that the bile contains a substance that checks the development of the colon bacillus and the bacilli of typhoid fever and diphtheria; that the different bacilli vary greatly in their susceptibility to the action of bile, virulence, as concerns the biliary passages, being by no means synonymous with infectivity; that the bactericidal property of the bile varies at different times and in different animals; that the fate of microbes introduced into the bile ducts is largely dependent upon their number; and that the hepatic cells and the epithelium of the biliary passages exert a powerful destructive action on bacteria, particularly on the bacillus of diphtheria.

EXTREMES ARE DANGEROUS.

From the view that all tuberculosis was hereditary, medical authorities have now come to quite the opposite view, that tuberculosis is an acquired disease and is communicable. The fact that it is communicable does not necessarily imply that it is contagious in the ordinary sense, as the public generally and even not a few medical men seem to think, and from the extreme of negligence of the danger of contracting the disease, which prevailed under the doctrine of heredity, we are now passing to an almost equally dangerous extreme of over-caution in labelling the disease "contagious." In Brooklyn a pupil suffering from tuberculosis has been excluded from the public school, a tuberculous immigrant has been held for deportation from this port, because of the disease, the existing hospitals of Toronto have been closed to sufferers from this malady on the ground that it was contagious, though no special accommodations have been provided for them elsewhere, and now, it is reported, the town of Liberty, N. Y., is about to close its doors on the tuberculous. All this, it seems to us, is not at all conducive to the most effective management of the disease.

THE EXTENT OF THE PERINÆUM IN WOMEN.

For a structure of such small size, so far as concerns its cutaneous aspect, the perinæum in women presents rather remarkable variations due to faults of development. They have recently been made the subject of study by Sellheim (*Beiträge zur Geburtshilfe und Gynäkologie*, v, 2; *Münchener medicinische Wochenschrift*, November 26th). As regards the length of the perinæum, meaning the measurement from the anus to the posterior commissure of the vulva, he classes as "short" a perinæum of less than 2.5 centimetres (about an inch), and as "very short" one of less than 1.5 centimetres (about five eighths of an inch).

TRAUMATISM.

Some medico-legal interest may attach to the question of the part that a mechanical injury is capable of playing in setting up an attack of inflammation of the vermiform appendix. Neumann, it seems, has maintained that traumatism cannot produce the result unless the appendix contains a fæcal concrement. Now Sonnenburg (*Deutsche medicinische Wochenschrift*, 1901, No. 38; *Centralblatt für Chirurgie*, November 30th) contends that an appendix must already be diseased for an injury to light up acute disease in it. This statement seems to us rather arbitrary.

News Items.

Marine-Hospital Service Health Reports:

The following cases of small-pox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending December 6, 1901:

Smallpox—United States.

Alabama.....	Gilmer Co.....	Nov. 26.....	10 cases.	
Illinois.....	Springfield.....	Nov. 1-20.....	50 cases.	
Indiana.....	Evansville.....	Nov. 23-31.....	2 cases.	
Kentucky.....	Lexington.....	Nov. 23-30.....	4 cases.	
Louisiana.....	New Orleans.....	Nov. 23-30.....	2 cases.	1 death.
Maryland.....	Baltimore.....	Nov. 23-30.....	1 case.	
Massachusetts.....	Boston.....	Nov. 23-31.....	103 cases.	8 deaths.
"	Cambridge.....	Nov. 23-30.....	1 case.	1 death.
"	Lowell.....	Nov. 23-30.....	1 case.	
"	Malden.....	Nov. 23-30.....	1 case.	
"	Medford.....	Nov. 23-30.....	1 case.	
"	New Bedford.....	Nov. 26-Dec. 2.....	2 deaths.	
"	Newton.....	Nov. 23-30.....		1 death.
Minnesota.....	Minneapolis.....	Nov. 23-29.....	4 cases.	
"	Winona.....	Nov. 23-30.....	2 cases.	
Nebraska.....	Omaha.....	Nov. 23-30.....	4 cases.	
"	South Omaha.....	Nov. 23-30.....	16 cases.	
New Jersey.....	Camden.....	Nov. 23-30.....	5 cases.	
"	Jersey City.....	Nov. 24-Dec. 1.....	11 cases.	
"	Newark.....	Nov. 23-30.....	26 cases.	4 deaths.
New York.....	Buffalo.....	Nov. 9-26.....	36 cases.	3 deaths.
"	New York.....	Nov. 23-30.....	16 cases.	2 deaths.
Ohio.....	Cincinnati.....	Nov. 23-29.....	6 cases.	
"	Dayton.....	Nov. 23-30.....	1 case.	
"	Youngstown.....	Nov. 10-30.....	3 cases.	
Pennsylvania.....	Allegheny City.....	Nov. 23-30.....	3 cases.	
"	Lebanon.....	Nov. 23-Dec. 1.....	4 cases.	
"	Norristown.....	Nov. 23-30.....	5 cases.	
"	Philadelphia.....	Nov. 23-30.....	113 cases.	14 deaths.
Tennessee.....	Memphis.....	Nov. 23-30.....	2 cases.	
"	Nashville.....	Nov. 23-30.....	2 cases.	
Utah.....	Salt Lake City.....	Nov. 30.....	1 case.	
Vermont.....	Burlington.....	Nov. 23-30.....	7 cases.	
Washington.....	Tacoma.....	Nov. 16-23.....	3 cases.	
Wisconsin.....	Greenbay.....	Nov. 26-Dec. 2.....	9 cases.	

Smallpox—Foreign.

Austria.....	Prague.....	Nov. 2-16.....	8 cases.	
Belgium.....	Antwerp.....	Nov. 2-16.....	6 cases.	2 deaths.
"	Brussels.....	Nov. 9-16.....		1 death.
Canada.....	Halifax.....	Nov. 3-30.....	9 cases.	
"	Quebec.....	Nov. 23-30.....	27 cases.	
"	St. John.....	Nov. 23-30.....		2 deaths.
"	Winnipeg.....	Nov. 23.....	5 cases.	
Colombia.....	Cartagena.....	Nov. 12-19.....	3 cases.	
"	Panama.....	Nov. 18-25.....	100 cases.	
France.....	Paris.....	Nov. 9-16.....		3 deaths.
Gibraltar.....		Nov. 9-17.....	1 case.	
Gt. Britain.....	London.....	Nov. 9-16.....	368 cases.	16 deaths.
India.....	Calcutta.....	Oct. 26-Nov. 2.....		1 death.
Italy.....	Naples.....	Nov. 2-9.....	29 cases.	2 deaths.
Mexico.....	Alvarado.....	Nov. 24.....	1 case.	
Russia.....	Moscow.....	Nov. 2-9.....	9 cases.	4 deaths.
"	Odessa.....	Nov. 9-16.....	2 cases.	
Spain.....	Barcelona.....	Oct. 19-Nov. 2.....		2 deaths.
"	Valencia.....	Nov. 5-19.....		20 deaths.
Straits Settlements.....	Singapore.....	Oct. 12-19.....	1 case.	1 death.

Yellow Fever.

Brazil.....	Para.....	Oct. 1-31.....	177 cases.	56 deaths.
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Cholera.

India.....	Bombay.....	Oct. 30-Nov. 5.....	2 cases.	
"	Calcutta.....	Oct. 26-Nov. 2.....		32 deaths.
"	Madras.....	Oct. 26-Nov. 2.....		32 deaths.
Java.....	Batavia.....	Oct. 19-26.....	19 cases.	15 deaths.
Straits Settlements.....	Singapore.....	Oct. 5-26.....	15 cases.	15 deaths.

Plague—Foreign and Insular.

India.....	Bombay.....	Oct. 30-Nov. 5.....	173 cases.	173 deaths.
"	Calcutta.....	Oct. 26-Nov. 2.....		24 deaths.
"	Karachi.....	Oct. 26-Nov. 2.....	66 cases.	38 deaths.
Hawaiian Islands.....	Honolulu.....	Nov. 13.....		1 death.

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the two weeks ending December 5, 1901:

AUSTIN, H. W., Surgeon. To report at Washington for special temporary duty.

MEAD, F. W., Surgeon. Granted leave of absence for one day, December 10th.

CARTER, H. R., Surgeon. Detailed as inspector of the port of Solomons, Maryland.

PERRY, T. B., Surgeon. Relieved from duty at Baltimore, and directed to proceed to New York and report to Surgeon G. W. STONER, Immigration Depot, for duty.

BLUE, RUPERT, Passed Assistant Surgeon. Relieved from special temporary duty at San Francisco and directed to rejoin station at Milwaukee.

CUMMING, H. S., Passed Assistant Surgeon. To proceed to San Francisco Quarantine, and report to Surgeon D. A. CARMICHAEL for duty, reporting at the Bureau en route.

HOBBS, W. C., Assistant Surgeon. To proceed to Elberton, Georgia, for special temporary duty.

McLAUGHLIN, A. J., Assistant Surgeon. To proceed to Cape Fear Quarantine, and assume temporary command of station during the absence of Assistant Surgeon T. B. McCLINTIC on leave.

RICHARDSON, S. W., Hospital Steward. Relieved from temporary duty in the Hygienic Laboratory, Washington, and directed to proceed to Charleston, S. C., and assume charge of the Marine-Hospital exhibit at the South Carolina Interstate and West Indian Exposition.

McINTOSH, W. P., Surgeon. Granted leave of absence for three days from November 26th.

CORPUS, G. M., Assistant Surgeon. Directed to assume command of the South Atlantic Quarantine Station, relieving Passed Assistant Surgeon H. S. CUMMING.

BOGESS, J. S., Assistant Surgeon. Granted leave of absence for ten days from December 5th, with permission to leave the United States.

GIRALT, FELIX, Acting Assistant Surgeon. Upon being relieved by Acting Assistant Surgeon S. H. HODGSON, to rejoin station at Havana, Cuba.

HALLETT, E. B., Acting Assistant Surgeon. Granted leave of absence for two days from November 28th.

HODGSON, S. H., Acting Assistant Surgeon. Relieved from duty at Progreso, Mexico, and assigned to duty in the office of the United States Consul at Vera Cruz, New Mexico.

ROWLES, J. A., Acting Assistant Surgeon. Granted leave of absence for four days from November 27th.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending December 7, 1901:

DENNIS, J. B., Assistant Surgeon. Detached from the Naval Hospital, New York, and ordered to the Naval Academy.

FURLONG, F. M., Assistant Surgeon. Granted leave of absence for two months on account of sickness, when discharged from the Naval Hospital, New York.

GARTON, W. M., Assistant Surgeon. Detached from the Naval Academy and ordered to the Naval Hospital, New York.

HAAS, H. H., Passed Assistant Surgeon. Detached from the Norfolk Navy Yard and ordered to the Kearsarge for duty with the marine detachment.

McDONNOLD, P. E., Assistant Surgeon. Detached from the Constellation when discharged from the Naval Hospital, New York, and granted leave of absence for one month on account of sickness.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending December 7, 1901:

BANISTER, WILLIAM B., Major and Surgeon, is relieved from duty in the Division of the Philippines, and will proceed to San Francisco for orders.

CHURCH, JAMES R., First Lieutenant and Assistant Surgeon. The leave of absence granted him is extended two months on account of sickness.

HARRIS, HENRY S. T., Major and Surgeon, is granted leave of absence for seven days.

KENNEDY, JAMES S., Captain and Assistant Surgeon, will report to the commanding officer of the Eleventh Cavalry and Twenty-seventh Infantry for temporary duty therewith during the voyage to Manila.

KIMBALL, JAMES P., Lieutenant-Colonel and Deputy Surgeon-General. The leave of absence granted him on account of sickness is extended four months.

KULP, JOHN S., Captain and Assistant Surgeon, is granted leave of absence for fifteen days.

MARSHALL, THOMAS R., Captain and Assistant Surgeon, will proceed to San Francisco for transportation to the Philippine Islands.

MURTAGH, JOHN A., First Lieutenant and Assistant Surgeon, will proceed to Fort McPherson, Georgia, to accompany the battalion of the Twenty-seventh Infantry to San Francisco.

TITUS, FRANK H., Major and Surgeon, will report to the commanding officer of the Fifteenth Cavalry for duty therewith during the voyage to Manila.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending December 7, 1901:

DISEASES.	Week end'g Nov. 30		Week end'g Dec. 7	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	67	18	66	21
Scarlet fever.....	183	20	196	12
Cerebro-spinal meningitis.....	0	3	0	4
Measles.....	429	12	547	13
Diphtheria and croup.....	283	46	320	48
Small-pox.....	16	2	17	2
Tuberculosis.....	253	166	260	144

Society Meetings for the Coming Week:

MONDAY, December 16th.—New York Academy of Medicine (Section in Ophthalmology and Otology); New York County Medical Association; Hartford, Connecticut, Medical Society; Chicago Medical Society.

TUESDAY, December 17th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, December 18th.—Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark).

THURSDAY, December 19th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Massachusetts, Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, December 20th.—New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynæcological Society.

Changes of Address.—Dr. Arthur I. Boyer, late of the United States army, has opened an office at No. 356 West One Hundred and Forty-fifth Street, New York; Dr. George Alexander Saxe has removed his office to No. 75 West Fifty-fifth Street, New York, where he is associated with Dr. Ramon Guitéras.

Dr. Rixey a Hospital Director.—Dr. P. M. Rixey, of the United States navy, who acted as attending physician to President McKinley, has been appointed by the Commissioners of the District of Columbia a member of the board of directors of the Columbia Hospital for Women. Dr. Rixey succeeds Dr. Louis W. Ritchie, deceased, on the board.

The Waukesha Sanitarium, which had just been completed at Waukesha, Wis., at a cost of \$60,000, was destroyed by fire while the steam-heating system was being tried.

The Second International Congress of the Medical Press should have taken place in Berlin during January, 1901, but owing to unsurmountable difficulties this was found to be impossible, and it was therefore proposed to hold congresses of this kind during January, 1902.

Changes at Dunning, Ill.—It is stated that, in view of the criticisms to which the Cook county institutions at Dunning have been subjected and of the findings of the commission of inquiry, there will probably be a number of changes made in the medical staff of the institutions.

A Physician to be Adjutant General.—Dr. Nelson H. Henry, for some years past a member of the Assembly of the State of New York and chief surgeon of the National Guard of the State, has been appointed adjutant general of the State forces, a salaried position, the duties of which require practically all of one's time.

Osteopathy Gains in Ohio.—On December 2d the Supreme Court of Ohio decided that the section applying to osteopathy in the State medical law is unconstitutional. This decision was rendered in the action of the State against H. H. Gravatt, of Piqua, O., who was arrested on the charge of practising medicine without a license.

The German Hospital and Dispensary.—The new annex to the German Hospital and Dispensary, which is a five-story building of ample dimensions, and fronts eighty feet on Seventy-seventh Street and forty-five feet on Lexington Avenue, was given to the trustees of the institution on the 7th inst. It is now ready for occupation, is absolutely fireproof, and equipped with the latest sanitary arrangements, and cost \$180,000.

A Physician Candidate for Mayor.—Dr. E. P. Lachapelle has been petitioned to stand as a reform candidate for mayor of Montreal, Can. Dr. Lachapelle is not only very popular among the laity of Montreal, but also stands well with the medical profession. He presented an able paper on The Progress of Sanitation in Canada at the Montreal meeting of the British Medical Association and has rendered important services to the city as a member of the Central Board of Health.

The Twelfth Annual Meeting of the Association of Austrian Physicians was held in Vienna in the week beginning October 31st. This association deals entirely with the professional side of medicine and its relation to the government and to the public. The subjects of sick benefit lodges and of quack practitioners were very earnestly discussed, and resolutions were adopted protesting against the order adopted by the Austrian Diet on October 9th of last year concerning quack practitioners.

The Philadelphia Medical Emergency Corps gave its annual dinner at the Hotel Bellevue, in that city, on December 5th. The forty-five members of this arm of the Department of Public Safety, who are graduate physicians of all schools, serve without recompense. They respond at an instant's notice when required at catastrophes.

Graduates in Medicine in Germany.—During the official year of 1899-1900, 1,384 students passed their examinations in medicine throughout the German Empire. Of these, 14 were Russian, 6 Austrian, 3 from the United States, 2 each from Italy, Egypt, West Africa and China, and 1 each from the Netherlands, from Switzerland, England, Brazil, and Argentina. The largest number—193—graduated at Munich, and the smallest number—namely 26 each—at Tübingen and Heidelberg.

A Hospital in the Middle of the Street.—The city authorities of Orange, N. J., have erected a temporary hospital for the ten small-pox patients on their hands in the middle of an ungraded and untravelled street. This was a last resort after numerous efforts to secure a suitable location for the hospital elsewhere, efforts which had been successively defeated by legal proceedings undertaken by the residents of the vicinities in which it had been proposed to erect the hospital. A year ago a hospital was erected by the city, but was set on fire by citizens before the patients were placed in it, and when the fire was extinguished the mob wrecked what was left of the building. The Chancery Court on December 11th issued an order requiring the city of Orange to show cause on December 23d why it should not be directed to remove from its present location the isolation hospital and its inmates suffering from small-pox. It is close to a fashionable neighborhood, and several residents have moved away in fright. It is said that some of these will later on sue the city for the costs of moving back and forth and for the amount they expend in rents, together with a further sum as salve to their feelings. A conference has been held between the authorities of Orange and of South Orange, with a view to the establishment of a joint isolation hospital for the two municipalities.

A Warning to Physicians.—Dr. Frank Van Fleet informs us that a man who represented himself to be from some "press association" called upon him a few days ago, offering to sell evidence damaging to the practice of osteopathy. Failing in this, he asked for Dr. Van Fleet's moral support, and was told that he would receive not only his moral support, but his active support as well, at the proper time, in any effort to free the community from the evils of this and kindred practices. Dr. Van Fleet states that he knows nothing of this person or of the association he professes to represent, and that while he does not desire to cast reflections on him or to impugn his motives in any way, he has no authority to use his name. Dr. Van Fleet asks the members of the medical profession to be careful in signing any petition which may be presented,

and in making subscriptions, until they are certain that the cause is a worthy one and that the person representing it is authorized by some organization or person other than himself to do so.

The Investigation of the Tetanus Cases in St. Louis.—A special commission, composed of the mayor of St. Louis; Dr. Max Starkloff, health commissioner of the city; the president of the city council; Dr. Merrell and Dr. Chapman, of the board of health; Police Commissioner Blong, and Councilmen Spiegelhalter, Hoffmann and Gibson, was convened on the afternoon of December 5th to investigate the recent deaths from tetanus attributed to the administration of diphtheria antitoxine prepared under the direction of the St. Louis Board of Health. At the first session the commission was organized, the mayor being chosen as presiding officer, and the secretary of the board of health being made secretary of the commission. At the second session of the commission, held on December 10th, Martin Schmidt, assistant city bacteriologist, offered startling testimony. According to the press dispatches, he declared that Dr. Amand Ravold, the city bacteriologist, had directed him on October 3d to prepare for distribution the serum secured from the horse "Jim," which had been shot the day before because it had tetanus.

"Dr. Ravold told me," said Schmidt, "that the serum could be safely used, as the horse had not been affected with tetanus on September 29th, when the drawing was made. I knew," the witness declared, "that the serum was poisonous and unfit for use on human beings, but I felt that I could not question Dr. Ravold's order. So I went ahead and carried out the orders."

The witness repeated his recent assertions before the coroner, that the poisoned serum was sent out to physicians without being first tested on guinea-pigs.

"It was difficult to obtain good guinea-pigs," said Schmidt. "All the available pigs had been used for tests during the summer, and hence were not in a fit condition for antitoxine tests. I do not know of any tests of the last drawing of antitoxine being made. If such tests had been made I would have known of it."

Schmidt testified further that the serum was kept unlabelled in the ice-box, and that the drawings at different dates were identified only in the mind of the colored janitor.

The Tri-state Medical Association of Western Maryland, Western Pennsylvania, and West Virginia will meet at the Queen City Hotel, Cumberland, Md., Thursday, December 19, 1901, at 1.30 p. m. Dr. William E. Barclay is president and Dr. Percival Lantz and Dr. F. W. Fochtman are secretaries of the association. The programme includes an address in medicine on *The Medical Side of Surgical Cases*, by Dr. I. N. Love, of New York, and papers on *The Radical Cure of Hernia*, by Dr. R. W. Stewart, Pittsburgh; *Incipient Tuberculosis*, by Dr. G. C. Johnston, Pittsburgh; *Uræmia*, by Dr. C. C. Jacobs, Frostburg, Md.; and *Pneumonia*, by Dr. A. F. Speicher, Elk Lick, Pa.

St. Louis Medical Society of Missouri.—At the meeting held on Saturday evening, December 7th, a paper on A Case of Nephrotomy with Drainage for Tuberculosis of Right Ureter, Secondary Nephrectomy, Apparent Cure, was read by Dr. H. McC. Johnson, and the following were elected to membership in the society: Dr. E. J. Goodin, Dr. Frank C. Sibley, Dr. M. W. Hoge, Dr. R. C. Harris.

The Eleventh Congress of Russian Naturalists and Physicians will open in St. Petersburg on January 2, 1902 (December 20, 1901, old style). The executive committee is composed of Professor H. A. Menchoutkine, president; A. A. Inostranzeff, vice-president, and I. I. Borgmann and W. T. Chewihkoff, secretaries. The congress embraces the following sections: Mathematics and mechanics, astronomy and geodesy, physics, physical geography, chemistry, geology and mineralogy, botany, zoology, anatomy and physiology, geography, with sub-sections on statistics, agronomy, and scientific medicine and hygiene.

The New York Academy of Medicine.—On December 5th a portrait in oil of Dr. Edward G. Janeway was unveiled by Dr. Janvrin at the New York Academy of Medicine. Dr. Janvrin stated that this portrait, which was given to the academy by Dr. Janeway himself, was the fulfilment of the promise made by him over a year ago. The condition necessary for its fulfilment was a purchase of a portrait of the late Professor Austin Flint, Sr., which condition had been complied with at the last anniversary meeting. Following the unveiling, Dr. V. P. Gibney was nominated for vice-president, and Dr. Joseph D. Bryant for trustee, of the academy.

Dr. Reginald H. Fitz, of Boston, delivered an oration on Some Surgical Tendencies from a Medical Point of View. Dr. Fitz discussed chiefly the relation of surgery to the treatment of cancerous growths, and inclined to the opinion, based on a record of observed cases, that in such cases an operation was more likely to serve simply to prolong suffering than to effect a permanent cure. He contended that in many instances an operation should be the last, and not the first, remedy employed.

Hospital Buildings and Endowments.—The Faulkner Hospital is the name of a new medical institution to be erected at a cost of \$100,000, at West Roxbury, near Boston, Mass., through the charity of Mrs. A. L. A. Faulkner, who died two years ago. Mrs. Faulkner herself selected and granted the site. The main or administration building, one of three, will be situated at the centre. It is to be three stories high, of dark brick, with elaborate trimmings of cream terra cotta. Special plumbing will prevail throughout the buildings, also a complete system of indirect steam heat and ventilation. The lighting will be by electricity. It is expected that the hospital, which will accommodate about thirty, will be ready for use in about a year.—The contract for adding two wings to the Gowanda (N. Y.) State Hospital, at a cost of \$900,000, has just been awarded.—Work on the new extension to the Government Hospital for the Insane, at Washington, D. C.,

has finally been begun. There had been a number of unavoidable delays since Congress made the appropriation of \$1,000,000 for its construction.—Bids have been received submitted by eight firms for the building of the new county hospital at Cripple Creek, Col.—The cornerstone of St. Ann's Hospital for Consumptives, at Chicago, was laid with appropriate ceremonies on October 20th. The hospital will soon be under roof, and it is expected that it will be finished this winter. It will cost \$200,000.—The people of Kansas City, Kans., are anxious to get both a city and emergency hospital, and a movement to that end is now on foot.—The will of Miss Emily Page, of Boston, gives part of a \$10,000 estate to the New England Hospital for Women and Children.—The movement to establish in Atlanta, Ga., the Georgia Eclectic Hospital is meeting with success. The hospital was chartered last month, and more than \$2,000 has already been subscribed.—The new hospital at Galesville, Wis., will be in readiness for patients in a week or two.—The new building of the Hackensack (N. J.) Hospital was thrown open to public inspection recently. The building can accommodate sixty patients, and cost about \$30,000.—The will of Matthew G. Emery, of Washington, D. C., bequeaths \$5,000 to the Sibley Memorial Hospital.—A new hospital is being erected at Fergus, Ont.—The board of directors of the Norwegian Hospital, Brooklyn, will soon begin the building of a new institution at Forty-sixth Street and Fourth Avenue, the present hospital having become too small. The new institution will be opposite the present building. It will be three stories in height and will cost \$100,000, of which \$25,000 has already been subscribed.

Births, Marriages, and Deaths.

Married.

COX—JUDSON.—In Brooklyn, on Wednesday, December 11th, Dr. Rowland Cox, Jr., and Miss Mabel Judson.

DOWNES—JAMES.—In Saratoga Springs, N. Y., on Tuesday, November 26th, Dr. Augustus S. Downes and Miss Isabella James.

HAYS—HAST.—In Louisville, Kentucky, on Tuesday, November 26th, Dr. John Edwin Hays and Miss Henrietta Courtney Hast.

LAMB—COOPER.—In New Haven, on Wednesday, November 20th, Dr. Chauncey Stafford Lamb and Miss Elizabeth Cooper.

MITCHELL—TRACY.—In Memphis, on Wednesday, November 6th, Dr. Edward Dana Mitchell and Miss Annie Bogardus Tracy.

WISELY—HILL.—In Detroit, on Wednesday, November 27th, Dr. Edward D. Wisely, of Port Richmond, N. Y., and Miss Anna Louise Hill.

Died.

BELL.—In New York, on Tuesday, December 3d, Dr. James Harvey Bell, in the thirty-second year of his age.

EDES.—In Jamaica Plain, Massachusetts, on Monday, November 25th, Dr. Richard E. Edes, in the thirty-third year of his age.

GANN.—In Wooster, Ohio, on Tuesday, November 26th, Dr. John A. Gann.

GIBBONS.—In Baltimore, on Monday, December 2d, Dr. James E. Gibbons, in the fifty-eighth year of his age.

JACKSON.—In Kansas City, on Friday, November 22d, Dr. James P. Jackson, in the fifty-seventh year of his age.

STEINSIECK.—In New York, on Tuesday, December 11, Dr. Charles H. G. Steinsieck.

Pith of Current Literature.

Medical News, December 7, 1901.

A Case of Suture of a Stab-wound of the Heart, with Remarks on, and a Table of, Cases Previously Reported. By Dr. George Tully Vaughan.—The author believes that the time has arrived when a wound of the heart should be operated on with as little hesitation as a wound of the brain, with the expectation, under corresponding conditions, of getting equally good results. In all cases of wounds in the region of the heart with symptoms threatening life, an exploratory operation should be done by making an osteoplastic flap by dividing the fourth and fifth costal cartilages at their attachments to the sternum and the ribs, about one inch external to their attachment to the cartilage, somewhat according to the method of Roberts. This door gives a good view of the pericardium and can be easily enlarged upward. Early and speedy operation is essential and the importance of asepsis cannot be too strongly emphasized. If there has been much hæmorrhage, physiological salt solution should be used, approximately equal in amount to the blood lost.

When and How to Introduce the Stomach Tube. By Dr. Mark I. Knapp.

The Pathology and Treatment of Bilocular Stomach, with a Report of Two Cases. By Dr. Charles Greene Cumston.

Some Unusual Localizations of Tuberculosis. By Dr. Frederick A. Baldwin.

Nephrectomy for Severe and Prolonged Mononephrous Hæmorrhage. By Dr. Granville MacGowan.

Philadelphia Medical Journal, December 7, 1901.

Congenital Defect of the Forearm, Absence of the Radius, Club Hand, etc. Plastic Operation. By Dr. Roswell Park.

Splanchnoptosis. By Dr. Byron Robinson.

Statistics of Typhoid Fever at the Philadelphia Hospital from January 1, 1897, to December 31, 1899. By Dr. Herman B. Allyn.—The mortality in one hundred and eighty-four cases was sixteen and thirty-nine one-hundredths per cent. In eight cases there were marked chills, which recurred and were followed by fever. Three cases simulated malarial chills, but no plasmodia were found in the blood. Incontinence of urine and fæces occurred in twenty-one of the cases ending in recovery, and in thirteen of the fatal cases. Nephritis occurred in twenty-two of the cases ending in recovery, and in seven of the fatal cases. Free sweating occurred in fourteen cases; bloody stools in nine cases; hæmorrhage in thirteen cases, six fatal. In fifty-eight cases (twenty fatal) diarrhœa occurred. Vomiting occurred in nine fatal cases; relapse in eight cases. The Gruber-Widal serum reaction was reported in ninety-five of the last one hundred and thirteen cases; in thirteen it was negative, and in five the blood was probably not examined. This gives a

percentage of eighty-eight in which the serum reaction agreed with the final clinical diagnosis.

Hypodermoclysis in Pædiatric Practice. By Dr. W. C. Hollopeter.—Hypodermoclysis, according to the author, is useful in hæmorrhage in the new-born from the genitals or umbilical cord; in purpura; in cases of general wasting from intestinal disturbances; and especially in the toxæmias associated with the acute eruptive fevers. In syphilis and in tuberculosis it is a therapeutic measure which aids very materially the uses of other means to effect restoration.

Amyotrophic Lateral Sclerosis, with Report of a Case. By Dr. Thomas Luther Coley.

A Case of Sterility in the Male, Due to Dead Spermatozooids, Cured by Galvanism. By Dr. Gustavus M. Blech.

American Medicine, December 7, 1901.

A Century of Vaccination. By Dr. Floyd M. Crandall.—The experience of a century has demonstrated that: (1) Vaccination in infancy, renewed at the end of childhood, renders an individual practically as safe from death from small-pox as if that disease had been survived in childhood, and almost as safe from attack. (2) In the face of an epidemic, vaccination of all who have not been vaccinated within five or six years, is giving the "benefit of the doubt." Every one who has been vaccinated in infancy and childhood, should be vaccinated not less than once in adult life. (3) The immunity conferred by vaccination is in direct proportion to the thoroughness with which it is performed, and this is shown with considerable accuracy by the character and number of the resulting scars. (4) Vaccination in infancy alone is not sufficient wholly to prevent small-pox among the adult population. (5) Optional vaccination has not proved sufficient to protect the community from small-pox. Compulsory vaccination is warranted by all experience. (6) The mild compulsion enforced in this country, by requiring vaccination or evidence of its recent performance upon admission to the public schools, should have the hearty support of parents and physicians alike.

The Diagnosis of Small-pox. By Dr. Jay F. Shamberg.—The author points out that during epidemics of small-pox the anticipatory attitude of the physician's mind will often lead him to suspect and diagnosticate as variola, diseases which bear only a superficial or remote resemblance to it. A diagnosis should not be based upon any one feature of the disease, but upon the ensemble of the symptoms.

Tetanus Appearing in the Course of Vaccinia; Report of a Case. By Dr. Robert N. Willson.—The author considers several other cases besides his own. In all cases the specific antitoxine was employed, and, in the author's case, carbolic acid (hypodermically), as well as chloral and the bromides by the rectum, but without permanently favorable result. In the author's case (the patient was a baby, eleven months old), the adult dose of antitoxine was given within the first twenty-four hours of the earliest appearance of the symp-

toms. The temperature fell to normal, as it sometimes does when no antitoxine has been employed; the jaws relaxed once, as also sometimes occurs; but the child died. This case seems to prove Gross's assertion, that when a patient recovers or dies, it does so "apparently independently of the treatment."

Vaccine Production and Vaccination. By Dr. George G. Groff.

Report of a Case of Compound Comminuted Depressed Fracture of the Skull, Cerebral Abscess, Cerebral Hernia. Operation; Recovery. By Dr. G. W. Spencer.

Shall Massage of the Stomach be Recommended? A Study of Six Cases. By Dr. Mark I. Knapp.

On the Use of Gärtner's Tonometer. By Dr. Leroy Crummer.

Boston Medical and Surgical Journal, December 5, 1901.

Hernia Epigastrica and Fatty Tumors in the Epigastrium. By Dr. Howard A. Lothrop (*concluded*).—If the hernia causes no trouble, no treatment is indicated. If symptoms are present, operation offers the only means of certain relief, and this method should be suggested, provided there are no complications which would contraindicate surgical procedure. Trusses and swaths are of no use. In extreme cases of local pain without objective signs, where a hernia is suspected, an exploratory operation is justified. It is very important to free the omentum from all adhesions. As a rule, operative treatment brings early relief with a minimum of risk. Recurrence is unusual.

One's Health in Egypt. By Dr. F. Gordon Morrill.

The Similarity of the Early Symptoms of Simple Abdominal Contusion and one Accompanied by Severe Intestinal Injury; the Need of Exploration Cœliotomy as an Early Routine Measure. By Dr. John T. Bottomley.—The author points out that at present we have no certain means of distinguishing between a simple abdominal contusion and one complicated by severe intestinal injury, except through an exploratory incision. This, to be of avail, must be done within a very short time after the injury. Exploratory laparotomy, combining as it does opportunity for a certain diagnosis and the best possible treatment, if severe injury is present, should be a very early routine measure in all but the most trivial cases of contusion of the abdomen.

The Scope of Vaginal Section in the Treatment of Pus in the Pelvis, with a Report of Eighty-two Abdominal Sections without Mortality; and Eighteen Vaginal Sections with One Death, Due to Accidental Causes. By Dr. Edward Reynolds and Dr. L. V. Friedman.

Prostatic Calculus Removed through Perineal Section. By Dr. Charles G. Levison.

The Treatment of Piles by the Injection of Carbolic Acid. By Dr. George W. Gay.

Journal of the American Medical Association, December 7, 1901.

Clinical Observations in Pericarditis. By Dr. Frank Billings.—The author shows that pericarditis is an easily recognized condition. Frequent careful, systematic examination of the præcordium should be made in all infectious diseases, and, if this is done, pericarditis will not escape one. The diagnosis will then be made during life, and not at the post-mortem table, as is unfortunately now the case in at least fifty per cent. of the cases of pericarditis which autopsies reveals.

The Pathology and Pathogenesis of Pericarditis. By Dr. Joseph McFarland.—There is no specific micro-organism of pericarditis. In the sero-fibrinous form of the disease, the study of numerous cases has revealed the presence of streptococci, staphylococci, pneumococci, *Bacillus pyocyaneus*, the bacillus of Friedländer, and the *Bacillus tuberculosis*. In the purulent form, streptococci, staphylococci, *Bacillus coli communis*, the bacillus of Friedländer, and the tubercle bacillus have been found. The hæmorrhagic form is apt to be tuberculous, so that the tubercle bacillus may be found together with other accidental organisms. In pyo-pneumo-pericarditis, with communications with the lung, œsophagus, etc., numerous saprophytic micro-organisms may be found.

Ætiology of Pericarditis. By Dr. Robert B. Preble.—Cases of acute pericarditis, clinically primary, occur, but are rare. Diseases to which pericarditis appears as a complication are in order of their frequency: Pneumonia, thirty-four per cent.; rheumatism, twenty-eight per cent., plus; chronic diffuse nephritis, eleven per cent., plus; tuberculosis, ten per cent.; sepsis, five per cent., minus; aneurysm, three per cent., minus; typhoid, one and seven-tenths per cent. The more extensive a pneumonia, the greater is the danger of this complication. With left-sided pneumonia the danger is the greater. Rheumatic pericarditis is complicated by endocarditis in sixty per cent. of the cases. The danger of pericarditis complicating rheumatism is greater the younger the individual, and is somewhat greater among males than females. So far as acute pericarditis is concerned, the site and extent of the endocarditis is apparently of no importance. Pericarditis occurs with all forms of nephritis, but particularly with the chronic diffuse nephritis with contraction. Pericarditis must be regarded as a rare complication of tuberculosis. The cases of obliteration of the præcordium are due to the following causes arranged in order of importance: Endocarditis, tuberculosis, chronic nephritis, aneurysm.

The Extraction of Cataract without Iridectomy. By Dr. S. D. Risley.

Temporary Clearing of a Cataractous Lens. By Dr. Hiram Woods, Jr.

The Enucleation of the Eye in Two Minutes by a New Method, with Demonstration. By Dr. A. T. Mitchell.

Medical Record, December 7, 1901.

Some Observations on the Borderland between Medicine and Surgery. By Dr. George Woolsey.—In the author's opinion, there is much need for improvement in medical practice along the line of early diagnosis, especially in cases of malignant new growth and septic processes. Along these lines much has already been done, but much remains to be done, and a vast amount of scientific work is being applied to the problem. The responsibility rests on physicians, not only to make an early diagnosis, but to call in the surgeon to confirm the diagnosis, and to apply the appropriate treatment in that ever-increasing range of conditions in which operative treatment affords the best results.

The Expectant Treatment. By Dr. Robert H. Bakewell.—The author expresses himself as being terrified on noting the mortality of some modern treatments, and he contrasts it with that of the "good old times."

The Psychic Half. By Dr. J. Allen Gilbert.—The author asks if experimental psychology has not promised more than she has fulfilled or ever can fulfil. The field of medicine is man; and if, after proper study, man is decided to be moral, æsthetical, and political, does not treatment at times reach beyond the *materia medica* and the laboratory? On the other hand, if man in his entirety is capable of reduction to a mere nervous mechanism, should we not, at least, be consistent and cease speaking of the effect of mind, if we deny its entity and make it but a product? Where is the consistency in giving lectures upon mental diseases and denying the entity of mind? Is it not lecturing upon diseases of a non-entity? Why speak of mind and the effect of mind at all, if mind is not an entity? Is anything less real, less an entity, because to our means of perception it fails to establish its continuity in time? Must all being have length, breadth, and thickness before we will grant it existence and reality?

Spasmodic Bronchostenosis. By Dr. Albert Abrams.—The author gives the following formula as being of value in certain cases of spasmodic bronchostenosis:

R Potassium iodide. 5 drachms;
Tincture of lobelia. 10 "
Spirit of glonoin (1 per cent.) . . . 16 minims;
Elixir of potassium bromide. . . . 4 ounces.

M.

Mix. A teaspoonful three times a day after meals. This dose may be gradually increased if necessary.

The Hæmorrhagic Diathesis in Relation to Operation on the Nose and Throat. By Dr. E. Harrison Griffin.—The author details some cases which show how important it is to quiz one's patient in regard to the hæmorrhagic diathesis, and at the same time to go into every detail. If an operation is in question, and the patient thinks such an operation will relieve his suffering, he is likely to give a rosy coloring to the situation, and will deny all knowledge of being a bleeder, and oftentimes a knife is introduced when the se-

quence will bring into action all the artifices that surgery can command.

The Treatment of Xanthoma of the Eyelids. By Dr. Fred. J. Levisseur.

British Medical Journal, November 30, 1901.

A Case of Syphilitic Arterial Disease. By Sir W. R. Gowers.—The author reports the case of a woman, aged twenty-five years, known to have had syphilis, who developed right-sided hemiplegia and all the symptoms of a rapid cerebral growth—prolonged headache and vomiting. In spite of the most energetic anti-syphilitic treatment, she grew steadily worse, became comatose, and died twenty-six days after admission to the hospital. At the autopsy no growth was found, but there was extensive disease of the arteries. The disease was most intense at the commencement of each middle cerebral artery; here, on each side the disease had entirely surrounded the vessel. The external prominence was very slight, but the thickening of the wall had encroached upon the cavity of the artery, even to the point of obliteration. The most intense disease extended for from one half to three quarters of an inch along the vessel. The right middle cerebral artery contained a clot, beyond which were evidences of necrotic softening. This was the cause of the final hemiplegia. In the left middle cerebral, which was completely closed by the disease, was another clot, but much older. This was the cause of the first, incomplete attack of hemiplegia. The structure of the cortex of the brain was greatly shrunken, and the fine arteries were contracted and pale, microscopical examination showing active endarteritis. This was not specific, however, but was due to the diminished blood supply, which in turn was due to the thrombosis. An abnormal artery was found on the left side, joining the left middle and posterior cerebral arteries. Just enough blood passed through it to prevent necrotic softening on that side. The palsy and stupor were due to the alteration in the brain structure. The clot having formed in the left middle cerebral before anti-syphilitic treatment was begun, the case was hopeless; for a clot in a vessel, once formed, is one of the most stable, most enduring of morbid states. Thus closed, the cavity of an artery cannot be restored.

Some Cases Illustrating the Necessity for Accurate Observation in the Management of Surgical Cases. By Sir W. H. Bennett.

Acute Yellow Atrophy of the Liver. By Dr. T. R. Bradshaw.—The author's article is based on three cases of acute yellow atrophy of the liver, in two of which autopsies were obtained. The most obvious symptoms of the disease are intense gastro-intestinal disturbance, extreme prostration with nervous symptoms, jaundice, and in most cases rapid diminution in the area of liver dulness. The process of which the liver is the subject is an acute inflammatory one characterized by granulation and disappearance of the hepatic cells and congestion and round-celled infiltration of the stroma of the organ. The plugging of the capillary bile ducts is probably analo-

gous to the formation of casts in acute nephritis, and explains the existence of jaundice in cases of this kind. The cause of this remarkable disease is still to seek. We are probably justified in assuming that the inflammatory and destructive changes in the liver are due to the action of some poison derived from the alimentary canal, but as to its nature or mode of production we are entirely in the dark. Bacteriological examination has given varying results. Most probably when organisms have been found they have been present as a secondary infection, their growth being favored by the lowered vitality of the tissues. The toxic origin of the disease is supposed to receive support from what is known of the action of phosphorus on the liver.

The prognosis is extremely grave, though, perhaps, not altogether hopeless, since recovery has been recorded in undoubted cases. Although the majority of cases of simple jaundice are among the mildest of diseases which come under our notice, yet they should never be lightly regarded; what has all the appearance of an affection which will pass off in a few days, may in reality be the beginning of a formidable disease, which will carry off the patient in as short a time.

On the Treatment of Wounds in War. By W. W. Cheyne, M. B.—The author states that the successful treatment, at the front, of wounds received in the South African war, is dependent, not on advances in surgical science, but on the merciful nature of the modern bullet wound, and on the climate in which the fighting took place. If a larger bullet were used and if the fighting took place in a moist climate, the results would be little, if any, better than those observed in the Crimea. There is no hope for real asepsis at the front. The wounded have to remain longer on the firing line; indeed they are safer there. The surgeon cannot carry lotions and water with him; and, further, the first field dressing must, in a large number of cases, be applied by the patient or his comrades. The author advocates the promotion of rapid scabbing by means of antiseptic dusting powders. Arrangements should be made by which the field ambulances would carry a supply of filtered water. Better illuminating facilities should be supplied to the field hospitals; acetylene furnishes a cheap, efficient, and easily transported system.

Medicated Lozenges. By Sir J. Sawyer.—The author urges the more extended use of lozenges by the medical profession, such lozenges to be put up by the pharmacist according to the physician's prescription. He calls attention to a "basis" for such lozenges which he has found most useful and palatable. It is known as the *pasta glycyrrhizæ alba*, or *pâte de réglisse blanche*. It is prepared as follows: Take of decorticated licorice root, four ounces; water, eighty ounces; macerate for twelve hours; strain and add two pounds and a half each of picked gum arabic and refined-sugar; dissolve, strain, and evaporate to the thickness of honey, constantly stirring, and add gradually the whites of twelve eggs well beaten with four ounces of orange water; evaporate with constant stirring until the paste is so

firm as not to adhere to the hands. With such a basis the active drug can be combined to form an agreeable and efficient medicament.

Observations on the Rate of Vibration in Ankle Clonus. By Dr. J. A. Macwilliam.—The author has studied the rate of vibration in ankle clonus, as observed in a case of hemiplegia of ten months' standing. Previous observers have found the rate to be usually about seven or eight per second. In the author's case it was found to be, as a rule, 13.5 or 14 per second.

Lancet, November 30, 1901.

The Symptoms and Treatment of Movable Kidney. By H. Morris, F. R. C. S.—A kidney is deficient in its proper means of fixity and must be considered abnormally movable under any of the following conditions: 1. When the whole kidney descends during deep inspiration below the examiner's fingers on deep palpation. 2. When the greater part of the kidney so descends as to be felt between the two hands. 3. When the lower half of the organ so descends, and can be so felt. In the cases in the third group, and in some of those in the second, the organ cannot be retained between the fingers, but slips back again on expiration. 4. When the kidney is out of position during natural respiration, and may be easily felt. This constitutes the so-called "floating kidney." 5. When the kidney moves horizontally, upon the plane of the posterior parietes, and does not drop forward or inward.

The symptoms of movable kidney. (1) The physical signs discoverable by palpation. A thick abdominal wall or a long thorax may prevent the kidney's being felt. Never declare a kidney not movable on a single examination, even though most carefully and systematically made. (2) Subjective symptoms. These may be entirely absent, or there may be (a) pain; (b) troubles of digestion; (c) neurasthenia and hysteria; (d) more rarely, some change in the urine or in the urinary functions; and (e), most rarely, some extreme complication due to compressing or dragging, such as intestinal obstruction, jaundice, or great gastric dilatation. But in no case are we justified in positively concluding that a patient's sufferings are due to movable kidney unless we actually feel the kidney to be movable. The commonest error is to mistake an enlarged gall-bladder for a floating kidney. The most frequent effect of movable kidney upon the kidney is hydronephrosis, either intermittent or constant. In cases of simple or uncomplicated nephroptosis, belts and pads are practically useless.

The author's conclusions as to treatment are as follows: 1. In movable kidney with enteroposis no operation should be performed until it is clear that the serious symptoms are due to the kidney alone, and thorough trial of a well-fitting abdominal support and dietetic treatment has been made. Should these fail, nephropexy should be tried. 2. In cases where both kidneys are movable, they should be fixed one after the other at an interval of a week. 3. In hysterical or neurasthenic patients, operation should be tried only as a last resort. 4. In uncomplicated

cases of movable or floating kidney, the operation of nephropexy may be confidently advised, without previous trial of belts or rest. 5. When renal crises are a feature, nephropexy should be strongly urged. 6. When a moveable kidney gives rise to no inconvenience, an operation ought not to be thought of, and a belt need not be worn.

The Symptoms and Treatment of Perigastric Adhesions. By Dr. W. H. White.—The author's article is based upon five cases of perigastric adhesions, four occurring in women and one in a man. In all, the adhesions were due to previous gastric ulceration; such adhesions form in about forty-five per cent. of all cases of gastric ulcer. Pain is the prominent symptom in these cases, and is sometimes excruciating. It is usually situated in the upper part of the abdomen, and is associated with local tenderness. There may also be symptoms of dilatation of the stomach or of gastric ulcer. The pain is not affected by the taking of food, as it is in cancer of the stomach. The only hope of relief lies in surgical intervention. In the cases here reported, the adhesions were easily broken down with the finger; only once was it necessary to ligate an adhesion before dividing it. Of the author's patients, three were greatly benefited by operation, one died on the third day from cardiac collapse, and one died after a long and tedious operation for double gastric ulcer.

Twenty-five Years' Experience of Urinary Surgery in England. By G. B. Browne.—(*The third of the Harveian lectures on this subject.*) In this article the author considers the treatment of strictures of the male urethra, and especially those strictures which will not yield to dilatation. After referring (without approval) to the operations of external urethrotomy, forcible rupture, and electrolysis, he states that internal urethrotomy is the best of all, and is the operation which has come to stay. By this he means the free division of all the fibres of the stricture in the floor of the urethra. The instrument recommended is Civiale's urethrotome, with which the cutting is done from behind forward, and the knife is under perfect control. Before it can be used, however, the stricture must be dilated up to No. 6 English; this is always possible after having passed a No. 1. The author holds that there are no cases of stricture, however severe, through which it is impossible to pass an instrument. He disapproves of filiform bougies as being dangerous, and uses finely polished, rigid, steel sounds. The patient must be most thoroughly anæsthetized, as the urethral reflexes are the last to be abolished. The author is opposed to incision of the urethra for any purpose; incision of the perinæum has to be done: (1) For extravasation of urine; (2) to permit the exit of pus; (3) in some cases of prostatic calculi; and (4), in rare cases of urethral calculus. In cases of tight stricture with perineal abscess, the stricture should be divided first and a sound passed and tied in. The abscess may then be opened, care being taken to avoid the urethra, and in this way urinary fistula may be avoided. In cases of prostatic abscess, the urethra should be opened behind the bulb, from the perinæum.

Anatomical Preparation-making as Devised and Practised at the University of Edinburgh and at the Hunterian Museum of the Royal College of Surgeons of England. By Dr. J. B. Pettigrew.—(*Concluding article.*)

About Alkaptonuria. By Dr. A. E. Garrod.—The author states that the evidence available points to tyrosine, formed as a product of pancreatic digestion, as the parent substance of the homogentisic acid which imparts to alkapton urine its peculiar properties.

He reports the case of an infant, whose nappies were noticed to be deeply stained fifty-two hours after birth; examination of the urine showed that it reduced Fehling's solution and exhibited all the other characteristics of alkapton urine. Alkaptonuria may be described as a "freak" of metabolism, a chemical abnormality more or less analogous to structural malformations. It may persist throughout life without any apparent detriment to health.

A Case of "Myxasthenia," with Remarks on Kindred Affections. By Dr. W. Overend.—By "myxasthenia" the author implies deficient mucus formation, due to atrophy of the mucous or goblet-celled epithelium of the pharynx, etc. He cites a case of this affection, occurring in a woman. The mucous membrane of her mouth and throat was dry and slimy, her bowels were costive, and she complained of dyspepsia and dryness of the mouth and throat. Treatment consisted of tablets of mucin and sodium bicarbonate. The author has proposed a series of new names to be used in such affections, such as orthomyxia, hypomyxia, paramyxia, etc. For instance, whooping-cough is a state of general hypermyxia.

Carcinoma Mammæ: on the Necessity for Taking Steps during the Operation for Removal to Obviate the Risk of Subsequent Dissemination. By C. H. Leaf, F. R. C. S.

A Case of Lead-poisoning Causing Insanity. By W. S. Stalker, M. B.

Indépendance médicale, October 16, 1901.

Pneumonia and Alcoholism.—M. Hayem reports a case of a man, thirty-eight years of age, who was admitted suffering from pneumonia, and who later developed an arthritis of the knee. He was shown to be an alcoholic subject. After his convalescence, it was seen that he had a tuberculous infiltration of both apices. The examination of the blood showed the presence of a great number of polynuclear red cells, a characteristic of pneumococcic infection, while the fluid from the joint was purulent. By rest and the use of cataplasms, the joint was perfectly restored, so that its tuberculous character was excluded by the therapeutic measures also.

The Hebeephrenias. By M. Deny.

Lyon médical, October 13, 1901.

Use of Gelatin Serum in Hæmorrhagic Pleurisy.—M. Raymond Bernard says that the use of gelatin for the avoidance of hæmorrhage due to infections of various kinds, is well established, and it

has seemed to him judicious to employ it in cases of hæmorrhagic pleurisy. He has tried it in four cases, and finds that it has a decided hæmostatic power, and that it seems to moderate, or to suspend entirely the exudation of blood. The local and systemic reactions are transitory and of little consequence. Upon the tuberculous process itself it has no influence whatever.

External Examination of the Digestive Tract and Indications for Alimentary Régime. By M. C. Sigaud.—(*Concluded.*)

Gazette hebdomadaire de médecine et de chirurgie, October 10, 1901.

Opothrapy in Diabetes.—M. Gilbert and M. Lereboullet conclude that the pancreatic extract is indicated in those cases of diabetes with enlarged livers, and in no other cases of the disease. In such cases they have had beneficial results in doses of four grains by mouth in pill form, or from fifteen to thirty grains by rectum in suppositories. The results are not always uniform. Other measures of treatment must not, however, be neglected.

Wiener klinische Wochenschrift, October 10, 1901.

Virchow Anniversary Number.—The articles in this number are entirely of a histological and pathological character. They are: The Spinal Cord of Children and Syringomyelia, by Dr. Julius Zappert; Degenerative Changes in the Renal Epithelium, by Dr. Karl Landsteiner; Renal Changes in Congenital Lues, by Dr. Oskar Stoerk; Histology of the Pancreas, by Dr. Emil Stangl; Finer Changes in the Pancreas in Diabetes Mellitus, by Professor A. Weichselbaum and Dr. E. Stangl; Ciliated Epithelium in Gastric Carcinoma and Its Metastases, by Dr. F. Külbs; The Branchiogenic Organs of Man, by Dr. J. Erdheim; Development and Absorption of Decidual Tissue in the Peritonæum, by Dr. C. Stravoskiadis; Origin of Tubal Rupture, by Dr. O. F. Lindenthal; Ætiology and Pathological Anatomy of Epidemic Cerebrospinal Meningitis, by Dr. H. Albrecht and Dr. A. Ghon; Metastatic Ophthalmia in Epidemic Cerebrospinal Meningitis, by Dr. Wintersteiner; Friedländer's Bacillus as a Cause of Brain Abscess, by Dr. Milan Sachs; Influenza as a Mixed Infection in Diphtheria, by Dr. Karl Leiner; and Ætiology and Histology of Endocarditis, by Dr. Julius Bartel.

Münchener medicinische Wochenschrift, October 29, 1901.

The Cure of Congenital Cystochisis, with Urinary Continence. By Dr. P. Trendelenburg.

Genesis of Tumors, Tuberculosis and other Organic Diseases Following Blunt Injuries.—Professor Jordan says that no definite knowledge on this subject is at hand, yet from many observations it seems likely that a blunt injury can result in tumors or tuberculosis. Sarcoma seems more likely to develop than carcinoma, although a single injury does not seem sufficient to cause either growth to develop. It is known that osteomyelitis may result from an injury, but it is

not right to conclude that either it or appendicular inflammation is the result of trauma unless it follows soon.

Case of Sneezing during Pregnancy.—Dr. Karl Heil narrates the case of a woman who, in two successive pregnancies, suffered from severe attacks of sneezing. Abortion resulted in the first pregnancy, but, the second time, local applications of a five-per-cent. solution of cocaine checked the sneezing. The author attributes the attacks to circulatory disturbances in the nasal mucous membrane due to the pregnancy.

Specificity of Bacteria.—Dr. Paul Klemm says that after micro-organisms have once penetrated the human organism, they exert no specific effects. The author concludes his observations, mainly clinical, by affirming that no obligatory specificity attaches to bacteria, but they possess a facultative specificity by which they evoke characteristic reactions in the tissues.

Urobilin in Ascitic Fluid. By Dr. C. Stich.

Centralblatt für Chirurgie, October 19, 1901.

Hanging Pelvis with Horizontal Trunk for Operations about the Diaphragm.—Dr. Georg Kelling describes a means of placing patients on the operating table for operations on and about the diaphragm. The position is such that the loins rest upon the edge of the table, while the feet, held by holders, almost touch the floor. Half a hoop over the lower third of the table, holds the trunk horizontal. It is an exaggerated extension of the trunk and exposes the diaphragmatic region admirably.

Technics of Appendectomy. By Dr. M. W. Herman.

Riforma medica, September 11, 1901.

On Painful Symmetrical Lipomatosis. By Dr. Luigi Bordini.—The author adds to the series of eighty-five cases already published, the following account of a case of symmetrical and painful lipomatosis: The patient was a man fifty-five years old, who, two years before admission, noticed two painless growths on the sides of the cervical spinal column, which gradually increased in size. After a time, these growths began to cause discomfort, both by impeding the motion of the neck, and by pain on motion or contraction of the cervical muscles. Soon the growths became painful to the touch. On examination, he showed the presence of a number of symmetrical subcutaneous tumors in various parts of the body, which had the characters of lipomata. The patient had a neuropathic parentage. Gradually there came on a state of muscular tremors, vertigo, and mental confusion. There are two types of lipomatosis, namely, that of Dercum, or the painful type, and that of Carducci, or the anæsthetic type. In this case there was undoubtedly Dercum's type, with slowly developing general paresis.

September 12, 1901.

On a New Method of Isolation for the Typhoid Bacillus. By Dr. U. Biffi.—Cambier recently proposed a method of separating the colon bacil-

lus from the bacillus of typhoid fever, based on the assumption that the germ of typhoid fever would pass through a Berkenfeld filter more rapidly than the colon bacillus. A series of experiments to test this method convinced the author that it was not trustworthy, for it failed in many cases. In fact, the author found that the *Bacillus coli* that he used in his experiments passed through the filter even more rapidly than the typhoid bacillus. This is due to the fact that the former develops more rapidly in the thermostat, and also in ordinary room temperature, than the latter. He found that it was indeed possible to isolate the *Bacillus coli* from fæces by Cambier's method, but this possibility diminished in proportion to the length of time which the *Bacillus coli* had remained in the fæces in contact with other germs. This statement is, however, qualified by the author, as needing further experimental proof. Cambier's method is more useful in the examination of drinking water. This is specially true if the author's suggestions as to techniques are followed in these tests, as thus large quantities are used and the bacteria greatly diluted. The author passes considerable quantities of the water to be tested through a Berkenfeld filter by aspiration, the filtration taking place from the outside of the filter toward the inside of the apparatus, so that germs must be deposited upon the surface of the filtering medium. The filtrate is examined and the filtering candle is immersed into culture broth, wherein, after from six to thirty hours, the germs that passed first can be seen in cultures. In four out of five experiments the colon bacillus passed first; in the other one, the typhoid bacillus first appeared in the culture broth inoculated with the filtered fluid.

Roussky *Archiv Patologii, Klinitcheskoy Meditsiny i Bakteriologii*, June, 1901.

On Dipsorrhexia and Antiethylin. By Dr. V. Thebault.—Dipsorrhexia is a term used by the author to designate the early stage of alcoholism, i. e., that stage when no organic lesions have as yet appeared in consequence of the alcoholic poisoning, but when the appetite for drink has been developed. He divides this early stage into four periods, namely, the period of attraction, when the patient drinks occasionally and the influence of alcohol is but slightly noticeable; the stage of habit, when he begins to drink habitually, but can stop if he wants to; the stage of desire, when the will begins to be conquered by the desire for drink; and the stage of necessity, when drink becomes necessary, so that the will can no longer control the appetite for it. When anatomical lesions, such as nephritis or cirrhosis, etc., begin to appear the patient enters into "alcoholism," as distinguished from dipsorrhexia. The author asserts that his serum is an efficient antidote for alcoholic poisoning when the patient has not gone further than dipsorrhexia, but that it is powerless when he has once become "alcoholic" in the true sense. He injects it subcutaneously in doses of from five to twenty cubic centimetres, every three or four days. The effect is a strong aversion for alcohol, thanks to the nausea and vomit-

ing (or to the psychical effect), so that the patient refuses alcoholic liquors when they are offered to him. The aversion increases as his general condition improves. The author's results with this serum are as follows: Successes in 60 per cent., improvement in 15 per cent, and failures in 25 per cent.

On Direct Amitotic Division of the Red Blood Corpuscles of Cold-blooded Animals. By Dr. M. A. Silberberg.—Under the influence of injections of a culture of anthrax bacilli into frogs, the author noted a pronounced proliferation of the red blood cells in these animals. The remarkable fact noted was, however, that this division took place not only by mitosis, but also amitotically.

Mottled Cells in Malaria. By Dr. W. Stephan-sky.—Mottling of the red cells was first described by Schueffner in 1899, and later by Ruge, Maurer, and Nerestneff. The author has found that in malaria the blood cells occupied by the parasite, when stained by Romanovsky's method, as modified by Ruge, remain colorless, but exhibit a mottling with numerous red spots upon their surfaces. The same method was used to stain chromatin in growing bodies. The red spots are always of the same color, they are of the same size, and evenly distributed on the cell. They become larger as the organism becomes older. In addition, the author has found other peculiarities in the blood of malarial patients, especially of those with pronounced anæmia or cachexia. He has noticed in red cells infected with adult parasites certain spots of a violet or reddish violet color, irregular in shape, and ill-defined in contour, of varying size, from that of a small granule to half the size of the nucleus of the parasite. He believes that these changes are produced by the disintegration of the protoplasm of the red cells.

On Nissl's Bodies in Nerve Cells. By Dr. Poloumordvinoff.—The significance of Nissl's bodies is not yet fully known. Held some years ago declared that they were artifacts, and were produced by some chemical reaction as the result of the fixing of the tissue before sections are made. In order to study the cells of the spinal cord in the fresh state, the author used spinal cords from living cats. After having excised small pieces of the cord with a scalpel, he plunged them into a solution composed of toluidin blue dissolved in the serum of the same animal, and left them there for a few minutes at a temperature of 38° to 39° C. The fragments were then teased in a drop of the same liquid, and examined as soon as possible. In the cells of these cords, the corpuscles of Nissl were very distinctly seen. The color faded in about fifteen minutes. Decolorized cells, as well as cells examined without staining, did not show the presence of Nissl's bodies, which tends to prove, according to the authors, that the stain in the first instance did not produce the chemical reaction which resulted in the formation of Nissl's bodies, as Held believed. In order to test this question further, they took some cells from the trachea of the cat, and stained them with the same fluid. They found that the stained cells showed, in many instances, move-

ments of the ciliary processes, while the granules of the protoplasm were stained blue. They conclude that Nissl's bodies form an organic part of the nerve cells of the cord.

Vratch, October 27 (November 8, New Style), 1901.

The Diagnosis and Non-operative Treatment of Complete Rupture of the Uterus during Labor. By Dr. D. D. Popoff.—It is often difficult to diagnose rupture of the womb, especially because such ruptures are sometimes accompanied by very slight symptoms, or even by no symptoms whatever. In the majority of cases, however, the presence of a rupture of the uterus makes itself known by a characteristic clinical picture. As a rule, the patient's face assumes the expression of suffering, and the eyes may look sunken. If there is much bleeding, as there often is, the face becomes very pale and is covered with cold perspiration. The eyes turn restlessly from side to side, and the consciousness is often clouded, while vomiting and nausea are often met with in such cases. The most characteristic sign is the presence of burning pains in a definite location, which make the patient cry out almost constantly. The slightest touch on the abdominal wall over the rupture gives intense pain, but sometimes little or no pain is felt. In some instances the patients feel something give way in the abdomen at the time of the rupture, and Auvard and Lepage state that, in rupture of the uterus during labor there is sometimes a dull sound, as of something being torn asunder, which is audible to the by-standers. The symptoms following a rupture are arrest in the progress of the labor, shock, and irregularity in the outline of the abdominal tumor, together with the appearance of the foetal parts in the abdomen, so that they may be felt immediately under the wall in cases of complete rupture. In some cases, crepitus, due to the entrance of air through the tear into the circum-uterine cellular tissue, is felt. A very important sign is the sudden cessation of the foetal heart-beat. On vaginal examination the presenting part will be found to have receded from its position further upward in the pelvis. If the foetus has escaped into the peritoneal cavity, the diagnosis is easily made by manual examination, though the uterus may be so contracted and full of clots that one cannot feel the rupture. In such cases it is advisable not to force matters. When intestines are projecting through the os, the diagnosis is not difficult, and when the ovaries and tubes hang out of the uterus it is easy to guess what has taken place, given the other symptoms. (*To be concluded.*)

On the Question as to the Function of the Thyreoid Gland. By Dr. V. V. Nefedoff.—After studying the phenomena following the removal of the thyreoid gland in dogs, the author injected mucin subcutaneously in both normal and thyreoctomized animals, and found that there was no difference in the effects produced by such injections upon either of these two groups of animals. No effects whatever were obtained from the injections in either group. According to Lindemann, the injection of caffeine into dogs that

have been deprived of the thyreoid is followed by more serious results than the introduction of the corresponding dose in dogs with normal thyreoids. The author has tested this statement experimentally, by injecting caffeine-sodium benzoate into healthy and thyreoctomized dogs, and has found that there is no difference in the effects of the drug in either group of animals. The injection of cocaine, digitaline, and sodium iodide into dogs belonging to both groups, also showed that there was no difference in the effects between dogs deprived of the thyreoid and dogs with normal thyreoids. Experiments with the juice expressed from thyreoid glands, and comparative tests of the same kind with juice from muscles and juice from lymph nodes showed that there was no difference in the effects of injecting these substances into dogs, so that there is nothing to show that the thyreoid secretion possesses a specific active substance. In one case the removal of the thyreoid, in spite of the fact that there were no accessory glands, was not followed by the death of the animal, the dog living seventy-seven days after the operation to the time of writing, and dying of an accidental gastro-enteritis. This dog increased considerably in weight during the period following the operation.

The Diagnostic Significance of Stalactites for Plague Bacilli. By Dr. M. G. Tartakovsky.—The mode of growth of the plague bacillus does not give any clue to diagnosis from other germs without experiments upon animals. In 1897, Haffkine found that, in bouillon, the plague bacillus gave rise to the formation of projections shaped like stalactites. He believes that the plague bacillus is the only germ that gives rise to the formation of stalactites, and therefore thinks that this peculiarity may serve as a diagnostic means between the plague bacillus and other bacteria. The author has found, however, that the formation of stalactites is also observed in cultures of the bacillus of pseudo plague in rodents, and this formation cannot, therefore, be considered as diagnostic of the plague bacillus proper.

A New Method of Treating Epilepsy. By Dr. M. E. Leon.—The author, assuming the truth of the toxic theory of idiopathic epilepsy and the antitoxic value of healthy cerebral cells, used "cerebrin" in seventeen cases of epilepsy that had resisted the usual medicinal treatment, and as the result of his experience recommends cerebral extract in the treatment of this disease. His method of treatment included a diet containing a small amount of sodium chloride, the administration of bromides, and the use of cerebral extract. He asserts that this method gives better results than any that has thus far been tried in epilepsy. In all cases, the severity and frequency of the attacks are diminished, and a prolonged course of treatment promises to produce permanent cures. He gave sodium bromide in doses of from 2.0 to 3.0 grammes daily, and cerebral extract in tablets containing from 0.2 to 0.3 grammes (3 to 5 grains), two tablets being taken daily. He did not observe any untoward effects in any case.

A Contribution to the Biology of the Blood. By Dr. V. F. Orlovsky.

Letters to the Editor.

THE EXCLUSION OF CONSUMPTIVE IMMIGRANTS.

16 WEST NINETY-FIFTH STREET,
NEW YORK, December 4, 1901.

To the Editor of the New York Medical Journal:

Sir: On the strength of a declaration by the Surgeon-General of the United States Marine-Hospital Service that pulmonary tuberculosis was a dangerous contagious disease, the Superintendent of Immigration issued in last June an order that in future all immigrants with tuberculosis of the lungs must be debarred from all ports in the United States, whether the aliens be passengers of the first or second cabin, or of the steerage.

It has been amply demonstrated that the germ alone is a direct cause of tuberculosis. The bacilli are usually contained in the expectorations and very rarely in the muscular or osseous tissue. Therefore, the contact *per se* of a consumptive individual does not transmit the disease, and pulmonary tuberculosis is not a contagious, but only a communicable malady. In his recent London address, Koch, the discoverer of a tubercle bacillus, said: "A consumptive who coughs out tubercle bacilli is not necessarily a source of infection on that account, so long as he takes care that his sputum is properly removed and rendered innocuous." Professor Herman M. Biggs, in the circular issued through the New York Health Department, uses almost the same phraseology. The action of the Treasury Department in regard to tuberculous immigrants—not paupers—has been pronounced by Dr. Biggs as unscientific, unwise, unnecessary, and inhuman. Dr. T. Mitchell Prudden, professor of pathology and bacteriology at the College of Physicians and Surgeons, has declared that pulmonary tuberculosis is a communicable, but not a contagious disease. In your own journal, you have declared your convictions "that the United States Bureau of Immigration, if it has really determined upon the course of indiscriminately excluding consumptive immigrants from the country, has been ill-advised." Other medical journals have taken the same stand upon this question.

One unfortunate result of the attitude of the government on this question has been the needless alarm among the laity of the fear of contagion, which has resulted in many instances of the infliction of great hardships upon tuberculosis patients. The case of Thomas P. Boden, the consumptive Irish immigrant, will, it is said, be carried to the Supreme Court, and it is to be hoped that the wise judges of this august body may view the subject in all its aspects and decide it in the light of our present knowledge, which makes the consumptive not a hopelessly ill individual, afflicted with a dangerously contagious disease, whose contact we have to fear, but which declares him only suffering from a communicable and at the same time easily preventable, and, in many instances, very curable disease.

S. A. KNOPF.

A CONVENIENT FORM OF COAPTATION SPLINT.

KINDERHOOK, ILL., September 26, 1901.

To the Editor of the New York Medical Journal:

SIR: I send you to-day by mail a model of a splint which I have contrived and have used to some extent with good results, thinking that perhaps, by its simplicity, durability, and range of usefulness it may be of some benefit and use to other members of the profession.

It consists, as you see by the model, of a strip of ordinary unbleached muslin long enough to encircle the limb, doubled and sewed into pockets into which strips of light wood are inserted. It can be properly applied to almost any fracture of the extremities. It can be made in less time than it takes us country practitioners to find boards and pad them. It can be made by the yard and rolled up and carried in the emergency bag. If it is too wide, it can be cut off in a moment; if too long, remove the wood and lap the muslin or cut it off. To apply it, roll it out flat, roll the cotton on it, place it around the injured limb, and buckle a strap an inch and a half or two inches from each end.

No bandage (to become loose and allow splints to slip) is necessary. It is always in place.

As the swelling increases or diminishes, tighten or loosen the straps (which should have roller buskles on them). This is a great deal less-trouble than removing and replacing a bandage, which necessitates a great deal of trouble to the physician and discomfort for the patient. This splint may also be used in compound fractures by simply removing the middle of the piece or pieces of wood over the wound and cutting a corresponding opening in the muslin, pasting down the edges around the wound with collodion.

C. J. GOSE, M. D.

IODINE IN ACUTE THROAT AFFECTIONS.

LITTLETON, N. C., November 7, 1901.

To the Editor of the New York Medical Journal:

SIR: Regarding the action of tincture of iodine in acute amygdalitis, as set forth by Dr. Samuel Floersheim and Dr. George Gross, I will state that for ten years I have been using tincture of iodine in all forms of angina, though not in the pure state, but diluted with glycerin and water, and I have yet to record a case in which, as they state, its beneficial local action was not prompt and very marked. During my attendance at the New York Polyclinic, in 1891, the formula was given me by Professor Seibert, and he was more than enthusiastic in its praise. It is as follows:

R Tincture of iodine..... 1 fluid drachm;
Potassium iodide..... 15 grains;
Carbolic acid..... 10 minims;
Glycerin..... ½ fluid ounce;
Water, enough to make.... 4 fluid ounces.

M. The patient is to spray the throat every hour in mild, and every one half hour in severe cases.

The tincture of iodine is, as you can readily see, the prominent ingredient, the carbolic acid acting as an anæsthetic.

It is my habit to preface the treatment with a cleansing spray of hydrogen dioxide and to use the above-mentioned solution thoroughly. I believe the pure tincture of iodine to be too severe for many sensitive throats; the solution mentioned obviates irritation, though still retaining its specific virtues. The relief in many cases is instantaneous, continuing until a permanent cure is effected. To those unacquainted with this formula I bespeak a trial at their hands, feeling assured it will not disappoint them.

B. RAY BROWNING, M. D.

Book Notices.

Sexual Hygiene. Compiled from Books, Articles, and Documents, many not heretofore published. By the Editorial Staff of the *Alkaloidal Clinic*. Chicago: Clinic Publishing Company, 1901. Pp. 7 to 269.

A considerable portion of the substance of this book has already appeared in the *Alkaloidal Clinic*. It took its rise out of a series of papers and the discussions thereon that took place at the Physicians' Club of Chicago beginning toward the end of November, 1898. The publication of these papers in the before-named journal led to a considerable number of letters, articles, and editorial comments, and these, systematized and welded together into a coherent whole, together with the addition of some fresh matter, constitute the book under consideration. The tenor of the work may be gathered from the titles of some of the chapters, *e. g.*, Sexual Frauds, Sexual Excess, The Effect of Coitus during Pregnancy and Lactation, Sex Problems in Education, Woman Sexually, Continence, Masturbation, Frequency of Intercourse, Prevention of Conception, Married Courtship, Artificial Fecundation, Management of Pregnancy, Determination of Sex, Restriction of Marriage, etc.

It will thus be seen that the book covers a wide field of subjects the importance of which cannot reasonably be denied. We have more than once expressed the opinion that a wider enlightenment on sexual matters and problems would make for a higher moral tone. There is in the following words much that most experienced practitioners can confirm. Replying to the objection that "with decent people sexual matters will regulate themselves," the writer says: "Our personal experience as a practitioner of medicine extends over more than a quarter of a century. The secrets of hundreds of families have been placed in our keeping. The causes underlying hundreds of cases of serious family disagreements, estrangement of husband and wife, divorce, inebriety, drug habits, adultery, desertion, suicide, and madness, have been known to us, and often to us alone. And we say emphatically that in the vast majority of these cases sexual incompatibility has been the essential difficulty. Do these things regulate themselves? Yes, but in a manner contrary to the laws of God and man; in a way that society winks at, closes its eyes upon unless it is compelled to see, when it damns perpetrators of open wrong, and goes on winking at their more fortunate fellow-sinners who are not found out."

So much for the *raison d'être* of the book. As to the manner in which its purpose is carried out, while there is much in it which will find opponents, it certainly presents a broad view of the entire subject, and that with a frank discussion from a practical standpoint. It contains much valuable information which the married ought to possess, and which should come to them from the family physician as the circumstances call for it. There is much wisdom in the remark (p. 266) "No one man or woman can be taken as a noun for another. Each is a law to him or herself." The physician should be prepared and equipped from a wide knowledge of the ramifications of this subject, to recognize the often unsuspected source of physical, psychical, emotional, marital, or social trouble, and to select in this, as in other fields of medicine, the remedy, of whatever character, appropriate to the case. It is expressly stated that "this book is written for doctors, and for no one else." It will, we think, prove of service to many a practitioner, and aid him in fulfilling his functions as a family adviser. As regards its style, there is a considerable amount of careless writing evident, and if it reaches another edition, which we think both likely and desirable, we would suggest a thorough revision from the literary standpoint.

Practice of Medicine. By Eminent Medical Specialists and Authorities. Edited by GEORGE ALEXANDER GIBSON, M. D., D. Sc., F. R. C. P. Ed., Physician to the Royal Infirmary, Edinburgh. Volume I. Pp. xvi-824. Volume II. xvi-617. Philadelphia: J. B. Lippincott Company. Edinburgh and London: Young J. Pentland, 1901.

The ordinary objections to a variorum book are the unequal treatment of the various topics, the overlapping of subjects, frequent repetitions of unimportant data, and the variety of opinions, the last a serious fault in a work which is to serve as a text-book for students. This work presents these faults to an unusual degree. On this account its avowed purpose as a text-book on the practice of medicine would tend to diminish its value. The reviewer does not regard this work as fulfilling any of the desirable features of a text-book, for the reasons above given.

It is true that some of the topics are well presented, with the facts condensed and put forth in a pleasing manner. Many of the articles are treated in a slipshod manner, lacking detailed information and not being brought up to date. One of the best chapters in the book, if not the best, is the pathological introduction on the General Pathology of Disease, which was the work of the late lamented Professor Kanthack, whose early death lost to English medicine a student who would have become one of her greatest lights. The completion of the chapter, unfortunately was interrupted by his death and was accomplished by Professor Sims Woodhead, whose work in this article leaves little to be desired. The articles by Dr. Patrick Manson on tropical diseases, especially the one on malaria and malarial diseases, are very good; they are short, give the most salient and important facts, and omit nothing of importance.

It would be sad, indeed, if a work written by so many eminent English physicians did not present

some meritorious articles. Some of the best men in Great Britain have been engaged in this work. Ashby, Lauder Brunton, Gowers, Hector Mackenzie, Patrick Manson, Sidney Martin, and Frederick Taylor are a few who stand preeminent. Notwithstanding this array of talent, the work is disappointing.

Die Serum-, Bakterientoxin- und Organ-Präparate. Ihre Darstellung, Wirkungsweise, und Anwendung. Für Chemiker, Apotheker, Aerzte, Bakteriologen, etc. Von Dr. pharm. MAX VON WALDHEIM. Wien: A. Hartleben, 1901. Pp. viii-404.

This manual treats of the history, action, methods of preparation, and uses of the various toxins, antitoxins, and organic therapeutic agents that have been introduced into medical and veterinary practice since the times of Pasteur, Brown-Séquard, and Behring. It is intended primarily for the use of pharmacists and chemists, as a guide to the preparation of the various remedies, and as a general textbook on the subjects of opotherapy and orrhoterapy.

The first part deals with the toxins and antitoxins, the subjects being arranged alphabetically, according to the name of the disease, for which the remedies are offered as specifics. A short and rather elementary introduction treats of the general theories of immunity and of the action of antitoxic serums. The chapters on diphtheria, streptococcus infection, and tetanus are especially complete. Those on tuberculosis and on malignant tumors are good *résumés* of what has been done up to the present time in the way of orrhoterapy in these diseases. The second part deals with the opotherapeutic remedies.

As regards the matter included, the book is thoroughly modern, and it will be most useful, we think, to the physician who wishes to read a general, comprehensive review of the whole subject of opotherapy and orrhoterapy.

The treatment of the themes shows a thoroughness and a brevity that deserve to be commended. The typography is, unfortunately, Gothic, to conform to the style of the other volumes of the library of chemical technology issued by Hartleben. A copious index of authors and one of subjects are appended, but we note with regret that bibliographical references are not given everywhere, and that there are whole sections treating of some particular remedy that do not contain any such references.

The Æstivo-autumnal (Remittent) Malarial Fevers.

By CHARLES F. CRAIG, M. D. (Yale), Pathologist and Bacteriologist to the United States Army General Hospital, Presidio of San Francisco, etc. Illustrated by Two Colored Plates and Twenty-one Clinical Charts. New York: William Wood & Company, 1901. Pp. ix-221.

Ever since Ross showed that the mosquito was the agent which introduced the sporozoa first described by Laveran as inhabiting the red blood cells of man suffering from malarial fever, great attention has been paid to malarial diseases and to the parasite producing them. Craig, in this book, directs his attention to the æstivo-autumnal variety of

malarial infection (remittent malarial fevers). While he gives us nothing new, his experiences as an assistant army surgeon at Camp Chickamauga gave him a mass of material for research and investigation. This has been partly utilized in the preparation of the book.

Diseases of the Intestines. By Dr. I. BOAS, Specialist for Gastro-intestinal Diseases in Berlin. Authorized Translation from the First German Edition, with Special Additions by SEYMOUR BASCH, M. D., New York City. With Forty-seven Illustrations. New York: D. Appleton & Company, 1901. Pp. xii-562.

Little by little the domain of internal medicine is encroached upon by investigators who have confined their attention to diseases of a single viscus. The kidneys, the stomach, the liver, and now the intestines have had their turn. Since the publication in German of Boas's work, and the English translation which is the subject of this notice, other publications on the same subject have rapidly been following. Boas's work has received so many commendatory reviews at the hands of our German contemporaries, and the work has become so well known by German practitioners, that it is no wonder that an English translation was forthcoming. Dr. Seymour Basch, the translator, deserves credit for placing this excellent work in the hands of those who are unable to read the original. The translation leaves nothing to be desired. It is a pleasure to be able occasionally to read a translation that is clear, that conveys the author's meaning, that does not contain involved and obscure sentences, and that presents good English. In all these respects Dr. Basch has succeeded.

BOOKS, ETC., RECEIVED.

An Introduction to Chemical Analysis for Students of Medicine, Pharmacy, and Dentistry. By Elbert W. Rockwood, M. A., M. D., Professor of Chemistry and Toxicology in the College of Medicine, University of Iowa, etc. Illustrated. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. vii-9 to 255. (Price, \$1.50.)

Phototherapy. By Professor Niels R. Finsen, Copenhagen. Translated from the German Edition and with an Appendix on the Light Treatment of Lupus by James H. Sequeira, M. D. Lond., M. R. C. P., Dermatological Assistant and Medical Officer in Charge of the Light Department at the London Hospital, etc. London: Edward Arnold, 1901. Pp. iv-79.

A Practical Guide to the Administration of Anæsthetics. By R. J. Probyn-Williams, M. D., Senior Anæsthetist and Instructor in Anæsthetics at the London Hospital, etc. London, New York, and Bombay: Longmans, Green & Company, 1901. Pp. 211.

Sémiologie pratique des poumons et de la plèvre. Signes physiques, inspection, palpation, percussion, auscultation. Par Henri Barbier, Médecin de l'hôpital Herold. Préface de M. le Professeur Grancher. Avec 20 figures noires et coloriées. Paris: J. B. Baillière et fils, 1902. Pp. xi-252.

Transactions of the American Surgical Association. Volume XIX.

Transactions of the Medical Society of the State of West Virginia, held in Grafton, May 22, 23, and 24, 1901.

Lamarck, the Founder of Evolution. His Life and Work. With Translations of his Writings on Organic Evolution. By Alpheus S. Packard, M. D., LL.D., Professor of Zoology and Geology in Brown University, etc. New York: Longmans, Green & Company, 1901. Pp. xii-451.

Studies of the Internal Anatomy of the Face. By M. H. Cryer, M. D., D. D. S., Professor of Oral Surgery, Department of Dentistry, University of Pennsylvania. Philadelphia: The S. S. White Dental Manufacturing Company, 1901. Pp. xii-176.

Medical Book Lists for the Year 1901

Titles of the Principal Medical Books Published in the United States During the Year, Together With Such Announcements as Have Thus Far Been Made for the Coming Year.

Although nearly all the medical books that have been issued by American publishers during the year, as well as many others of foreign production, have already been reviewed by the NEW YORK MEDICAL JOURNAL, these reviews are so scattered throughout the different numbers of the volume as to make a collective list, such as follows, of much value to those who intend ordering books. To serve the purpose of ready reference, the lists of the several publishing houses have been arranged alphabetically according to the firm names.

D. APPLETON & CO., NEW YORK.

BERKLEY.—*A Treatise on Mental Diseases*. By HENRY J. BERKLEY, M. D., Clinical Professor of Psychiatry to Johns Hopkins University; Chief Visiting Physician to the City Insane Asylum, Baltimore. 8vo. Cloth, \$5; sheep, \$6.

BOAS.—*Diseases of the Intestines*. By DR. I. BOAS, Specialist for Gastro-intestinal Diseases in Berlin. Authorized Translation from the First German Edition, with Special Additions by SEYMOUR BASCH, M. D., New York. Prices: Cloth, \$5; sheep, \$6.

BRYANT.—*Operative Surgery*, Third Revised Edition. By JOSEPH D. BRYANT, M. D., Professor of the Principles and Practice of Surgery, Operative and Clinical Surgery, University and Bellevue Hospital Medical College; Visiting Surgeon to Bellevue and St. Vincent's Hospitals; Consulting Surgeon to the Hospital for Ruptured and Crippled, Woman's Hospital, and Manhattan State Hospital for the Insane, etc. In two octavo volumes, 1302 pages. 1576 Illustrations, 90 of which are in Color. Sold by subscription. Price, cloth, \$10.

BUTLER.—*The Diagnostics of Internal Medicine*. A Clinical Treatise upon the Recognized Principles of Medical Diagnosis, Prepared for the Use of Students and Practitioners of Medicine. By GLENTWORTH REEVE BUTLER, A. M., M. D., Chief of the Second Medical Division, Methodist Episcopal Hospital; Attending Physician to the Brooklyn Hospital; Consulting Physician to the Bushwick Central Hospital; formerly Associate Physician, Departments of Diseases of the Chest and Diseases of Children, St. Mary's Hospital, Brooklyn; Fellow of the New York Academy of Medicine; Member of the Medical Society of the County of Kings, etc. 8vo. Prices: Cloth, \$6; sheep, \$7.

CULLEN.—*Cancer of the Uterus; its Pathology, Symptomatology, Diagnosis, and Treatment*. Also *The Pathology of Diseases of the Endometrium*. By THOMAS STEPHEN CULLEN, M. B. (Toronto), Associate Professor of Gynecology in the Johns Hopkins University. Prices: Cloth, \$7.50; half morocco, \$8.50.

OSLER.—*The Principles and Practice of Medicine*. Designed for the Use of Practitioners and Students of Medicine. By WILLIAM OSLER, M. D., Fellow of the Royal College of Physicians, London; Professor of Medicine in the Johns Hopkins University and Physician-in-Chief to the Johns Hopkins Hospital, Baltimore; formerly Professor of the Institutes of Medicine, McGill University, Montreal, and Professor of Clinical Medicine in the University of Pennsylvania, Philadelphia. Fourth Edition, thoroughly Revised, Rewritten, Reset, Enlarged, and brought up to date in all departments. Cloth, \$5.50; sheep, \$6.50; half morocco, \$7.

REED.—*A Text-book of Gynecology*. Edited by CHARLES A. L. REED, A. M., M. D., Gynecologist and Lecturer on Diseases of Women at the Cincinnati Hospital; President of the American Medical Association (1900-1901); Fellow of the American Association of Obstetricians and Gynecologists; Fellow of the British Gynecological Society; Corresponding Member of the National Academy of Medicine of Peru, etc. 8vo. Cloth, \$5; sheep, \$6.

ROGER.—*Introduction to the Study of Medicine*. By G. H. ROGER, Professor Extraordinary in the Faculty of Medicine of Paris; Member of the Biological Society; Physician to the Hospital of Porte D'Aubervilliers. Authorized Translation by M. S. GABRIEL, M. D. With Additions by the Author. 8vo. Cloth, \$5; sheep, \$6.

SHOEMAKER.—*A Practical Treatise on Diseases of the Skin*. By JOHN V. SHOEMAKER, M. D., LL. D., Professor of Skin and Venereal Diseases in the Medical-chirurgical College and Hospital of Philadelphia; Physician to the Philadelphia Hospital for Diseases of the Skin; Member of the American Academy of Medicine and of the British Medical Association. Prices: Cloth, \$5; sheep, \$6. 8vo.

SHURLEY.—*The Diseases of the Nose and Throat*. By ERNEST L. SHURLEY, M. D., Vice-president and Professor of Laryngology and Clinical Medicine, Detroit College of Medicine; Laryngologist and late Chief of Staff, Harper Hospital; Consulting Laryngologist and Chief of Laryngological Clinic of St. Mary's Hospital, etc. 8vo. Cloth, \$5; sheep, \$6.

STRÜMPPELL.—*A Text-book of Medicine for Students and Practitioners*. By DR. ADOLF STRÜMPPELL, Professor and Director of the Medical Clinique at the University of Erlangen. Third Revised American Edition. Translated by Permission and thoroughly Revised, from the Thirteenth Revised and Enlarged German Edition, by HERMAN F. VICKERY, A. B., M. D., Instructor in Clinical Medicine, Harvard University; Visiting Physician to the Massachusetts General Hospital; and PHILIP COOMBS KNAPP, A. M., M. D., ex-President of the American Neurological Association; Clinical Instructor in Diseases of the Nervous System, Harvard University, etc. With Editorial Notes by FREDERICK C. SHATTUCK, A. M., M. D., Jackson Professor of Clinical Medicine, Harvard University, etc. With 185 Illustrations in the Text and 1 Plate. Prices: Cloth, \$6; sheep, \$7.

TILLMANN.—*The Principles of Surgery, Surgical Pathology, and Regional Surgery*, in three volumes. By DR. HERMANN TILLMANN, Professor in the University of Leipsic. Translated by BENJAMIN T. TILTON, M. D. Edited by LEWIS A. STIMSON, M. D., Professor of Surgery in the New York University. A New Revised Edition of Volume I. Cloth, \$5; sheep, \$6 per volume.

In Preparation and Soon to Be Issued :

- ALBERT.—*Surgical Diagnosis*. By EDUARD ALBERT, M. D., Professor of Surgery at the University of Vienna. Translated by ROBERT T. FRANK, M. D., New York.
- BABCOCK.—*Diseases of the Heart and Lungs*. By ROBERT HALL BABCOCK, M. D., Professor of Clinical Medicine and Diseases of the Chest, College of Physicians and Surgeons, Chicago.
- BARTHOLOW.—*A Practical Treatise on Materia Medica and Therapeutics*. New, Eleventh, Revised Edition. By ROBERTS BARTHOLOW, M. D., Professor Emeritus of Materia Medica, General Therapeutics, and Hygiene in the Jefferson Medical College of Philadelphia.
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Miscellany.

A Discussion on Poisoning by Carbon Monoxide.—At the regular meeting of the Baltimore Medical and Surgical Association, on November 11, 1901, Dr. Charles G. Hill in the chair, Dr. E. L. Whitney read a Report of Five Cases of Poisoning by Carbon Monoxide. Dr. Whitney said that these cases were of interest from the standpoint of the difficulties in the diagnosis. The entire family was discovered in a state of unconsciousness and physicians were hurriedly summoned; on account of the contracted pupils opium poisoning was suspected and atropine was given. Ptomaine poisoning and also gas poisoning were later suspected. The examination of the blood by spectroscopic and chemical tests showed that they were cases of carbon monoxide poisoning. The father of the family, after regaining consciousness, related facts which confirmed the diagnosis of carbon monoxide. He afterward complained, as did also one of the children, of numbness and anæsthesia in different parts of the body. The rapid disappearance of albumin and sugar from the urine of different members of the family, eliminated these as causative agents in these cases. The cause of sugar in the urine in such cases was not definitely known, and different theories had been advanced. All of these five cases recovered promptly. There was taken with an aseptic hypodermic syringe from the brachial a small quantity of blood, which showed between the D and E lines a wider coloring, thus indicating a reduced amount of hæmoglobin. There was a constant variance in its character. Dr. Whitney showed the seal test in a sterilized tube. The blood, of course, was arterial. In these cases the police did not notice gas poisoning. A dog also, under test, being well before, showed signs of such poison. Partial suffocation, he said, was presumed to be the cause in these cases by Hoppe-Seyler, while Minkowski declared it traceable to disturbances of the liver. The theory of muscular chemistry in the loss of ability to handle sugar and the excess of sugar in the urine were briefly referred to by Dr. Whitney. The anæmia in these cases was due to deficient oxidation.

Dr. Charles G. Hill said that it was interesting to note that the man showed albumin in the urine while he also showed sugar. From observation, he was led to believe that albuminuria was due primarily to changes in the blood, the kidney lesions being subsequent. Had these blood changes continued they would have been followed by structural changes in the renal organs. Typical cases of diabetes, Dr. Hill believed, were traceable to structural changes in the liver. These patients he treated with thyroids and purified bile, and gave them fatty substances with a moderate restriction of starchy foods. In reference to Dr. Whitney's cases, Dr. Hill said that such cases might have caused serious criminal charges. Dr. Hill recalled a case of carbon-monoxide poisoning in the country, where children suffered from a Christmas tree taking fire. He also mentioned a case of diabetic gangrene that was re-

lieved by thyroids. Also a case of transient glycosuria that, after a short treatment, proved acceptable to a life insurance company.

Dr. David Streett said that, in gas poisoning, all complained of headache, vertigo, and dizziness. A soft pulse, such as was described in yellow fever, was observed. In the fatal cases the face was flushed and there were stertorous breathing and rapid respiration. Chlorosis and anæmia were no doubt caused by gas poisoning. The coal stove was noticed often to cause these phenomena. A habit of inhaling gas existed in a patient treated by Dr. Streett, a young woman who enjoyed this rare practice and who was decidedly chlorotic.

Dr. C. Urban Smith said that in these cases the treatment must be on general principles. Of two cases he had treated, one with a cylinder of oxygen, the results were poor, and he used stimulants; the second was a worse case, and he had used the intravenous injections of salt solution with good results. He practised blood-letting to the extent of at least twelve ounces. Blood pressure was markedly increased after the salt injections. The patient revived in twenty minutes and the blood pressure was increased in five minutes, and in an hour patient was conscious.

Dr. J. I. Pennington said that about twenty years ago he saw a case of gas poisoning in a young man who had been exposed to it for six hours. Oxygen treatment was employed, but to no avail. Dr. Pennington asked if any of the members had had experience with the Kroman treatment with nitro-glycerin.

Dr. J. M. H. Rowland reported a case as follows: On arriving he found the room full of gas, the man unconscious. The man was suffering from narcosis and his respirations were nine to the minute, falling to five, and then to four, or even three. Stimulants, strychnine, digitalis and aqua ammoniæ were administered, and, when these failed, the hospital corps assisted in endeavoring to establish artificial respiration. The patient recovered. Cold cloths, slapping on the face with ice cloths, and the application of ice to the chest were also used with good results. In another case Dr. Rowland had noticed unusual excitation, possibly due to the strychnine administered. Dr. Rowland quoted Dr. D. Streett as saying that œdema of the lungs frequently, and pneumonia sometimes, followed in these cases.

Dr. J. T. King urged great care in diagnosis. It was easy to diagnosticate a case where we went into a room and smelled gas and found the patient unconscious. Dr. King had never seen a fatal case. He used nitro-glycerin, strychnine and artificial respiration. In four cases that he reported, recoveries were due to employment of atmospheric air.

Dr. David Streett said that it was remarkable how quickly some persons became narcotized by gas, and how slowly others.

Dr. Hill related a case of a boy who had inhaled gasoline and, after enjoying it, taught a number of others the practice, and soon a crowd was seen engaged in the habit.

Dr. Whitney, in closing, said that in these cases the blood was not able to carry oxygen, hence

the utility of giving it. Amyl nitrite was probably contraindicated; it produced methæmoglobin. Transfusion would do some good. The temperature in these cases was somewhat elevated, from two to three degrees.

The Value of the Medical Society to the Physician.—The *Albany Medical Annals*, for November, in an editorial on The Decadence of a Medical Society, commented on some words of Dr. Ward, in the recent debate at the Medical Society of the County of Albany, who summed up the debate in a very clear statement of the elements at work in the disintegration of the county society. The principal factors, he said, were the amplification of medical literature, and the comfort of the physician. He drew a fascinating picture of the physician at his fireside, in dressing gown and slippers, with the traditional pipe, informing himself of the abundant medical literature of the day, and contrasted this modern custom with the more irksome task of attendance upon cheerless meetings.

Upon this the *Annals* comments as follows:

"Acknowledging the gradual diminution of activity in the society during the last twenty years, we cannot believe that the younger men will permit their representative organization to perish. The fireside comforts described by Dr. Ward are the privilege of those who have attained to the 'cakes and ale' stage of their professional life, but the 'bread and butter' men, who are at the threshold of their experience, will not allow themselves to be allured away from their duty. We do not believe that the mere perusal of the literature of medicine, no matter how voluminous or how classical and exact it may be, can ever be a fair equivalent for the meeting of physicians in societies where their patients and specimens are presented and discussed and their views are criticized and perhaps disputed. The fireside reading of literature, while it has its place, is greatly enhanced by discussion. Just as in undergraduate teaching the object of the didactic lecture is to bring out the relative importance of the presented facts, so in the post-graduate work of a county society discussion answers the same purpose with regard to current literature."

Beri-beri and the Heart.—Dr. Arthur Stanley (*Journal of Tropical Medicine*, November 1st) closes a thoughtful paper with the following conclusions:

(1). Beri-beri has a marked degenerative action on the heart muscle, which frequently causes fatal circulatory failure. (2). In this respect beri-beri resembles other toxæmic diseases, such as diphtheria, influenza, and alcohol and arsenic poisoning, which often cause peripheral neuritis, and also other toxæmic diseases, such as typhoid fever, plague, and acute rheumatism, which do not, or rarely, give rise to peripheral neuritis. (3). Beri-beri and diphtheria are the diseases *par excellence* in which sudden fatal heart-failure occurs. (4). The heart muscle degeneration is not a secondary result of neuritis of the vagus. (5). The heart muscle degeneration takes place, as a rule, before skeletal muscle degeneration, and is the result probably of direct action of the toxine, and not a secondary result of nerve

change. (6). Sudden heart-failure does not indicate a sudden lesion, but rather is the result of a gradually increasing heart weakness from cardiac muscle degeneration, which may be precipitated by any sudden exertion, but more frequently is the result of the principle of "all or nothing"—the transition from "all" to nothing being necessarily rapid. (7). The cardiac physical signs in beri-beri closely resemble those found in diphtheria, and are of paramount importance in prognosis and treatment.

Koch's Views on the Bacillus Tuberculosis.—M. Arloing (*Revue de la tuberculose*, August) sums up a paper as follows: "The critical investigations relied on by Professor Koch to sustain him in declaring human tuberculosis to be essentially different from bovine are not sufficiently rigorous. The facts that I have related, apart from my experiments on the ass and the goat, show that the virulence of the *Bacillus tuberculosis* is frequently modified, even in the organism of the same kind of animal, and also that it adapts itself to this and that medium by a series of successive transmissions. Consequently, one must expect to find among the bacilli of Koch inhabiting different animals, differences and particular characters in their virulence. But these variations do not affect the fundamental properties of the bacillus, which may always reappear from one moment to another with typical intensity. M. Koch has himself made the experiment in his investigations on infection in the pig. It is furthermore astonishing that the accomplished discoverer of the *Bacillus tuberculosis* should have made a clean sweep of all these considerations, as well as of the positive results obtained by other experimenters, and that, relying upon a series of negative results, he should have affirmed absolute distinctions between the tuberculoses and thus undermined the prophylactic measures considered valuable by the majority of hygienists. Let us then fight against infection by the sputa of the phthisical, but let us not cease either to occupy ourselves, to a proper extent, with the milk and the meat from tuberculous animals."

Resection of the Uterus for Displacements.—Mauclair (*Annales de gynécologie et d'obstétrique*, Vol. lv, No. 28; *American Journal of the Medical Sciences*, November) advises the following plan of treatment for persistent anterior or posterior displacements where there is no disease of the tubes or ovaries requiring their removal. A wedge-shaped piece is removed in the median line from the anterior and posterior walls of the uterus, the portion resected being about half a centimetre in depth, and the width depending on the displacement to be corrected, and extending from the fundus to the vaginal junction. The cut surfaces are brought together with interrupted sutures placed at right angles to the long axis. Very little hæmorrhage occurs. It may be necessary to shorten the round ligaments or resect the sacral ligaments in order to assure a complete reduction of the displacement. Preliminary dilatation and curetting, and, when needed, repair of the pelvic floor should be practised in all cases.

Special Articles.

THE CORRECTION OF DEFORMITIES FOLLOWING OSTEITIS OF THE KNEE.*

By WISNER R. TOWNSEND, A. M., M. D.,

NEW YORK.

Osteitis of the knee, involving either the lower end of the femur or upper end of the tibia, or both bones, with or without destruction of the joint, is followed in about fifty per cent. of the cases by deformity. This is a most remarkable exhibit, when one realizes that in almost every case, by proper treatment during the acute stage of the disease, deformity can be prevented, and that all patients should recover with straight limbs.

How to prevent deformity has been discussed by many surgeons, and while they may differ as to details, whether in a given case to use plaster or a brace, whether to allow motion or not, whether to use a splint or to do an arthrectomy, an excision, or an amputation, yet all agree that deformity, except of very slight character, should not occur, and, when it does occur, indicates either faulty treatment or a failure on the part of the patient to follow instructions or to permit to be carried out necessary procedures which would have prevented or overcome it.

The author's views do not materially differ from those of other surgeons, and may be found in an article on Treatment of Tuberculosis of the Knee Joint, published in the *Journal of the American Medical Association*, January 12, 1901.

The amount of motion following treatment will vary. The more efficient the previous or early treatment, the greater will it be, and this is very well illustrated in the admirable monograph by Gibney on Final Results in Tubercular Osteitis of the Knee in Children, presented to the New York Academy of Medicine, January 7, 1892, and published in its transactions, Second Series, Volume IX. He traced 300 cases, and found that 40 patients died, in 14 excision, in 4 amputation was practised; the 242 remaining patients being accurately measured and the method of treatment and the result in each case shown. Under the expectant plan, the old method, sixty per cent. recovered with motion; under the fixation plan, an improvement over the old, but not equal to the new, seventy-six recovered with motion, while under the protective plan, the latest and the best, the one followed by most surgeons of to-day, ninety-five per cent. were cured with motion in the knee joint.

With more efficient treatment and the knowledge that deformity can and must be prevented, the class of cases to which reference is made in this article will be largely diminished in the future, and the final results of treatment of osteitis of the knee will show much better results.

The deformities that follow this disease or that are due to it may be classified under two headings: First, subluxation of the tibia; secondly, all other deformities, flexion, knock knee, bow legs, outward rotation of the tibia upon the femur, and genu recurvatum or anterior displacement of the tibia. All of these deformities may be present with or without ankylosis of the joint. Subluxation, more or less severe, is usually present with the other deformities. Complete luxation but rarely occurs.

Many ingenious devices have been utilized for the correction of the subluxation deformity, the best being the Goldthwait genuclast and the Billroth splints. They are efficient in the hands of one skilled in their use, but will never be popular with the general surgeon, and equally good results can usually be obtained by forcible correction under anæsthesia, pressing the tibia forward as the leg is straightened, and cutting the hamstring tendons when necessary.

For the correction of the other deformities, of which flexion is by far the most common, three methods are available. 1. Forcible correction. 2. Osteotomy, linear or cuneiform. 3. Excision.

The applications of force under anæsthesia will correct in most cases, even where fibrous ankylosis is present, and adhesions can often be broken up, which, prior to the administration of the ether or chloroform, seemed firm and apparently bony. The force should be gently applied, and in some cases partial correction only is possible, and at a subsequent time the limb can be entirely straightened. When adhesions are broken up, they usually recur, so that we get new adhesions with the limb in an improved position. Cutting of the hamstring tendons may or may not be necessary. If it is, the external should always be divided through an open incision, for fear of injury to the external popliteal nerve. It is perfectly safe to cut the internal by subcutaneous incision. After the limb is straightened, it should be held so for a considerable period of time, for the tendency to recurrence is great. The more perfect the correction, the less the danger of recurrence; so, if an ankylosed joint is broken up, one must be sure that the limb is perfectly straightened before the patient is discharged from treatment. If motion is present, the same, or even greater, care must be taken, and retentive apparatus kept on for several months.

*Read before the New York State Medical Association at its eighteenth annual meeting, October 21, 22, 23, and 24, 1901.

Where the deformity is so great that the lower leg cannot be brought into a straight line with the upper, whether ankylosis is present or not, osteotomy is preferable to an excision, except in two

by the author in an article on *The Prevention of Deformity after Excision of the Knee in Children*, and published in the *New York Medical Journal*, April 1, 1899, and need not be here discussed.

The other deformities can all be corrected by osteotomy, and, in many cases, even severe in character, a simple subcutaneous linear division of the femur above the condyles will suffice. Cuneiform osteotomy is only indicated where the deformity is extreme. Linear osteotomy should be done subcutaneously, and with the Vance osteotome. The skin wound is only as long as the blade is wide, or from one quarter to one half an inch in length. By forcing the osteotome through the skin and other tissues to the bone, the use of scalpel and an open wound are obviated, and, when the instrument is withdrawn after the bone has been chiselled

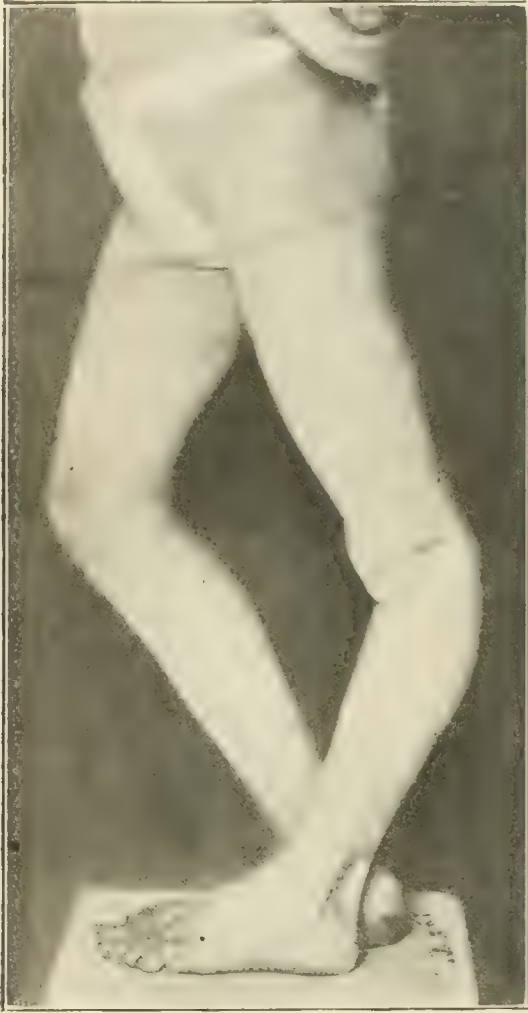


FIG. 1.—Case of Genu recurvatum.

classes of cases: First, where the subluxation is extreme; secondly, where the deformity is almost a right angle, complicated with subluxation. These cases are very exceptional, and excision is therefore rarely indicated for the correction of deformity, for the reasons that osteotomy, linear or cuneiform, is a less dangerous procedure; sacrifices less tissue, and does not interfere with the subsequent growth of the limb; produces much less shock; is not so liable to cause a relapse, as we rarely cut through the diseased tissue as we are forced to do in an excision; the healing is more rapid; the danger of sepsis much less, and the subsequent deformity is more easily prevented than after an excision.

The interference with the growth in excision, and the danger of the occurrence of flexion and other deformities have led most surgeons to abandon the operation in children. This subject was presented



FIG. 2.—The same case.

through, the small wound closes at once, and no sutures, even for the skin, are needed. The osteotome is introduced in such a manner that the external wound has its greatest length in the long axis of

the limb and after piercing the periosteum it is so turned as to cut across the bone. Cuneiform osteotomy, of course, demands an open wound and subsequent suturing of soft parts. In cases where motion exists in the knee and the deformity needs correction, osteotomy, if properly done, will relieve this and not interfere with the motion in the joint, although it has a disadvantage, in that the condyles are displaced forward to form an angle with the shaft, which condition may be overcome by a subsequent osteotomy on the tibia, or by doing this operation without the supracondyloid incision through the femur. The fact that excision destroys all future possibilities of motion should, therefore, lead to the more frequent use of osteotomy in such cases, while the results, in the correction of deformity when ankylosis exists or after excision, are extremely satisfactory.



FIG. 3.—Case of Genu Recurvatum after Operation.

Two sets of photographs and brief histories of the cases are added, to show how great a degree of deformity can be overcome by osteotomy.

CASE I.—A boy, aged sixteen years. Admitted to the Polyclinic Hospital, *February 4, 1901*, for deformity after excision of the left knee. He had a marked genu recurvatum, as shown by Figures 1



FIG. 4 The same.

and 2. Bending backward began one year after the excision, which was done at the age of twelve years. The measurements were as follows: Ra., $32\frac{1}{4}$; La., 25. Length of right femur, $18\frac{1}{2}$; left femur, $17\frac{1}{4}$; length of right tibia, 13; left tibia, $10\frac{1}{2}$. Under ether, a subcutaneous osteotomy was done above the site of the original excision wound, and the leg forcibly straightened. The osteotome was introduced from the side, and there was practically no hæmorrhage or disturbance. The after-treatment consisted of a plaster-of-Paris splint, which was left on for eight weeks, when examination showed that union had occurred. The splint was removed, and a lighter one applied and the boy was allowed to go around on crutches.

September 30, 1901, shows that the left leg has been lengthened two inches by the operation. Tibia displaced backward; no angular displacement; no motion. The patient walks well with the aid of a patten $3\frac{1}{2}$ inches high.

In this case the deformity was extreme and several who saw the case believed that it would be impossible to reduce it by simple linear osteotomy. The result speaks for itself. (See Figures 3 and 4.)

CASE II. A girl, aged fifteen years, had an excision at the age of six or seven years, and the knee began to bend several years after the operation had been performed. There was flexion deformity of ninety degrees, the limb was ankylosed; no patella; some knock knee.

May 21, 1901, at the Hospital for Ruptured and Crippled, under gas, an attempt was made by manual force to overcome the deformity, but the adhesions could not be broken up.

On *May 28th*, under gas and ether, a subcutaneous supracondyloid osteotomy was done, and the leg put up in plaster of Paris, extended to 125 degrees.

July 9th, under gas and ether, it was again put up, at 145 degrees.

October 5th there is only half an inch difference between the length of the two limbs. The leg is perfectly straight, with no signs of bending. Patient to continue wearing a light plaster cast. (See Figures 5 and 6.)



FIG. 6.—The Same after Operation.

This case presents an unusual feature, that, despite the excision and the subsequent osteotomies, there is so little difference in the length of the two limbs.

Consumptives Excluded from Liberty.—The village authorities of Liberty, N. Y., a popular summer resort in the Catskill Mountains, near which the Loomis Sanitarium is located, have enacted an ordinance providing that no building situate within the limits of the village shall be used, occupied, or maintained as a hospital, pest house, or sanitarium for the reception of public or private patients afflicted with consumption. A first violation of the offense is punishable by a fine of \$50, and for a subsequent violation there is to be a penalty in the discretion of the board, not to exceed \$100.



FIG. 5.—Case of Bent Knee after Excision of the Osseous.

August 27th, under gas and ether, a cuneiform osteotomy was done at the tubercle of the tibia, the limb put up straight, or at 180 degrees, and the knock knee deformity corrected.

Original Communications.

ON THE FEASIBILITY AND MANAGEMENT OF A HYGIENIC CURE OF PULMONARY TUBERCULOSIS OUTSIDE OF CLOSED SANATORIA.*

By CHARLES L. MINOR, M. D.,

ASHEVILLE, N. C.

The profession has so generally accepted, in theory if not in practice, the hygienic open-air treatment of pulmonary tuberculosis, that before this audience I need not champion its claims; but to those coming in daily contact with this disease it is very evident that, with a large part of the medical public, its acceptance has been one of faith without works, and that there is a crying need of making its features familiar not only to the specialist, but to the general practitioner, so that, an early diagnosis being presupposed as a *sine qua non* of success, tuberculous patients shall be able to obtain, both in our health resorts and outside them in their homes, that minute care and oversight which are essential to a cure.

Every one before me to-day can, I doubt not, recall cases where people with hectic in their cheeks and every evidence of advanced trouble have been sent off for their health with no better instructions than to live out of doors, to eat heartily, and to take plenty of exercise, and who, in a faithful attempt to carry out these nebulous and often dangerous instructions, were losing what little chance of recovery they ever had.

It is sad enough to see the heedless and disobedient doing badly through their own wilfulness, but to see those who desire to do right and have, if rightly instructed, the seriousness of purpose and determination necessary to recovery, thus neglected by their physicians, is far worse.

If we search for reasons why the tuberculous are so often neglected they are not far to seek. Pulmonary tuberculosis is a chronic disease, and chronic diseases are, unfortunately, unpopular with the profession. If there is any disease which demands of the doctor patient, persistent effort and attention to even trivial details, it is this; and the results, though excellent in properly selected cases, are slow. Yet, taken early and handled faithfully, there is no disease which better repays the time and effort expended on it, and to-day there is no chronic disease which is so curable and yields such brilliant results; and those who will give the care and time to their

tuberculous cases that they do to their typhoids and pneumonias will find them as absorbing in their interest and as hopeful in their outcome as any cases they have ever handled.

Coming to details, the causes of this neglect are various, in part the fault of the doctor, in part of the patient. Of the former, I might note a lack of interest in a disease which is too generally supposed to be incurable, a want of familiarity with the details of the treatment, or of time to attend to the cases, and often a deficiency in the teaching faculty.

Of the latter, the chief are a want of sufficient intelligence or earnestness to grasp and carry out the objects of the treatment, an unwillingness to obey instructions faithfully, or a lack of means to obtain that minimum of comforts without which, save by State aid, the tuberculous poor cannot hope to recover.

Granted that my contentions are right, it is most important to spread among the profession a knowledge of the hygienic method and a live faith in its possibilities; the truth taught by its founders and verified by so much experience must become common property, and should be taught in our medical schools and applied in every-day practice.

Granted that this method is to-day the best and most rational, if not the only, method of treating phthisis, then for the poor or for those of very moderate means the only hope lies in the opening of such institutions by the States and cities, a movement admirably begun in this country by Dr. Trudeau at his Adirondack Cottage Sanitarium. Only by State aid can the poor ever get the necessary elements for such a treatment, and I regret that it is not possible in this country to have such a compulsory workman's insurance as has in Germany led to the opening of so many sanatoria for the poor.

Object of the Paper.—But when, in writing on the subject of the hygienic and dietetic treatment, sanatorium doctors and others assume, as they do so generally, that it is impossible outside such institutions to get satisfactory results with any certainty, I must lodge a protest; for it is feasible to get the best results, the most implicit obedience, the closest supervision of the patients' lives, in carefully selected private houses, and I feel that it is time to contradict assertions which, if not denied, would be finally accepted as facts. Were these exclusive claims admitted their effect on phthisio-therapy would be harmful and only tend to discourage the general adoption of the method in private practice as impracticable outside special institutions; and since it is evident that there are not, nor are likely ever to be, enough of such establishments for the well-to-do to supply the demands of all the tuberculous in easy circumstances, those who could not be accommodated would be in a sorry plight.

*Read at the annual meeting of the American Climatological Association, Niagara Falls, June, 1901.

If by treatment in open resorts is meant the sending of patients to some place where, as so often happens, they are turned over to their unguided care of themselves and allowed to follow every whim and to neglect every precaution, and, living as they choose, throw away all their chances, then of course sanatoria with their supervised life are essential; but if, instead of comparing the results in sanatorium patients with those in people thus neglected, they are compared with cases outside of sanatoria, but properly supervised, I believe these assertions cannot be supported, and it is to a study of this question that this paper is devoted.

Here let me say that I am not combating, and would never combat, the general spread of properly managed sanatoria; no one recognizes more fully than I the great good they have accomplished, but I believe that enthusiasm over the results they have yielded has blinded their advocates to the general applicability of the methods there used, and to their infinite value in general practice. To apply them outside such institutions will, I am willing to admit, demand more work on the doctor's part to get equal results, as well as considerable intelligence in the patient; but, these granted, and neither is too much to ask, it is not only feasible, but in many cases, especially with American patients, to be preferred to a sanatorium which, despite its many advantages, has certain inherent faults more felt in this country than in Germany, where the temper of the people better fits them for sanatorium life. Indeed it is, I believe, partly because all statistics have been gathered from Germany in this matter, that the view of the indispensability of sanatoria for the successful treatment of tuberculosis pulmonum has gained such ground.

Definition of Sanatorium.—Before going further, to avoid misconception let me state that in this paper I will confess the use of the term "sanatorium for tuberculosis" to institutions like the original ones of Brehmer and Dettweiler or that of Dr. Trudeau in this country, where the outdoor rest-treatment, combined with hygiene and diet, is the chief reliance, and where other methods are used only experimentally or as adjuncts; or, to quote Walters,¹ an authority, "establishments for the open-air treatment of presumably curable cases of consumption, by hygiene and educational methods."

Requisites for a Sanatorium.—In adapting the method, then, for use in private practice, it is wise to see what are the advantages claimed for sanatoria by their most ardent advocates, and whether these conditions cannot be had outside their walls.

According to Penzoldt,² "the advantages which a well-arranged and managed sanitarium must com-

bine are, in general, the following. Favorable protected location in a pure atmosphere near mountains and woods, with ample grounds, hygienic construction of the buildings as to location of rooms, ventilation, heating, etc., good facilities for the open-air rest cure (pavilions, verandas, balconies), absolute cleanliness, especially as to expectoration, good cooking and good milk, management by a capable, energetic doctor, especially experienced in phthisiotherapy, with absolute authority over the patients, enough trained assistant physicians, sufficient practised attendants, removal of the patients from their daily surroundings, with a lightening of the sadness of separation by a kind welcome, proper amusements, and the impossibility of all excesses and the greatest possible avoidance of intercurrent diseases." Quoting again, Walters¹ says: "Sanatorium treatment is based on a careful regulation of each patient's daily life in all its hygienic and medical details. He is gradually trained to stand a life in the fresh air in all weathers, while his tendency to chill is removed by simple hydropathic applications and other common-sense precautions. The nature and amount of his daily exercise are regulated according to the weather and to his momentary state of health in an ascending scale, beginning with absolute rest in bed. His food ranges from fever diet to a rich and varied, though digestible, dietary. Strict precautions are taken to prevent all risks of infection, while the training he receives is useful, not only to himself, but to the whole community after his departure from the sanitarium. A resident medical and nursing staff assist in carrying out these daily measures and are immediately available in case of hæmoptysis, etc. They have to prevent imprudences in some cases, to encourage to perseverance in others, to strictly enforce all the essential rules while they allow sufficient personal liberty in less important matters so as to prevent the irksomeness of restraint; to suggest harmless and beneficial forms of recreation while they discourage those likely to do mischief. Mind has a great influence over bodily health, and the stimulus of hope and the encouragement which results from steady progress and sympathetic attention, will count for much in curing the patient."

Reviewing these desiderata as stated by the foremost authorities, it will be evident to those who have treated this disease that, while certain of them can be more easily attained in a closed institution, all the essential ones can be attained outside them, in private houses, only granted sufficient interest in, and attention to, the matter on the doctor's part. Certain patients will, owing to their nature, do better in closed sanatoria, others far better outside but under close supervision, and I believe that the majority of American patients will belong to the latter

¹Walters. *Sanatoria for Consumptives*, London, 1899, p. 1 and p. 11.

²Penzoldt. *Anstaltsbehandlung der Lungentuberculose*, p. 333 of Penzoldt *Stützung Handbuch der Therapieinnerer Krankheiten*, Vol. iii.

class, as a majority of the German ones do to the former. If the trouble is taken to make a study of the locality from the hygienic point of view, doctors will not find it hard to get houses with proper location, southern exposure, good construction, and proper porches, many of the best known sanatoria being only ordinary houses turned to the new use. All our health resorts and many suburban localities offer proper facilities for the open-air treatment in pure air, mountains, open country, fields, woods, and shady footpaths away from roads, and a little study of the gradients and distances will enable the doctor to plan out his patient's exercise with accuracy and effect.

Proper cooking, while in my experience, the most difficult of these desiderata to obtain, can with sufficient care always be had, not only if the patient is in his own house, but when he is in a properly selected boarding house. The landlady of the house can be readily made to realize that it is to her interest to keep the best possible table and that, if she fails in this, the patients will be placed elsewhere.

Properly supervised milk supplies are daily, I am glad to say, more common, and herds subjected to regular veterinary inspection are to be found at all our resorts, while the houses where one's patients stay will be kept clean and the sputum disposal closely watched if their owners are made to feel that their patronage will suffer if it is wanting.

Homesickness is not less evident in than out of sanatoria, and, if the patients are well located, can soon be removed if they are interested in their own cases and occupied with the work of getting well.

The chief point, however, on which is based the statement that the method cannot be carried out successfully outside such institutions, is the fact that the doctor cannot at all times be with the patient, who, therefore, it is asserted, cannot be protected from imprudences or disobedience.

An experience covering several years has, however, shown me that, if proper precautions are taken and the patient properly taught in the beginning, if proper records are kept, of which I will speak more fully later on, and if the proper relation between the patient and the doctor has been established and the confidence of the former won and his cooperation assured, this difficulty will not be felt, and an amply close watch may be kept over him without the constant presence of a mentor, which is very trying to many people.

Excesses in exercise, amusements, diet, etc., will be easily avoided if our teaching faculty and the control of our patients are what they should be. If we cannot get their confidence and cooperation, cannot teach them or control them, we should fail, even if with our patients every moment; with these, we can safely trust them out of our sight for a consider-

able length of time, knowing that they have been taught what to do and what to avoid and can be trusted to obey us and to keep a close record of everything they do.

Application in Private Practice.—Turning now to the application of the method outside of a sanatorium, there are certain variations dependent on whether we are to carry it out in the patient's home or with the added assistance of a special climate.

Where pecuniary reasons prevent the patient from seeking one of the latter, excellent results can be had, though with greater difficulty, in the patient's home if the case is not too advanced; but any one who has seen the remarkable results that can be attained in our resorts, even in severe cases, cannot doubt that climate can greatly improve the results to be attained by hygiene and diet, and will enable us to obtain results not otherwise possible.

If, however, one has to choose between treating patients in narrow circumstances in their own homes or sending them to a resort where their poverty will not enable them to get the necessary conditions of quarters, diet, and care, which are so essential, by all means let them stay at home; by changing their houses, moving to the top floor, using the roof as an outdoor sun parlor and spending the utmost possible part of their time there, by economizing in every other way, in order to be able to spend freely for good food and cookery, much can be done, provided always that their work can be relinquished, rest taken, and their lives properly supervised.

Study of Locality.—While, in our cities, the house of the patient cannot be well controlled, in a health resort the doctor's first duty is to make a careful study of all the local conditions and to familiarize himself with the houses fitted for his patient's use. Their topography must be studied so as to get sunny protected exposures with good drainage, the location and advantages of the various ones should be well known, and the housekeeper be informed of the essentials which her house must offer; the kindness, ability, and willingness of the landlady to accept suggestions are most important, perfect location and drainage not compensating for a poor table or a cheerless, untidy house.

Locating Patients.—It is most important that the patient should agree to locate himself in accordance with the doctor's advice. Strange to say, they generally seem to think that this is a matter of no medical importance, and are apt to settle themselves in some badly located house in the centre of the town before consulting him. I need hardly say that it is essential that the thickly settled central parts of a town, or even of a village, be avoided, and the patients placed in the outskirts, and that the house

chosen shall either have its own lawn and trees or be surrounded by country.

In locating a patient the company he will be thrown with needs the doctor's attention; agreeable companions have a good effect on the course of the case, and the doctor should try to see that congenial ones are obtained.

Personally I am satisfied that no patient can be properly followed in the average large hotel; the temptations are too great, the local conditions cannot be properly controlled, there is too much noise and excitement, and early hours are not possible.

They must, therefore, either have their own house or be placed in some properly managed house where a good landlady keeps things in proper shape, where there is amusement without over-excitement, and where the table and other conditions can be controlled. The doctor will find most needful and useful a list of such houses as he approves of regarding location and management, which, even though the physician does not live under the roof, offer for all practical purposes the conditions which sanatorium doctors demand.

Whether a patient will be best in his own cottage or in such a properly kept house, is a question which must be answered separately for each case, and depends largely on the temperament of the patient. Some, possibly a majority, do best under their own roof, if the family or friends who accompany them are judicious and sensible, but I find that a large number are better off in a well-managed house with other people, and away from their families. To some, the presence of others all engaged in the same pursuit is an encouragement and aid, to others it is depressing; by some, the absence of their own family is not felt, and is rather an assistance than a hindrance, while to others the presence of their dear ones is indispensable.

Here, as everywhere else in medicine, each case must be studied on its own merits, and no hard and fast rule can be made.

Arrangement of Quarters.—When the location has been settled the doctor should himself inspect the room or house and show the patient how to arrange it in accordance with the rules of hygiene. The ignorance of even educated people in these matters is deplorable, and if left to themselves they will almost surely make mistakes.

Room.—The room should, of course, face south, southeast, or southwest, and should have from 2,000 to 3,000 cubic feet of air space, though sometimes, if there are plenty of windows and an open fireplace, less can be tolerated. It had best be rectangular, as irregularly shaped rooms are bad to ventilate; and the ceiling must never be too low. An open fireplace, as much as a ventilator as a heater, is invaluable, and, save in the very coldest climates, such a

fireplace will be sufficient for warming purposes; where more heat is needed, hot water should be chosen, and in no case should a hot-air furnace-flue open into the bedroom of the pulmonary patient; its bad effects will have been noted by all who have seen much phthisis.

There should be at least two windows, and, where they can be had, French windows which open like double doors and allow full ventilation, should be chosen.

Where possible, the cracks in the floor should be filled with some good composition, that given by Pétit³ being good, while painted or kalsomined walls, which can be washed or renewed frequently, are far better than papered ones.

Some writers, pushing their fear of contagion to unnecessary extremes, as I believe, would banish all pictures and ornaments from the room, as possible places of dust lodgment and bacillary storehouses; while it is true that the patient's room is rarely used save as a sleeping place, its cheerfulness is an important factor in the case, and especially if the patient is confined to bed; and, while thick hangings cutting off light and air, nailed-down carpets and needless flummery are to be forbidden, it is not necessary to convert the room into a species of cell with four bare walls, a bed, and a chair, and an intelligent patient of decent habits can safely be allowed pictures on his walls, attractive furniture in sufficient but not superfluous amount, and pretty removable rugs which can be steamed or sunned frequently, while light washable window curtains, which can go to the laundry, add to the homelikeness of the room and its cheerfulness, and therefore improve it.

Single beds alone should be allowed, preferably of iron or brass; the persistence of the use of double beds, those relics of an unhygienic age, is a painful commentary on the ignorance of the public on sanitary matters. Mattresses should be firm, never soft, and of hair, and the bed covers should be light, but warm. The best are woolen blankets and cotton sheets; the popular comforters of cotton wadding are heavy and cannot be cleaned, and linen sheets allow of chilling. The bed head should never be allowed to be in a corner, as it is well known⁴ that air does not circulate there properly, and the bed had best be well out in the room, yet not in a direct draught from constantly open windows.

A living room is generally not needed, but, where raw, damp days are common, may at times be useful; yet it should never be so attractive as to tempt to indoor life. When used it should be kept between 58° F. and 68° F.

³ Léon Pétit. *Le Phthisique et son traitement hygiénique* Paris, 1895, p. 55.

⁴ K. G. J. *Ueber die Ventilation*, Strassburg, 1899.

Porch.—An absolutely necessary adjunct is a good wide porch or a good summer house in the yard, well protected from winds and with southern exposure. If it opens from the patient's room so that the bed can be rolled out on it, it will, during the febrile period, be advantageous, as allowing the bed to be rolled outdoors. Glazing, save on the most exposed side, where it is necessary, turns a porch from a fresh-air rest place to a sweat box, and robs it of its usefulness. In cities, where porches are often wanting, they can be extemporized by the carpenter at no very great expense.

Cooking and Diet.—To nothing should more attention be given than to the cooking and housekeeping. The food need not be elaborate, but must be good, nourishing, and tempting, and in generous amount; but very rich food or many made dishes are not desirable.

The proportion of good red meat must be far larger than would be necessary for people in health, and there must be plenty of good milk available, subjected to veterinary testing where feasible. Outside of sanatoria, and even in them, judging from the literature, the doctor will find that the greatest difficulty is likely to lie in procuring a proper table; but with care and the cooperation of the housekeeper this can be overcome.

In the more hopeful early cases the diet does not give much trouble, for in no disease is so much freedom in diet permissible; but when dyspepsia or anorexia is present, it becomes our hardest problem and will tax all our ingenuity.

Granted no special gastric trouble, a general diet with insistence on red meat daily, milk freely but not to disgust, plenty of butter, cream, and animal fats, with plenty of green vegetables, but a limitation of starches (not from any harm in them, but because, being filling, they lessen the desire for more nourishing food and are bulky), is what we shall generally find best.

Careful cooking of the meats is most needful, and I have found great assistance from a good meat grinder, which yields a fine meat pulp free of fibre, which can be made into patties and broiled till the outside alone is brown; such patties are generally liked and easily eaten and have a high nutritive value. After trying various arrangements of the meals I have found most satisfaction from three regular meals a day, supplemented by light nourishment on waking, at 11 a. m., 4 p. m., and at bedtime; this should consist generally of milk and a raw egg or any other easily digested food, care only being taken that the patient does not take enough to destroy his appetite for the next meal.

In some cases, milk, especially at bedtime, does not agree, but generally the lack of agreement is in the patient's mind rather than his stomach, and with

care can be educated away. Dilution with Vichy, disguising it by adding a little digestible cocoa or coffee, etc., will generally be enough; certainly the tuberculous who really cannot take milk are sorely handicapped in their efforts at recovery. Where milk cannot be tolerated, one or other of the many excellent nutrient preparations on the market, with eggs, scraped beef, chicken soup, etc., can be used; and, even where milk is taken, they can be added to it with advantage, and a familiarity with the various prepared foods and concentrated nutrients on the market is of value to the doctor.

I rarely push milk beyond one quart and a half or two quarts in a day (six to eight glasses), save where no other food is taken.

Anorexia is probably the commonest difficulty one has to meet in tuberculosis, and there is little one can say on the subject; where outdoor life after a fair trial does not remove it, as it very generally does, the prognosis is made far more serious. Penzoldt's suggestion, that a poor appetite can be greatly assisted by using soft foods that need no chewing, cold food rather than hot and liquids rather than solids, will appeal to those who know from personal experience what anorexia really is; certainly no drug has in my hands proved of any but temporary benefit.

Outdoor life, variety and daintiness in the food, and, at times, frequent small meals rather than the usual three large ones, are our best simple measures. Febrile cases generally regain an appetite as the fever falls under the influence of outdoor rest; where fever persists liquid diet has to be resorted to. Gavage, as advocated by DeBove, may be useful for certain cases; when resorted to, it is generally too late to expect anything from it but pain to the patient from the tube and a slight prolongation of a life he is anxious to give up.

Intestinal indigestion and myasthenia gastrica are common and troublesome digestive conditions in the tuberculous. Their treatment cannot be gone into here, but for the sake of the patient's nutrition they need to be closely cared for.

Family Surroundings.—The control of the patient's family is often a great difficulty. At times a wife, sister, or sensible husband will be of great assistance; more generally they hinder the progress of the case and our patients are better without them if well located in a pleasant house. Where the patient is in his own house and their presence cannot be avoided, they have to be taught to be a help and not, as they so often are, a hindrance; too often they are either so depressed as to discourage the patient, or are so little aware of the seriousness of the case as to be constantly tempting him to over-exertion or imprudence.

Study of the Case.—After these matters of location, quarters, surroundings, diet, etc., are settled, the patient's physical and mental condition next demand attention, and, on the first few weeks' intercourse with him on the correctness of our estimate of his character on the impression we make on him, and on his belief in our earnestness and our interest in his case, fully as much as on our history-taking and physical examination, depends largely our success with him. No pains should be spared at this time to familiarize ourselves with his nature and win his confidence; such time and pains are never wasted, and our first few interviews should never be hurried or give the impression that we are not interested in the case, and indeed, studied rightly, every case becomes deeply interesting.

Character study ought to be of interest to every physician, and in tuberculosis is more important than in almost any other disease. The patient's psychological attitude toward his disease, his family relations, and idiosyncrasies must be known, if possible, as on them often hinges our treatment; but this is a matter that need hardly be mentioned to any intelligent doctor.

A good history is a good foundation on which to base treatment, and is too often neglected; there are many questions in phthisiology which only the study of carefully taken histories can settle, but I believe such histories are not, as yet, as universally taken as they should be. In seeking for heredity, close enough search is not always made; previous possible exposure to infection in the home, school, or business, ought to be closely inquired after; if looked for, it will often be found that history of childhood cervical adenitis or otorrhoea can be obtained, and the supposedly recent infection referred to childhood. Close search for unnoted prodromata years before the patient thought himself sick, persistent dyspepsias, anæmias, nervous prostrations, and different departures from the normal, which the patient would never pay attention to, and which the doctor has to search for closely to elicit, will, I believe, tend to show a longer duration of the incubative period than is often credited, and point to a preponderance of childhood infections which lie latent, only to manifest themselves in later life when conditions depressing vitality occur.

It is almost needless to note that the physical examination which follows must be of the most searching and accurate nature known to modern scientific medicine; no modesty or hurry should prevent an examination to the skin and the keeping of a chart of the findings, which can be filed away with the rest of the card-indexed history, and at each re-examination will be found far better for reference than our unassisted memory.

Such re-examinations, I believe, save when intercurrent trouble makes them more frequent, need not occur oftener than once a month; the progress in tuberculosis is too gradual to make more frequent ones desirable. Of course, all these things are routine matters with all careful men, but all men are not careful, and, were these things more generally attended to, results would be better.

Truth Telling.—After the examination a frank and free talk with the patient must follow, and, while many writers on the subject have declaimed against the common sin of concealing the truth and calming fears by subterfuges, this warning seems not to be sufficiently heeded, either from a mistaken kindheartedness, or from a misconception of its effect on the patient.

As has been well said, "Why should the patient who is told he is suffering from an apical catarrh and who otherwise feels well and strong, take care of himself? How shall we bring him to observe the hundreds of cautions and rules, to give up so many favorite habits and pleasures for months and years? How shall we induce him, following our advice, to temporarily give up his calling, to separate himself from home and family, to sacrifice money and time, if we do not honestly explain to him the seriousness of the case."⁵

Of course, no one would advise a blunt and brutal revelation of the whole unvarnished truth without proper explanations and preparation, but even this, much as it would shock him, is less bad than the mistaken kindness that so often leads doctors to conceal facts, a proper realization of which is so essential to the patient's recovery. Let it never be forgotten that the patient is to be our partner and co-worker on his own case, and that a partnership in which one member is ignorant of the course of the business is sure to end in failure.

Of course, in hopeless cases, concealment of the bitter truth is needed, and with nervous and timid people time must be taken to educate them to understand the situation before the whole truth is revealed; but, gone about tactfully, it will never be found hard to accomplish, and even the most rebellious will thank you for it in the long run.

In this connection I would dwell on the advantage of making a distinction in talking with the patient, and clinically, between pulmonary tuberculosis and consumption; while the latter term should be applied only to advanced cases with much destruction and generally with mixed infection is a hopeless disease, and so recognized by the public, the former, which should be reserved for uncomplicated first, and even second, stage cases, is one of the most curable of chronic diseases; and if the patient is taught this, taught that yearly many recover from

⁵Cornet. Die Tuberculose, Nothnagel's System, p. 478.

it without even knowing that they had it, as shown by many autopsies, taught that his recovery lies largely in his own hands and depends very much on his own good sense, that you are to be his teacher to show him how to live wisely, and that he must help in the treatment and not be a passive subject, he will thank you for your frankness where, had you concealed the truth from him in a cruelly mistaken kind-heartedness, he would, when in the inevitable course of events the truth was forced home on him, hate you for it.

In all teaching, but never more than here, one finds that it is necessary, if the pupil is really to learn, to give the reasons for the facts one imparts, if these facts are to be real and living and not the mere dry bones of knowledge; only thus will you get willing and intelligent obedience.

(To be concluded.)

THE TREATMENT OF ABORTION.

By HELEN HUGHES, M. D.,

MANKATO, MINN.

The subject of abortion is one of the deepest interest to the medical profession, not only on account of its great frequency and the high death rate following it, but, above all, in view of the immense number of women who trace the beginning of their shattered health to this accident.

The word abortion is used in the profession to indicate the throwing off or expulsion of the impregnated ovum at any time from conception to the complete formation of the placenta. That we should use the Latin term abortion to signify expulsion during this period, and its English equivalent, miscarriage, for the same accident from that time until the seventh month, while the term premature labor covers the condition from that period till the termination of pregnancy, is one of the mysteries of medical onomatology.

In the treatment of abortion, as in all other pathological conditions, no hard and fast rules can be laid down. Let it be granted that the operator has a thorough knowledge of anatomy and physiology and possesses "the antiseptic conscience," also a fair amount of common sense, and without doubt he will bring the case to a successful issue.

Abortion may be classified under two heads: Simple accidental abortion, and criminal abortion.

The first may be considered under the subdivisions of (1) complete and (2) incomplete abortion, according to whether the uterus is fully or partially emptied.

Before discussing the management of an actual case, a word might be said in regard to threatened abortion, the proper care of which often prevents a

grave result. Here the indications are to put the patient at rest mentally and physiologically. Mental rest can be best secured by placing the patient in bed in a quiet, darkened room and removing, as much as possible, all sources of worry from her mind, while small doses of morphine tend to give physiological rest to the irritated uterus. The patient should not resume her household duties until all symptoms have disappeared.

But if the pain persists and the dilatation and hæmorrhage increase, it soon becomes evident that the uterus is about to throw off the ovum, which in all probability is in effect dead, and any attempt to prevent its expulsion would be not only useless, but harmful. The indications now are to stimulate the uterine contractions and control the hæmorrhage, and for this double purpose we have an efficient agent in the tampon.

As to the material for tamponing, we have not always what we should like, but rather what we can get. Gauze bandages often present themselves as the most acceptable material in our grip, or absorbent cotton, or, failing this, strips of old muslin or fine sheeting can be utilized. The essentials of a tampon are, that it be of fine enough texture to form a solid pack where only a very moderate amount of pressure can be used, and that it be absolutely sterile—this latter condition can be secured by boiling in a carbolyzed solution. As a rule, a rectal enema should proceed tamponing, as fecal matter in the rectum interferes with the efficiency of the pack and adds to the distress of the patient. The vagina need not be douched unless there are special indications.

The patient is now placed on a table, or, if there is no assistance at hand, she can be laid crosswise on the bed, a drain-pad adjusted, the vulva and adjoining parts well scrubbed with soap and water, and then washed off with a creolin solution—one drachm to the quart—a piece of muslin that has been boiled in a carbolyzed solution being laid over the vulva and allowed to hang down over the pad for some distance. Through this an opening is made, a sterilized speculum inserted, the vagina cleared of clots, the cervix packed around with iodoform gauze—a piece being introduced into the cervix—and, lastly, the whole vagina filled with the prepared material. We should bear in mind that the vagina is a dilatable tube and that, if the packing is not done firmly and thoroughly, we have failed of our object; an ill-applied tampon is worse than useless. Sims's position is more favorable for applying a tampon, but requires some intelligent assistance. When the tamponing is completed, a vulvar pad is applied and kept in place by a T bandage. No further medication is required. The patient should be warned that the pains which follow are for her benefit, and that, compromising with them by the use of drugs,

will only prolong her misery. Generally speaking, the tampon should be removed when the pains cease; but, if the patient is at a distance, no evil will result from delaying its removal for twenty-four hours, when it may be necessary to re-tampon; but, usually, on withdrawing the packing, the foetus with its membranes is found in the vagina, or at least in the cervix, from which it can be easily shelled out with the finger.

After-treatment is such as anæmia following hæmorrhage would call for. The patient should remain in bed until involution has taken place. Unless a trained nurse is in attendance, the vaginal douche had better be dispensed with.

In complete abortion is the partial expulsion of the products of conception. The uterus is probably still aseptic, but contains dead material and is liable at any moment to become septic, and cause pain and hæmorrhage by provoking the uterus to contraction and at the same time preventing its closing down firmly.

The indications are to remove the offending material. Usually no anæsthetic is called for, the cervix being sufficiently dilated. The patient is prepared as for tamponing, the vagina washed out well with a hot creolin solution, a sterilized speculum introduced, the cervix exposed and brought down with a double tenaculum, and the uterus carefully and thoroughly cleaned out with a blunt curette, and then washed out with a hot creolin solution until the water returns clear of clots or fragments. Now dry out by packing with strips of iodoform gauze, which can at once be removed; pack the vagina lightly with sterilized gauze, and dress as in the preceding case. The after-treatment is symptomatic. Frequently there is restlessness and sleeplessness following, and in this case the following mixture,

R Morphine..... $\frac{1}{2}$ of a grain,
Chloral hydrate..... 10 grains,
Sodium bromide..... 10 "
Water..... 2 ounces,

M.

meets the indication very nicely. This preparation is recommended by Dr. T. G. Thomas, of New York.

Criminally induced abortion is altogether a more grave and serious condition; even without the signs of sepsis we may conclude that we are dealing with an infected case and proceed to empty the uterus as soon as possible. The great desideratum is to remove the septic material from the highly absorbing surface of the uterus with the least possible loss of time, as every moment further endangers the patient's life. If necessary dilatation should be per-

formed under anæsthesia, the patient be prepared, and the uterus be cleared out as in the preceding case. A loose pack of iodoform gauze may be left in the uterus for six or eight hours. Whether the uterine douche is repeated or a repacking done, will depend on conditions; if the odor on removing the pack is offensive and a discharge is noticeable, the douche might be repeated, followed by a liberal use of hydrogen dioxide. If the infection has passed beyond the uterus, no amount of scraping and douching will arrest its progress; the indications are then to allay pain and support the strength while the battle is fought out between the infection and the vital force of the body.

A discussion of the treatment of this condition and other complications following abortion would require a separate paper. In taking charge of such a case as the last mentioned, the physician should remember that he is dealing with criminals, no matter what their surroundings or their standing in society may be, and the usual precautions for the protection of his own character and that of the profession at large, should not be neglected.

AMYGDALOTOMY RASH.

By EDGAR A. FORSYTH, M. D.,

BUFFALO, N. Y.

A rash sometimes complicates removal of the faucial and pharyngeal tonsils, but our books on these subjects, with one exception, do not mention this complication. I have looked through quite a number of books, and find that Lennox Browne is the only one to refer to it. Moreover, in a recent article by Wyatt Wingrave, he states that he is not aware of any published references having been made to this subject, and also asserts that he has seen thirty-four cases of rash following removal of the tonsils and adenoids during the past seven years; and that, of the thirty-four cases, three proved to be scarlet fever, one diphtheria, and the remainder non-specific.

Lennox Browne says that, after removal of chronically enlarged tonsils, symptoms are occasionally exhibited of pyrexia, sympathetic albuminuria, glandular enlargement, rash, and desquamation, which are practically identical with scarlatina; and, in his article on Hypertrophy of the Pharyngeal Tonsil, he says that a traumatic fever may develop, accompanied with a surgical rash which partakes of the nature and runs the course of a roseola, not infrequently terminating in desquamation, and that on this account the term surgical scarlet fever is sometimes employed.

The rash generally appears on the second or third day after operation, and may be papular, roseolar,

or erythematous in type. It generally appears on the neck, chest, and abdomen; sometimes it extends to the face or extremities, and lasts two or three days, but in some cases it may last as long as five days. After reaching its maximum intensity it rapidly disappears. Some cases terminate in desquamation; in some there is severe itching; there is very little constitutional disturbance, and the temperature is only one or two degrees above normal.

Amygdalotomy rash has developed once in my practice after the removing of the pharyngeal tonsil in a boy eleven years old in May, 1900. The operation was done without an anæsthetic, except the painting of the pharynx with four-per-cent. solution of cocaine. The operation was done in my office, and instruments were sterilized before using them, and every precaution was taken to avoid infection. The boy experienced no bad effects from the cocaine, and, in a short time after the operation, went home; but, instead of remaining quiet as directed, he assisted his father paint a floor. The second day after operation, a rash appeared on the face, neck, and chest, and the temperature rose to slightly above normal. The family physician was called in and we thought it was scarlet fever; but in two days all symptoms had disappeared.

The physician in charge thought it might be due to the cocaine; but very little cocaine was used, and I am not able to find any cases reported in which cocaine has produced a rash similar to that of scarlet fever.

It might be possible that, while painting immediately after the operation, the boy's raw surface absorbed the turpentine or some other ingredient in the paint, but the symptoms would not lead one to think that that was the cause. I only mention it as we thought of the paint as a possible cause at the time. It certainly was due to infection of some kind.

Our books and journals mention other complications following removal of the faucial and pharyngeal tonsils, but, with the exception of Lennox Browne and Wyatt Wingrave, they all fail to mention amygdalotomy rash. It is evidently a rare complication or, at least, one that has not received the consideration it deserves.

Fined for Failure to Report a Small-pox Case.
—Dr. J. H. B. Amick, of 2308 North Thirteenth Street, Philadelphia, who is a member of the city council, has been fined \$10 and costs for failing to report to the health department a case of small-pox which came under his notice.

The Chicago Death Rate for the first week in December was 13.9 per thousand, as against 13.7 for the corresponding week of last year. The increase is attributed to la grippe.

Issues and Events of the Day.

REPORT OF THE COMMITTEE OF SEVEN OF THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK ON THE PROPHYLAXIS OF VENEREAL DISEASE IN NEW YORK CITY.*

By PRINCE A. MORROW, M. D., CHAIRMAN,

NEW YORK.

The committee of seven appointed by the president of the Medical Society of the County of New York for the "study of measures for the prophylaxis of venereal diseases," in pursuance of a resolution adopted by the society February 25, 1901, begs leave to submit the following report:

The committee organized April 4th by the election of Dr. Prince A. Morrow as chairman and Dr. L. Weiss secretary. A number of meetings have been held.

As the study of measures for reducing the morbidity and mortality from venereal diseases was the object of the committee's creation, it was thought that some definite knowledge of the magnitude and extent of the evil and the nature and causes of the conditions concerned in its spread would form the best groundwork for an intelligent study of the remedial measures to be recommended.

At the outset the committee was confronted by the fact that there were no statistics regarding the prevalence of venereal diseases in this city. The existence of this class of diseases has always been ignored by the sanitary authorities, and the amount of venereal morbidity was purely conjectural. In outlining the plan and scope of the committee's work it was decided that an investigation should be made of the prevalence of venereal diseases in both private and public practice in this city.

With this view the following circular letter was drafted and a copy sent to each of the 4,750 physicians resident in Greater New York.

NEW YORK, May 1, 1901.

DEAR DOCTOR: The committee appointed by the Medical Society of the County of New York for the study of measures for the prophylaxis of venereal diseases, deems it important to ascertain the amount of venereal morbidity in this city.

As a large number of the cases of venereal disease occurring in our civil population are treated by physicians in private practice, the committee would ask the cooperation of the entire medical profession in securing statistics bearing upon this subject.

*In addition to the chairman, the committee consisted of Dr. Ludwig Weiss (secretary), Dr. George B. Fowler (president of the society, *ex officio*), Dr. Charles W. Allen, Dr. L. Duncan Bulkley, Dr. Henry Dwight Chapin, Dr. Edward D. Fisher, and Dr. S. Adolph Knopf.

As this information is sought for solely in the interest of the public health, and does not in any way violate professional secrecy, the committee trusts that you will answer promptly the appended series of questions and forward to the secretary.

I. The number of cases of venereal disease occurring in your private practice during the past year.

- 1. Number of cases of gonorrhœa,
- 2. Number of cases of syphilis,

It is also desirable to obtain, where practicable, detailed statistics as to:

3. Cases of gonorrhœa occurring in	a. Men,	with pelvic complications.	Total
	b. Women,		
	c. Children, { Ophthalmia, Vulvovaginitis,		
4. Cases of syphilis occurring in	a. Men,	Acquired. Hereditary,	Total
	b. Women,		
	c. Children, {		
5 Also as to the origin of the infection, whether from	a. Public prostitutes,		Total
	b. Clandestine prostitutes,		
	c. Marital infection,		
	d. Hereditary infection,		
	e. Extragenital infection,		
	f. Unknown source,		

The committee is desirous of gaining the fullest possible information relative to the prevalence of *syphilis insontium*, of gonococcic infection in married life, and of venereal diseases occurring in children.

II. Judging from the results of your observation, are venereal diseases on the increase in this city?

III. What measures, in your opinion, are best adapted to limit or prevent the dissemination of venereal diseases in this city?

A circular letter was also handed to the superintendents of various dispensaries and public institutions in New York city in which this class of cases is received by the representative of the committee, asking permission to inspect their records.

To the circular letter sent to the members of the medical profession relating to the statistics of private practice 886 replies were received—nearly 20 per cent. While it was hoped that the response would be more general, this proportion was not a distinct disappointment, as the committee was fully aware that, in all attempts to gather mass statistics concerning any disease or class of diseases, a large proportion of physicians to whom such inquiries are addressed fail to reply, either from indifference to the particular subject of inquiry, from indisposition

to take the trouble to make the necessary tabulation of statistics, or from lack of interest or sympathy with the objects of the investigation.

Of the 886 replies, a few were flippant in tone, but the remainder were serious, well considered, and evidently prompted by a recognition of the importance of the committee's work and in a spirit of cordial cooperation.

Two hundred and eight of the 886 replies contained no statistics, some on the ground that the writers kept no records of their cases, others that it would involve too much trouble to go over their books for an entire year. Many of the eye, ear, and throat specialists, gynæcologists, neurologists, etc., admitted that they treated a large number of venereal cases, but it was usually for complications or late manifestations which were recorded under other titles, and that it would require too much work to identify and classify them.

It is but proper to say that most of these gentlemen, although declining to send their statistics, manifested sufficient interest in the objects of the committee's inquiry to give their views in answer to Question III, as to the best measures to prevent the dissemination of venereal diseases in this city.

The statistics of some of the reporters were excluded on account of their indefiniteness—thus a number stated that they treated, roughly speaking, from 50 to 100, or, as in one reply, from 200 to 300 cases of venereal diseases the past year—none of these was included.

It will thus be seen that 678 physicians, or *about one in seven* of those to whom the circular was addressed, forwarded statistics of venereal disease occurring in private practice. The total number of cases reported by these 678 physicians, which are duly tabulated and preserved in a permanent form for reference, is 23,196—15,996 cases of gonorrhœa and 7,200 cases of syphilis. It is to be understood that no cases of chancroid are included. While the frequency of chancroid is variable, being less in private than in public practice, the statistics of all authors in all countries estimate it from 9 to 35 per cent. of the total of venereal morbidity. Neither do these figures include the large number of the sequelæ of gonorrhœa, pelvic complications excepted—strictures, etc., and a vast deal of morbidity which is distinctly and directly of venereal origin.

Taking this aggregate of 23,196 cases reported by 678 physicians, it would seem fair to assume that an equally large proportion of cases occurred in the practice of those who sent no report, and upon this basis of calculation there would be a total of 162,372 cases of gonorrhœa and syphilis treated during the past year in private practice in this city.

Now it may be claimed, and with perfect propriety, that as many patients go from one physician to

another, they may figure more than once in the statistics, but, abstraction made of these cases, the committee believes that the aggregate of venereal morbidity in private practice in this city is much below rather than above the total indicated above. When we take into account the large number of venereals who are treated by advertising empirics, by druggists, and by secret nostrums, and the very large contingent who are not treated at all or use prescriptions given them by friends, the above figures would be easily swollen much beyond this aggregate.

The testimony of many European physicians is that from 25 to 50 per cent. of all venereal cases are treated by charlatans. In this country it is not possible to make an accurate estimate, but it is evident that the number is large. The advertising quacks in this city could not keep up expensive offices, put costly advertisements in the daily papers, print and distribute their private literature unless they derived a large revenue from this source. Again, the business of certain drug-stores is another evidence of the extent of this irregular practice. In addition to the secret nostrums, the "sure cures," the "blood purifiers" which are found upon their shelves, many druggists cauterize sores and put up injections, pills, etc., without the advice or authorization of a physician. It is not intended to assert that all druggists engage in this business, but it is well known that many of the smaller drug-stores in various parts of the city owe their chief source of revenue to this class of practice.

Upon analyzing these statistics further, it is found that under gonorrhœa are grouped 12,956 men and 1,941 women. This preponderance of males, which might be misleading, is explained by the fact that many reporters gave in their returns so many cases of gonorrhœa, so many cases of syphilis, without indicating the sex of the individual. In tabulating the statistics all such cases were placed in the column of gonorrhœa in men.

Among the 1,941 cases of gonorrhœa in women there are 724 with pelvic complications—nearly 40 per cent.

Among children there are 265 with purulent ophthalmia; 218 with vulvovaginitis; 5 with urethritis.

In the group of syphilis there are 1,657 cases of syphilis in women, 61 children with acquired syphilis (evidently due to contagion in family life), and 468 children with hereditary syphilis. This latter number is all the more significant when it is remembered that from 80 to 86 per cent. of all syphilitic pregnancies terminate fatally; each surviving child would represent 5 deaths from syphilis.

As to the origin of the infections, 8,053 were attributed to public and 3,915 to clandestine prosti-

tutes. In explanation of this marked discrepancy as compared with foreign statistics, it may be said that the line of distinction between the two classes is not sharply drawn in this country. Abroad only those subjected to registration, and therefore licensed, are termed public prostitutes; all the others are classed as clandestine.

There are reported 988 cases of marital infection (presumably, as is the rule, from husband to wife). The returns do not indicate whether these marital infections are of syphilis alone, or embrace both syphilis and gonorrhœa. If the former, they would show that of 1,657 syphilitic women, nearly 60 per cent. have received syphilis from their husbands. If they refer to both (gonorrhœa and syphilis), they would indicate that nearly 30 per cent. of all venereal infections occurring in women in private practice in this city are communicated by the husbands. It is but proper to say that, if the committee's basis of calculation is regarded as legitimate, all the figures just given should be multiplied by seven in order to express their full significance.

There are many other interesting deductions from these statistics which must be passed over from lack of space.

Of the 45 dispensaries and charitable institutions in Manhattan visited by the representatives of the committee, 9 declined permission to inspect their records, or refused to give the information sought for on the ground that they did not receive venereal cases. Of the 37 in which permission was given to inspect the books, or the desired information was furnished by the superintendent or house surgeon, there were collected records of 14,649 cases of gonorrhœa and 7,607 cases of syphilis, a total of 22,256 treated during the year.

There were 9,452 cases which were grouped as venereal diseases, but in which the records did not indicate a distinction between gonorrhœa and syphilis, swelling the list to 31,708. In addition there were found upon the records of the dispensaries 3,907 cases of chancroid, 898 cases of epididymitis and orchitis, 332 cases of cystitis, 414 cases of bubo, 261 cases of venereal warts, 172 cases of balanitis and phimosis, 523 cases of ophthalmia, 142 of ophthalmia neonatorum, 19 of vulvovaginitis in children, 195 of hereditary syphilis; 30 of the cases were caused by extragenital infection.

This by no means represents the amount of venereal disease treated in our public institutions. Although gonorrhœa and syphilis are ostensibly not treated in the general hospitals of this city, we find records of cases in the few investigated—many thousands altogether—in which the sequelæ of gonorrhœa and the late systemic manifestations of syphilis are received and treated, but entered under names which are not recognized by the laity as indi-

cating a venereal origin. Thus, in one of the eye hospitals there were 136 cases classed as purulent ophthalmia, in all of which the gonococcus had been identified by bacteriological examination as the pathogenic factor. In the same institution there were 38 cases of interstitial keratitis, indubitably of syphilitic origin, but not indicated in the record. It would seem that, in the society of diseases, venereal diseases represent the criminal classes—they are disreputable—they have a bad character and, like most criminals, when they consort with the respectable element they masquerade under an alias, so that in a public hospital it has been ordained that they appear not under their true names, but disguised under a variety of aliases which do not betray their venereal origin.

The annual reports of a few of our general hospitals record 371 cases of salpingitis, 1,762 of endometritis, 335 of pyosalpinx, 45 of salpingo-oophoritis, 48 of vulvovaginal abscess, 169 of vaginitis, 651 of stricture, 173 of gonorrhoeal rheumatism. Altogether there were collected records of 9,731 cases, including many cases in the hospitals under titles indicating their venereal origin, making a total of 41,439. The records of the hospitals also abound with cases of locomotor ataxia, rickets, cerebral and spinal accidents, monoplegias, hemiplegias, general paralysis, epilepsy, and various nervous affections in which syphilis is a common ætiological factor.

It would seem a strange perversion of the proper purposes of charitable institutions that a patient is debarred entrance into our general hospitals when the disease is acute and a source of danger to others, but he is readily admitted when suffering from the remote effects of the disease which might have been prevented by prompt treatment.

Practically the hospitals proclaim to this class of patients, "We cannot receive you when your disease is acute and curable, but when your gonorrhœa has developed into stricture, salpingitis, peritonitis, or when your syphilis has affected important central organs, the brain, the spine, the organs of special sense, you may be received, but your disease shall be baptized under another name which does not offend the refined susceptibilities of our patrons."

The committee must censure the attitude of the governing boards of our hospitals in excluding all mention of venereal diseases from their reports, as if it were a shame and a reproach. While it may be true that a respectable syphilis does not exist, they give the public the impression that it is almost as disgraceful to treat syphilis as to contract it.

It is to be regretted that these statistics could not have been more definite—giving in all cases the age, the stage of the disease or other important particulars, but the imperfect methods of recording cases in many institutions render this impossible.

While it is no part of the committee's province to discuss the system or rather lack of system in keeping records which was disclosed by an examination of the books of many of our public institutions, yet we feel that in the interest of scientific research a uniform nomenclature of venereal diseases should be adopted and a more orderly method should be introduced in keeping records.

The most obvious defects noted were, in the first place, an omission of the diagnosis, in some institutions amounting to 20 to 100 per cent., and the lack of uniformity in the terms used to designate the diseases—a veritable nosological anarchy. Thus, syphilis was variously designated as chancre, primary lesion, initial lesion, hard sore, X, XX, and XXX, (S.), lues, s. pox, "specific," spec. sp.; gonorrhœa as clap, sp. with gon. tripper., blenorragia, drop, etc. In some records there were private marks to designate the disease known only to the physician in charge. All indications as to the stage of the disease, of syphilis, whether secondary or tertiary; of gonorrhœa, whether acute or chronic, the number of the attacks, complications, and other important particulars were absent. The adoption of a uniform nomenclature of venereal diseases should be urged upon the officers of all public institutions in which these cases are treated.

It is hoped that the very defects which the statistics in this report disclose—defects which are inseparable from the confusing nomenclature employed and the imperfect methods of keeping records—will lead to a reform in this matter.

Much credit is due the representative of this committee, Dr. A. D. Mewborn, for the painstaking care with which the records of the public institutions were investigated and the thoroughly conscientious manner in which he endeavored to arrive at accurate results. That there was no disposition to swell the total it may be observed that, while the official records of the Bellevue Out-patient Department showed 7,300 cases of venereal diseases treated in the Genito-urinary Department, only 5,872 appear in this record. The Vanderbilt Clinic records 2,938 cases of venereal diseases treated in the venereal clinic, but only 2,263 are included in this report. Instances in which the diagnosis was wanting, as was not infrequently the case, were not included in this report.

It will be observed that these statistics were confined to certain institutions in the borough of Manhattan. None of the island institutions, the Penitentiary, Workhouse, Almshouse, House of Refuge, and many of the public hospitals were not visited. The institutions in Brooklyn and other boroughs were not investigated.

The only available basis for a comparative estimate of venereal morbidity in the other boroughs

appeared to be the mortality statistics of all the public institutions of Greater New York. The deaths for 1899 in the public institutions of the borough of Manhattan were 10,157. The deaths in the institutions of all the other boroughs were 5,400, a little over one half. Applying this basis of calculation, the total number of cases of venereal diseases treated in the institutions in Greater New York would foot up to a total of 62,157 cases; this, with the cases treated in private practice, would make a grand total of about 225,000 in both private and public practice.

This total the committee regards as rather under than above the actuality. The figures do not, of course, represent the sum total of venereal morbidity, but only the number of cases actually treated during the year. There is no class of diseases so serious in their direct and ultimate effects upon the health of the individual, which are so apt to remain untreated. One cause is the ignorance of their significance on the part of patients, another is the feeling of shame and fear of detection on account of the publicity inseparable from the conditions under which dispensary treatment is given.

This estimate of the fruits of prostitution in New York city takes no cognizance of its incidence among the strangers within our gates. Among the million or more of the floating population of this city—strangers who come for business or pleasure—it is well known that many are worshippers at the shrine of Venus and carry with them to their homes sad souvenirs of their sojourn in the metropolis. In this rich harvest field of infection they often reap more than they sow.¹

Whatever may be the sum total of venereal morbidity in this city, enough statistical evidence has been adduced to show that there exists in our midst a vast amount of contagious disease which constitutes a grave danger to the public health and which is absolutely ignored by our sanitary authorities. *Officially*, venereal diseases do not exist in New York city.

MORTALITY OF VENEREAL DISEASES.

Let us compare for a moment this sum of morbidity with that of the contagious diseases which do come under the official cognizance of the board of health. To take the past year, 1900, when the morbidity of contagious diseases was unusually heavy, the records show that of measles there were 12,530 cases, 816 deaths; diphtheria, 11,001 cases, 1,920

deaths; scarlet fever, 7,387 cases, 465 deaths; chicken-pox, 1,251 cases, 1 death; small-pox, 99 cases, 12 deaths; tuberculosis 8,877 cases, 8,154 deaths.

The above figures may be accepted as an approximately accurate census of contagious disease, with the exception, perhaps, of tuberculosis. Against these we have a venereal morbidity of 225,000 cases.

Now, as regards the mortality from venereal diseases, a matter which properly comes within the scope of the committee's inquiry, the vital statistics record 177 deaths from syphilis. The board of health officials readily admit that this number affords no correct indication of the mortality from this disease. From a regard for the feelings of relatives and an indisposition to brand the patient's memory with the stigma of a compromising disease, deaths from syphilis are concealed under various causes—in the adult scrofula, compression of the brain, and other innocent titles; in children, marasmus, infantile debility, convulsions, etc., in but a fraction of the cases is the real disease mentioned. But if we consult the mortuary records, we shall find that syphilis is buried under a variety of names. In many of the 1,179 cases of premature birth, the 2,136 deaths recorded as due to marasmus, the 28 deaths from hydrocephalus, etc., syphilis was doubtless a causal factor. In many of the 5,590 deaths from diseases of the nervous system, such as 50 deaths from locomotor ataxia, 341 from general paresis, 875 from softening of the brain, 232 from hemiplegia, 96 from paraplegia, 83 from aneurysm and diseases of other important organs, syphilis doubtless entered as an ætiological factor. The records of the Randall's Island Nursery Hospital show that 8 per cent. of the total deaths from all causes in the institution are due to hereditary syphilis.

Gonorrhœa is not mentioned as a cause of death, but we find in the group of "urinary diseases" and in diseases of the "organs of generation" a large number of deaths in some of which gonorrhœa might well be considered as the remote cause; thus there are recorded 141 deaths from ovarian disease, 137 from diseases of the uterus and vagina, and 27 from pelvic abscess. While the mortality bill of venereal diseases is indefinite, it is doubtless much larger than is generally supposed.

We may well ask why certain infectious diseases are elevated to the dignity of a danger to the public health and every effort made to prevent their spread, while another class of diseases, compared with which the morbidity of the former is but a molehill to a mountain, is completely ignored. To take for example small-pox, of which in the year 1899 there were 18 cases and 11 deaths, and in 1900 99 cases and 12 deaths. All the energies of the health department, with an expensive equipment, a

¹These figures do not include statistics of venereal diseases among sailors in this city, some of whom bring the infection from foreign ports, but many more contract disease in the dives and dance houses frequented by sailors about the water front and in the lower part of the city. The attending physician of the Merchants' Marine Hospital Service and Dispensary states that no fewer than 18,000 sailors inspected and treated in this service during the past year had gonorrhœa or syphilis. This was among the crews of steamships carrying no passengers. He states further: "If we add to them cases occurring on board passenger ships and sailing ships the total will be from 25,000 to 30,000 annually."

large corps of public vaccinators were employed in preventing its spread—while the great pox was allowed to feed and batten upon the community unchecked and unnoticed.

To Question II in the circular letter issued by the committee, "Judging from the results of your observation, are venereal diseases on the increase in this city?" there were 412 replies, 212 affirmative and 200 negative. It is, of course, impossible to answer this question intelligently or definitely, because there are no statistics of the prevalence of these diseases in this city at different epochs to serve as a basis of comparison. The value of the work which this committee has attempted to inaugurate can be no better illustrated than by the unfortunate absence of such data. Dr. Gross, in his paper on Syphilis in its Relation to the Public Health, declares that it would be a matter of deep interest and of the greatest possible value if we could ascertain even approximately the extent of syphilis in our cities and larger towns.

In his *History of Prostitution*, Sanger estimated that there were 9,487 cases of venereal diseases treated in the island institutions, public hospitals, and dispensaries of New York and Brooklyn and the Seaman's Retreat on Staten Island in the year 1857. His basis of calculation was that there were 3 per cent. of venereal patients treated in the dispensaries and 10 per cent. in the hospitals. These 9,487 cases, he thought, represented only two thirds of the aggregate, which he places at 14,770. He found that the statistics of the Penitentiary Hospital (now the City Hospital), Almshouse, Workhouse, and Penitentiary, showed that, of the total number admitted to these several institutions, 59½ per cent. were suffering from venereal disease at the time the inquiry was made. The Penitentiary Hospital, he states, was the only public hospital where venereal disease was confessedly treated. It may be interesting to learn that at that period, while "Bellevue Hospital is not professedly available to venereal cases, yet the medical board of that institution estimates that not far from 10 per cent. of the inmates are admitted for affections which have their origin remotely in venereal disease."

Basing his estimate upon the assumption that the number of cases of venereal disease treated in private practice quadrupled the number treated in public institutions, Sanger concluded that in the year 1857 there were 74,000 cases treated in New York. At that time the population of the city was about 700,000. In 1874 Dr. Sturgis estimated "that out of a population of 942,292, 50,450 were suffering from syphilis in New York city." In an appendix to Dr. Sanger's book, 1892, it was estimated that 100,000 persons out of a population of 1,800,000 had syphilis. The population of Greater New York at

the present time is about 3,560,000, and assuming that the rate of increase of venereal disease has kept pace with the growth of the population, there would be, on this basis of calculation, nearly 200,000 syphilitics in this city. All these estimates are, of course, purely conjectural, without any statistical basis.

(To be concluded.)

THE RESPONSIBILITY FOR THE RECENT DEATHS FOLLOWING THE USE OF DIPHTHERIA ANTITOXINE AND VACCINE VIRUS.*

By W. R. INGE DALTON, M. D.,

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Deplorable as is the loss of life which has occurred in St. Louis from the use of impure antitoxine, and in Camden and elsewhere from tetanus following vaccination, there is something that is infinitely more to be regretted and gives infinitely more cause for alarm, and that is the distrust which has been engendered of vaccination and antidiphtheritic serum, two of the greatest life-saving agencies which medical men have at their command. There is no exaggeration in the statement of the *Journal of the American Medical Association* (November 25th) that "the deaths in St. Louis sink into positive insignificance compared with the untold thousands of avoidable diphtheria deaths which will inevitably follow unless members of the medical profession demand a guaranteed purity of antitoxine and are thus enabled to speak with the confidence of definite knowledge, and so inspire the anxious parent with their own confidence." And, in regard to small-pox, the evils to be apprehended are even greater. With what ill-concealed delight will not the unfortunate accidents be made use of by the fanatical opponents of vaccination? What unscrupulous use may we not expect to have made of them by charlatans of every kind? In the light of the past history of events connected with vaccination and cognate matters, one shudders to think of the extent to which the cause of medical progress may be thus set back and of the terrible scourges that may as a consequence be inflicted on mankind.

The situation being thus grave, it is eminently fitting that a society like this should devote some time to its serious consideration, with a view to the ascertainment as far as possible of the exact causes of the different catastrophes, to the end that steps

*The substance of a paper read at a meeting of the Society of Medical Jurisprudence, December 9, 1901.

may be taken to prevent the possibility of their repetition.

Upon whom, then, must the responsibility be placed for these various fatalities? Evidently, upon one of three classes: 1. The manufacturers of antitoxine and vaccine virus. 2. The physicians. 3. The parents or guardians of the unfortunate victims.

In regard to the deaths from tetanus following the use of antitoxine at St. Louis, with which we have first to deal, the coroner's jury has spoken with no uncertain voice. "The presence of tetanus toxin in the diphtheria antitoxine," it says in its verdict, "shows negligence upon the part of the Health Department in the preparation of the said diphtheria antitoxine and in the issuance thereof." With the apportionment of blame among the different functionaries of the board we have nothing to do here. For general purposes it is sufficient to know that the board itself has been held to have been negligent, and that the finding is abundantly supported by the evidence given in the investigation. Nor was it one careless act alone or the mistake of a single individual that led to the fatalities. The whole system on which the board has been in the habit of producing antitoxine seems to have been grossly reckless and in all respects bad. Perhaps too much has been said by myself and others about the "very careful janitor" who was entrusted with the responsible duty of filling the phials. We might as well censure the poor old horse "Jim," now fortunately gone to his rest, for the part he played in supplying the impure antitoxine. The fault all too clearly was not that of subordinates of any kind. It was deeply ingrained in the system by which antitoxine was produced by such manifestly inadequate means and with such obviously incompetent help. Does the bacteriologist say that he did the best he could with the means at his command? I have no manner of doubt that he did. But is there any reason why he, as a man of science, should have consented to do it at all under such conditions? Surely, he if any one connected with the municipality knows the safeguards that have to be adopted, and that are regularly adopted by reputable manufacturing houses, in the production of antitoxines; and if he was acquainted with these safeguards, it follows as a matter of course that he was not ignorant of the fact that they were being neglected in the laboratory of which he had charge, and that he must have been fully alive to the terrible risks which were being run—the chances that were being taken—by reason of this neglect. The board itself may justly plead ignorance; but it can do so no longer, and neither can other boards of health

which are engaged in similar dangerous enterprises. They have had a rude awakening by reason of the deaths of these innocent little ones. It is to be hoped they now realize the enormous responsibility which they undertake when they establish plants for the manufacture of their own serums. If they do not, it is evident that the public does, and is prepared henceforth to hold them to a strict accountability. Were there any reason for boards of health engaging in this or other industrial pursuits in competition with regular trade, the fact might be pleaded in mitigation of its shortcomings, though it could never justify such an exaggerated combination of objectionable methods as has been shown to prevail at St. Louis. But, far from there being any reason for boards of health engaging in such industries, all considerations of an economical and sociological as well as scientific character point to the fact that it would be infinitely better for them to confine themselves to their own duties—the inspection and abatement of nuisances, the spread of information that will be of use to a community, particularly in the way of enabling it to protect itself from contagious diseases, and the testing of drugs and articles of daily consumption, such as milk, and possibly beer and other beverages. They should assist the regular physicians in promoting the public health, and call upon the ordinary purveyors of drugs to furnish them with the best available methods of fighting disease. Surely, in this way they would serve a higher purpose than by each of them setting up its own poorly equipped laboratory and seeking to compete with manufacturing houses which have millions invested in their plants, and which are compelled by a healthy regard for their own interests to adopt every conceivable precaution to prevent anything but the most perfect goods being sent out under their label.

The St. Louis Board of Health is unfortunate in this respect, that it is the first to have its careless and inefficient methods found out. But it is far from being the only sinner, and I am by no means sure that it is the worst. A peculiarly bad example was set years ago by the board of health of New York, which not only was the first to make its own antitoxine, but makes a business of selling its serum and vaccine virus in open rivalry with regular manufacturers. It has been pleaded that it is only its surplus that is thus disposed of; but inquiries made a year or two ago by a taxpayers' committee disclosed the startling fact that the surplus amounted in quantity and value to four or five times as much as was required for legitimate purposes.

Other facts made known at a public hearing at Albany showed that antitoxine of an inferior quality and pronounced not good enough for use in this city was sold at a reduced price to another board of health whose sphere of usefulness is a thousand miles away; and statements were at the same time made as to the condition of the stable where the antitoxine horses of the city are boarded which would be incredible were it not for the standing of the gentleman who made them and the fact that they were never contradicted.

We now come to the second class of cases, the deaths from tetanus following vaccination. Here we find ourselves confronted by a different set of facts, for in no case, so far as I am aware, has the virus used been that made by a board of health, and I am not sure that in any case the tetanus germs have been traced to the virus. In one instance—that of a child who died at St. Johns, N. B.—the coroner's jury expressly declared in its verdict that the tetanus was caused by the use of impure vaccine; but in nearly all the other cases the contention has been that the vaccine virus had not and could not possibly have had anything to do with the tetanus from which the children died. Those who assume this position base their conclusions partly on the failure to find tetanus germs in any of the samples of vaccine examined, but more particularly on the fact that the tetanus usually has not developed until three or four weeks after vaccination, which is considerably longer than the period of incubation generally recognized in tetanus. An editorial in the *New York Medical Journal* (November 23d) states the case thus: "This very lapse of time ought to teach them (the good people of Camden) that the tetanus was indeed 'following vaccination,' but in nowise connected with it. Most of the ills that men suffer from 'follow' vaccination, *longo intervallo*, for vaccination does not purport to protect people against anything but small-pox."

I am afraid, Mr. President, that this will not commend itself to the members of the Medical Jurisprudence Society as showing either sound logic or close reasoning. Following vaccination, but in nowise connected with it! Can it be pretended for one moment that the tetanus would have developed if there had been no vaccination? Assuredly not, for a sore of some kind—or at all events an abrasion of the skin—is necessary to afford a portal or way of entrance to the tetanus germs, and it is admitted that that portal was opened by the act of vaccination. Moreover, as has been pointed out, surgical operations of every kind have gone on as usual in the places

supposed to be infected with tetanus, and, as I have also seen suggested, the average number of persons must be presumed to have met with accidental abrasions. Yet nowhere do we hear of lockjaw following these injuries. Only where the sore has been caused by vaccination has the fatal tetanus ensued, and thus, as has been remarked, an unbroken chain of cause and effect is established between the vaccination and the deaths from tetanus.

Perhaps it is true that the tetanus germs were not conveyed in the vaccine virus, and I certainly hope it is, for one of the great advantages of glycerinated lymph as compared with the human virus formerly used has always been regarded as this, that it deprived antivaccinators of their last vestige of an excuse for saying that infections of one kind and another could be and were thus communicated. But there are various brands of vaccine virus—some of them cheaper than others, some that are not tested with the same care, some that produce more apparent signs of having proved effective, while in reality they have done nothing toward rendering the patient immune against small-pox, but have only caused a septic sore. It is incumbent upon us in a case of this kind to inquire into the quality of the vaccine that was used, the manner and particularly the degree of care with which the operation was performed, the character of the sore which developed, and the way in which it was treated.

In the Camden cases dirt and neglect are said to have been the sole causes of the disasters, not impure vaccine or faulty technics. Were this so, it would seem to dispose of the theory advanced by some people that there is a plague of tetanus in the air with a selective predilection for sores produced by particular kinds of vaccine virus. Besides, it is not the opinion that has been arrived at elsewhere where deaths have occurred from tetanus following vaccination. In Cleveland, where the first cases of the kind occurred, the conclusion arrived at, according to the local *Journal of Medicine*, was that economy had been considered entirely too much in the purchase of the vaccine for city use.

I have seen it stated that in the vast majority of cases that have occurred elsewhere the same vaccine virus was used as at Cleveland, and if that can be established I would ask the legal gentlemen present whether it does not furnish a *prima facie* case for a searching inquiry into all the circumstances connected with these numerous fatalities.

Summing up, I would offer the proposition that the lesson we have principally to learn from these catastrophes is the necessity of eliminating com-

mercialism from matters pertaining to the public health. When it is our own ills or those of our own household that we have to deal with, we make it a point to procure the best medicaments and the highest skill that can be obtained consistently with our means. It is false economy, to say nothing of the kind of humanity it is, to deal otherwise with the health of the public. Boards of health, instead of grasping eagerly at the lowest bids or trying to make cheap preparations of their own, should first of all look to the quality of the drugs and prophylactic agents they are called upon to use. Besides this, they should do whatever lies in their power to insure that none but reliable preparations shall be used within the community of whose health they have charge. They should see particularly to the enforcement of regulations for surrounding with all possible safeguards the manufacture and sale of such articles as antitoxine and vaccine virus.

In trying to bring about the safeguards indicated, and in discharging the other duties that fall naturally within their province, boards of health, it is evident, have a large field of usefulness open before them; it is equally obvious that they cannot discharge any of these duties satisfactorily so long as they engage in the manufacture and sale of antitoxines and vaccine virus or other medical or prophylactic agents, in competition with regular manufacturers. It is anomalous for a public health official as for any one else to seek to be "himself the judge and jury" so long as he may also be "the prisoner at the bar" of public opinion. To be impartial, boards of health must get out of business.

The following were among the remarks made in the discussion that followed the reading of Dr. Dalton's paper:

Dr. NATHAN E. BRILL, after reading a letter from Dr. William M. Park, of the New York board of health, apologizing for his absence and upholding the products of the board, said that personally he was neither interested in any private manufacturing company, nor connected with any board of health. He was, therefore, in a position to discuss the subject from the independent standpoint of a physician whose only object was to see that the public obtained honest products, whether they came from boards of health or private manufacturers. He thought it was safer to depend on boards of health for such products as antitoxine and vaccine virus, though he would not approve of their going into the general manufacture of drugs. In regard to the deaths from tetanus at Camden, he thought it had been established that the vaccine virus was not the source of infection, and, besides, it was admitted to have come from one of the largest private manufacturers. As to the St. Louis epidemic, on the other hand, he had not a word to

say in exculpation. The methods used there appeared to have been such as to provoke shame and horror.

Dr. I. N. LOVE, formerly of St. Louis, said that he had only been a short time in New York, and so could not speak so authoritatively as others in regard to the conditions that prevailed here. He had had some personal experience with the vaccine virus of the health board, and he had never seen any that produced more sore arms. His opinion was that it must contain an excessive number of streptococci, staphylococci, etc., which were calculated to give rise to sores that might invite tetanus, erysipelas, or septicæmia, but did not necessarily produce immunity from small-pox.

Dr. S. A. KNOPF advocated the establishment, under the auspices of the State, of a control laboratory whose duty it would be to examine and report on all such products, whether manufactured by boards of health or by private manufacturers.

Dr. L. W. ZWICHOHN remarked that we could control municipalities, but not private concerns. He approved of the suggestion that a laboratory be established for testing all sera and similar products.

Dr. DANIEL LEWIS, State commissioner of health, acknowledged the good spirit in which the reader of the paper had approached the subject, though he did not concur in all the conclusions arrived at. The public mind was in an excited state at present, and he was glad that nothing had been said to prejudice it against such valuable agencies as antitoxine and vaccine virus. He did not think that we were yet in a position to decide that the authorities at St. Louis had been guilty of criminal neglect; before coming to this conclusion we must have the final reports of the committees that were now investigating the subject. Both public authorities and private manufacturers were liable to have mistakes made in their laboratories, but when they considered the millions of cases in which vaccine virus and antitoxine were used it was marvellous that the accidents were not more numerous. He thought the fatalities that had occurred, while much to be deplored, would have a good effect in this way, that they would enforce on manufacturers the necessity of exercising greater care in the manufacture and testing of such products, and at the same time would teach the members of the medical profession a much-needed lesson—namely, that the operation of vaccination should be treated more seriously and the condition of the patient's arm carefully watched after it had been performed. The reader of the paper had properly described the functions of boards of health, and, while the State board of health had established a laboratory for the purposes of experiment and for testing the products that might be submitted to them, or that the board might buy for itself in the open market, there was no intention to engage in the sale of antitoxine, vaccine virus, or any other product. He had always had an opinion adverse to the action of the city board of health in this respect, and thought it should be discontinued.

Dr. THOMAS H. MANLEY thought the manufacture of antitoxine and vaccine virus, like that of other medical supplies, should be left to regular manufacturers.

Dr. C. A. VON RAMDOHR said it was to be hoped that vaccination would not be neglected because of the fatalities which had occurred. The results of the repeal of the compulsory law in England were already being seen in the reappearance of small-pox in epidemic form.

Dr. WILLIAM T. JENKINS, one of the health commissioners of New York, being invited by the chairman to make some remarks, said that he had come in late without knowing the subject of discussion, and therefore was not in a position to say much. He believed that the vaccine virus and antitoxine made by the board of health were as good as any others, if not the best on the market; but he confessed that he did not approve of the board's selling its products. He thought it should only make them for free distribution among the poor.

Dr. DALTON complained that the issues he had raised had been to a large extent lost sight of by speakers who gave their own personal experiences in regard to the different brands of virus, but ignored the questions of principle which were involved.

Therapeutical Notes.

The Treatment of Deciduoma Malignum.—On this subject, Dr. W. E. Fothergill says, in a critical review of the subject published in the *Medical Chronicle* for July, that the treatment "consists in the removal of the uterus, together with all other diseased structures that can be removed, as soon as the diagnosis can be made. As above mentioned, the appearance of symptoms pointing to the existence of secondary deposits is not always followed by death, and therefore must not be held to contraindicate operative treatment.

'Repeated curettings cannot be too severely deprecated. Many recorded cases are a warning against indecision and delay.' More care than ever should be used in clearing away ovuline structures from the uterus after labor and abortion. Every woman who has a hydatid mole should be carefully watched for at least a year after the event. 'This holds good particularly in the case of women between the ages of twenty and thirty years, for it is at this age that hydatid mole most often brings malignant tumor in its train.'

The Treatment of Goitre.—As the result of experience gained in forty-two cases of goitre treated by operation, Mr. A. Marmaduke Sheild (*Edinburgh Medical Journal*, July) draws the following conclusions: 1. That medical treatment should not be neglected in cases of goitre. 2. That cases of goitre which tend progressively to increase should always be submitted to operation before they grow to a huge size, and before their deep connections become complicated. 3. That the operation of removal of one lobe and the isthmus is practically always followed by atrophy of the corresponding lobe.

The operation is free from special risk, if done properly, and with the assistance of an experienced anesthetist. 4. That large, old, adherent goitres will still remain difficult and dangerous to remove, and that it is the duty of every practitioner to urge this upon his patients, and submit them to operation while removal is yet comparatively safe and easy.

For Flatulence.—The *Gazzetta medica lombarda* for September 22d quotes the following prescriptions from the *Revue générale de thérapeutique*:

1. R Bismuth salicylate,
Magnesium salicylate, } of each. . 75 grains.
Sodium benzoate,

M.

Divide into 20 powders. One before each meal.

A very efficacious measure, which acts by aiding the evacuation of the stomach, consists of the administration of excito-motors, as sodium sulphate and sodium chloride in small doses. Every morning, fasting, should be taken a teaspoonful of the following mixture:

2. R Sodium bicarbonate, } of each. . 600 grains.
Sodium sulphate,
Sodium chloride, }
Neutral sodium phosphate, } of each. . 150 "

M.

Or ipecacuanha in small doses, from two to five pastilles, each containing 15/100ths of a grain, or from three to five drops of the tincture.

Or 3.

R Tincture of ipecacuanha, }
Tincture of calumba, } of each, 75 minims.
Tincture of gentian,

M.

From fifteen to thirty drops after meals, in two or three portions, at intervals of half an hour.

Or 4.

R Tincture of calumba, } of each, 90 minims.
Compound spirit of ether, }
Tincture of star-anise, } of each, 30 "
Tincture of nux vomica,

M. Twenty drops to be taken at each meal.

According to Robin, ammonium fluoride, as employed by brewers to arrest lactic-acid fermentation, may be used:

5. R Distilled water. 9½ ounces;
Ammonium fluoride. 15 grains.

M. A dessertspoonful after each meal.

Nervines may be prescribed as clysters in neurasthenic subjects. With regimen and excito-motor remedies (*e. g.* formulæ 3 and 4) physical measures are useful. Gastric lavage, either with simple boiled water or with the addition of 750 grains of sodium sulphite, 240 grains of sodium benzoate, or 600 grains of milk of bismuth; moist warm packs, especially in nervous air-swallowing dyspeptics; hydrotherapy, and massage of the stomach.

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APPOINTMENTS BY THE MAYOR-ELECT OF
NEW YORK.

In less than a fortnight the city of New York will be under the Low régime, and several of Dr. Low's appointments to high office have already been announced. We are pleased to be able to say that they indicate great care in the selection. Some of the appointments are of particular interest to medical men, most of all perhaps that of the health commissioner. The appointee as that commissioner is Dr. Ernst J. Lederle (not a doctor of medicine, but a doctor of philosophy), who, together with the health officer of the port (a State appointee) and the police commissioner, will, under the revised charter, constitute the city's board of health. Dr. Lederle is a native of the enlarged city, having been born on Staten Island, which is now the borough of Richmond. For several years he has been the health department's chief chemist, and in that capacity he has deserved well of the community. Taught in chemistry as he was by Professor Charles F. Chandler, of Columbia University, we may well suppose that he has imbibed to a great extent the executive ideas of Professor Chandler, under whom, while Professor Chandler was the president of the board of health, he served for a number of years.

Hardly second in interest to the medical profession is the office of the street cleaning commissioner. Doubly true is this in the present instance, for the new appointee is himself a physician, Dr. John McGaw Woodbury. We need not point out the close connection between cleanliness of the streets and a normal sanitary condition of the city. In the army Dr. Woodbury has

won an enviable reputation for executive ability, a prime essential in a street cleaning commissioner, and if there was to be found a worthy successor to the lamented Colonel Waring, we have every reason to hope that it is Dr. Woodbury. Many of our people have despaired of ever finding a second Waring, but we believe Dr. Woodbury will prove himself such a man. Dr. Low is deserving of special credit for having exercised such rare discrimination in the appointment.

Close to the welfare of medical affairs in the city is the administration of the office of charities commissioner. Dr. Low's appointee, Mr. Homer Folks, has a creditable record as general superintendent of the Children's Aid Society of Pennsylvania and as secretary of the New York State Charities Aid Association, and we are glad to learn that he has announced that no small part of his efforts will be directed toward ameliorating the condition of the poor inmates of the city hospitals. It is largely in the municipal hospitals that medicine is taught and learned, and we look to Mr. Folks to facilitate these processes to the full extent of his power. As citizens, we medical men are of course interested in Dr. Low's other appointments—and, so far as they have been announced, we must say that they are admirable—but the three we have mentioned specifically will, we are sure, commend themselves particularly to the medical profession.

FREE-HAND ÆTIOLOGY.

To be untrammelled in assigning causes for morbid conditions seems to some men the unquestioning acceptance of the plausible, and not even plausibility is required by those who account for a boy's death after he has leaped from a fifth-story window by his addiction to the cigarette habit. We are impelled to this reflection by a portion of the amalgamated report of two sessions of the Bordeaux Society of Medicine and Surgery, held a few months ago (*Gazette hebdomadaire de médecine et de chirurgie*, July 11th). M. Monod presented a patient affected with enormous hypertrophy of the tongue. He was a remarkable patient, for when he was only two or three years old—so the report has it—he perceived [*a vu apparaître*] a swelling of the sub-

maxillary regions which still persisted and appeared to be due to adenolipomatosis. Three weeks before the time of the report, within the space of two days, the tongue assumed a violaceous red color and became so swollen that it protruded outside of the mouth. No traumatism was discovered or any change of the buccal mucous membrane. At the time that this swelling occurred, two of the man's children were attacked with scarlet fever, and he himself had a little fever, but no rash and no sore throat.

Now comes in the ingenious exploiter of the plausible. M. Durodié, who had observed a case of macroglossia due to the abuse of tobacco, asked if the patient was a smoker or chewer, to which M. Monod replied that the man had in times past smoked a good deal, but at the time of his affliction was smoking no more than fifteen cigarettes a day. It will be noted that, so far as the report goes, M. Durodié did not give his reasons for the deduction that in his own case the abuse of tobacco was really the cause of the lingual hypertrophy, and there may be scoffers who will fail to see the connection between a smoking habit brought down to the consumption of fifteen cigarettes a day and a swelling of the tongue so pronounced as to cause its protrusion from the mouth within the space of so short a time.

AMYGDALOTOMY RASH.

Under this title, Dr. Forsyth, in an article appearing in this issue of the *Journal* refers to a rash appearing after operation, upon the tonsils, etc., and remarks that, of all the books on throat diseases that he has consulted, only Lennox Browne's work refers to it. The subject of surgical scarlatina was well discussed some twenty years ago, and it would seem that the rash, accompanied by certain constitutional symptoms, to which Dr. Forsyth refers, is in no sense special to operations on the region of the throat, but is of the same character with that previously described under the name of surgical or traumatic scarlatina. Mr. Howse, F. R. C. S., in the *Guy's Hospital Reports*, Vol. xxiv, gives an account of surgical scarlatina, which illuminates the relation of scarlatina to ordinary septic fever; while Dr. Braxton Hicks, in the *Transactions of the Obstetrical Society*, Vol. xii, showed the relation of

specific infection to puerperal fever. Scarlatiform rashes have been shown at various times to accompany, not only surgical and puerperal fevers, but also typhoid and rheumatic fevers and occasionally small-pox, and even to have occurred after the eating of shell-fish, tomatoes, etc. The constancy with which the throat is affected in scarlet fever indicates a relation between the toxic action of that disease and the throat, pointing to it as a seat of election for the poison. It is, therefore, not unlikely that traumatisms of that region would be even more apt than those of other regions to develop the rash; but that it needs to be regarded as in any way a distinct affection is not, we think, clear, and cases such as this may fairly be considered in the light of "general principles."

THE REMUNERATION OF PRESIDENT McKINLEY'S PHYSICIANS.

Dr. Mann and the gentlemen associated with him in the conduct of the late President McKinley's case naturally and properly hesitate to render an account for their services, and their feeling in the matter has been very delicately set forth by Dr. Mann. Their remuneration should undoubtedly come from the nation, not from the McKinley family. Congress may be looked to, we presume, to appropriate a handsome sum of money for the purpose, leaving the physicians themselves to settle upon an equitable plan for its apportionment.

THE RESPONSIBILITIES OF THE OBSTETRICIAN

Manifold and great as are the responsibilities weighing upon the obstetrician, an attempt has been recently made to impose a further grievous burden upon him. In a case recently adjudicated in New York, a physician sued the husband of a patient for the remainder of his fee, which had, by arrangement, been allowed to stand over till after the confinement of the lady. The husband being very anxious for a boy, the physician naturally expressed a hope that his desires would be gratified. Fate, however, was unkind, and the result was a "mere girl;" whereupon, the liability for the remainder of the fee was repudiated, the husband seeming to hold the physician responsible for the failure to realize his expectations. Fortunately the court did not agree with him, but ordered the payment of the stipulated remuneration in full. It is bad enough to be unjustly regarded as a quack; but to be made responsible also for the waywardness of the stork is more than a long-suffering profession can be expected tamely to endure!

DANGEROUS SUBSTITUTIONS.

A case was recently tried in a Detroit court the testimony in which is convincing proof of the fact that substitution of a dangerous kind is only too prevalent, and that, moreover, those engaged in the practice on a large scale are reckless and careless to a degree difficult to conceive of. One employee of the person on trial testified that he did not know what the substance was which he was putting up in bottles, did not know which labels he should put on—all were powders—and that no one told him! The books of this gang of counterfeiters are said to show that their counterfeit goods have been sold to thousands of druggists all over the country. It therefore behooves the prescriber to make sure that his prescriptions are filled as written. When any doubt of this is felt, a sample of the medicine dispensed should be sent either to some analytical chemist or to some manufacturer, for examination as to its purity and strength.

PERMEATION PERITONITIS.

We are accustomed to thinking that the healthy intestinal wall is proof against penetration by bacteria, but that under certain abnormal conditions, which, although we designate them as "certain" in accordance with English idiom, have not been strictly defined, pathogenic germs may find their way from the interior of the intestinal tube to the peritonæum. But, in order to produce peritonitis, says Tavel (*Korrespondenzblatt für schweizer Aerzte*, 1901, No. 20; *Centralblatt für innere Medizin*, November 30th), they must be in great numbers.

THE DIAGNOSIS OF TYPHOID FEVER AND APPENDICULAR INFLAMMATION.

There are some cases of inflammatory disease of the vermiform appendix which run a slow course and are apt to be puzzling for a time to an inexperienced physician, but rarely, it seems to us, will there be need to call upon such a multiplicity of diagnostic data as are enumerated by Bayet (*Gazette des hôpitaux*, 1901, No. 85; *Centralblatt für innere Medizin*, November 30th), who dwells on the points of distinction between appendicular disease and typhoid fever. Both diseases, as he justly remarks, may have certain symptoms in common, especially tenderness in the right iliac fossa, with or without ileocæcal gurgling, tympanites, elevation of temperature during the first few days, enterocolitis, and diarrhœa. No one symptom is in itself pathognomonic, but the totality of symptoms will generally suffice for a diagnosis. Examinations of the blood, he says, are of great value. In appendicular trouble the blood clot is rich in fibrin, while in typhoid fever it is poor. The agglutination test is not much to be

depended upon, for it is not practicable before the seventh or eighth day of the disease, and the phenomenon is often still longer deferred or not well marked in cases of typhoid fever otherwise quite pronounced. Hyperleucocytosis is a valuable sign of inflammatory trouble. Nothing is said, so far as the abstract indicates, of tenderness at McBurney's point or of the board-like rigidity of the abdominal muscles in inflammation of the appendix.

THE PATHOGENY OF PUERPERAL CONVULSIONS.

This problem is still far from being satisfactorily cleared up. The limit that an excess of sodium chloride in the blood is a factor may be taken from certain experiments on rabbits made by H. Schuhmacher (*Beiträge zur Geburtshilfe und Gynäkologie*, v, 2; *Münchener medicinische Wochenschrift*, November 26th). He injected solutions of salt, urine, and liquor amnii into the jugular or femoral vein. Weak solutions of common salt, even in large quantities, did not harm. The urine of healthy women who were not pregnant caused convulsions. The urine of healthy women who were pregnant and that of lying-in women showed more or less toxicity, but the variation did not seem to depend upon any time relation to the process of parturition. The urine of puerperal women seemed the more poisonous, but the degree of its toxicity was connected with its specific gravity. The urine of women affected with nephritis gravidarum appeared no more deleterious than that of healthy pregnant women; the amount of albumin seemed to make no difference, but the degree of concentration was the determining element. The urine of women suffering with puerperal eclampsia showed itself highly poisonous, but only, the author implies, because it was a concentrated solution of sodium chloride. Serum proved much more energetic, and every intravenous injection of it endangered the animal's life. This was the case also with the liquor amnii.

THE PREVENTION OF MAMMARY ABSCESS.

Suppuration of the breast is by no means the least important of the ills that may in many instances be prevented by careful asepsis, but the asepsis must be thoroughly carried out. This is illustrated by Müry, of Basel (*Beiträge zur Geburtshilfe und Gynäkologie*, v, 1; *Centralblatt für Gynäkologie*, December 7th), who for about ten years past has kept the nipples moistened with a four-per-cent. solution of boric acid, and had the nipples and the child's mouth washed with the same solution before and after each nursing. By this simple treatment the occurrence of purulent mastitis in the Woman's Clinic of Basel has been reduced from 1.45 to 0.22 per cent. of the cases of confinement.

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general, during the week ending December 13, 1901:

Smallpox—United States.

California....	Los Angeles....	Dec. 3.....	1 case.	
Illinois....	Chicago....	Nov. 30-Dec. 7.....	2 cases.	
"	Peoria....	Nov. 1-30.....	41 cases.	
Indiana....	Evansville....	Nov. 23-Dec. 7.....	5 cases.	
Iowa....	Ottumwa....	Nov. 2-Dec. 9.....	63 cases.	
Kansas....	Wichita....	Nov. 30-Dec. 7.....	4 cases.	
Louisiana....	New Orleans....	Nov. 30-Dec. 7.....	3 cases.	
Massachusetts....	Boston....	Nov. 30-Dec. 7.....	59 cases.	14 deaths.
"	Brookline....	Nov. 30-Dec. 7.....	2 cases.	
"	Cambridge....	Nov. 30-Dec. 7.....	5 cases.	1 death.
"	Chelsea....	Nov. 30-Dec. 7.....	2 cases.	
"	Gloster....	Nov. 30-Dec. 7.....	1 case.	
"	New Bedford....	Nov. 30-Dec. 7.....	2 cases.	
"	Somerville....	Nov. 23-30.....	2 cases.	
Michigan....	Grand Rapids....	Nov. 16-30.....	3 cases.	
Minnesota....	Minneapolis....	Nov. 30-Dec. 7.....	1 case.	
"	Winona....	Nov. 30-Dec. 7.....	1 case.	
Nebraska....	Omaha....	Nov. 30-Dec. 7.....	14 cases.	
New Jersey....	Camden....	Nov. 30-Dec. 7.....	6 cases.	
"	Newark....	Nov. 30-Dec. 7.....	14 cases.	7 deaths.
New York....	Buffalo....	Nov. 23-Dec. 4.....	39 cases.	
"	New York....	Nov. 30-Dec. 7.....	17 cases.	2 deaths.
Ohio....	Cincinnati....	Nov. 30-Dec. 7.....	7 cases.	
Pennsylvania....	Lebanon....	Dec. 2-9.....	3 cases.	
"	Norristown....	Nov. 23-Dec. 7.....	1 case.	
"	Philadelphia....	Nov. 23-Dec. 7.....	185 cases.	22 deaths.
Tennessee....	Memphis....	Nov. 30-Dec. 7.....	2 cases.	
Texas....	San Antonio....	Nov. 1-30.....	3 cases.	
Vermont....	Burlington....	Nov. 30-Dec. 7.....	3 cases.	
Washington....	Tacoma....	Nov. 19-26.....	4 cases.	
Wisconsin....	Greenbay....	Dec. 1-8.....	9 cases.	

Smallpox—Foreign.

Belgium....	Antwerp....	Nov. 16-23.....	7 cases.	
Brazil....	Rio de Janeiro....	Oct. 20-Nov. 3.....	153 deaths.	
Canada....				
"	Manitoba....	Nov. 16-23.....	5 cases.	
"	N. Brunswick....	Nov. 30-Dec. 7.....	17 cases.	2 deaths.
"	Nova Scotia....	Nov. 30-Dec. 7.....	8 cases.	
"	Windsor....	Nov. 30-Dec. 7.....	1 case.	
"	Quebec....	Nov. 30-Dec. 7.....	30 cases.	
Colombia....	Cartagena....	Nov. 18-24.....	5 cases.	
"	Panama....	Nov. 23-Dec. 2.....	100 cases.	
France....	Paris....	Nov. 16-23.....	9 cases.	9 deaths.
Gt. Britain....	Glasgow....	Nov. 22-29.....	1 case.	
"	London....	Nov. 9-23.....	764 cases.	44 deaths.
Cuba....	Havana....	Dec. 4.....	1 case from S. S. Alfonso XIII.	
India....	Bombay....	Nov. 5-12.....	1 death.	
"	Calcutta....	Nov. 2-9.....	2 deaths.	
"	Madras....	Nov. 2-9.....	2 deaths.	
Italy....	Naples....	Nov. 16-23.....	25 cases.	6 deaths.
Russia....	Moscow....	Nov. 9-16.....	6 cases.	
"	St. Petersburg....	Nov. 9-16.....	6 cases.	1 death.
"	Odessa....	Nov. 16-23.....	5 cases.	1 death.
"	Warsaw....	Nov. 9-30.....	3 cases.	
Spain....	Barcelona....	Nov. 16-30.....	5 deaths.	

Yellow Fever.

Brazil....	Rio de Janeiro....	Oct. 20-Nov. 10.....	3 deaths.	
Cuba....	Havana....	Nov. 20-Dec. 3.....	1 case from Br. S. S. Ardanmohr.	
"			1 death from Sp. S. S. Buenos Aires.	
Mexico....	Merida....	Nov. 9-16.....	3 deaths.	
"	Vera Cruz....	Nov. 23-Dec. 1.....	20 cases.	8 deaths.

Cholera.

India....	Bombay....	Nov. 5-12.....	3 deaths.	
"	Calcutta....	Nov. 2-9.....	35 deaths.	
"	Madras....	Nov. 2-9.....	18 deaths.	
Japan....	Yokohama....	Nov. 2-9.....	1 death.	

Plague—Insular.

Hawaiian Islands....	Honolulu....	Nov. 27-Dec. 10.....	2 cases.	1 death.
Philippine Islands....	Manila....	Oct. 12.....	1 case.	

Plague—Foreign.

Brazil....	Rio de Janeiro....	Oct. 20-Nov. 3.....	42 deaths.	
India....	Bombay....	Nov. 5-12.....	180 deaths.	
"	Calcutta....	Nov. 2-9.....	14 deaths.	

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the Seven Days ended December 12, 1901:

BROOKS, S. D., Surgeon. Granted leave of absence for one day, December 25th.

WHITE, J. H., Surgeon. Granted leave of absence for sixteen days from December 9th.

CARRINGTON, P. M., Surgeon. Four days' leave of absence from December 9, 1901, under paragraph 179 of the Regulations.

McINTOSH, W. P., Surgeon. To proceed to Athens and Ducktown, Tennessee, for special temporary duty.

ROSENAU, M. J., Passed Assistant Surgeon. To proceed to Mexico for special temporary duty.

WICKES, H. W., Passed Assistant Surgeon. To proceed to Buffalo for special temporary duty, assuming command of station during the absence on leave of Surgeon EUGENE WASHIN.

VON EZDORF, R. H., Assistant Surgeon. Department letter granting Assistant Surgeon VON EZDORF leave of absence for two months and fourteen days, is cancelled.

FOSTER, M. H., Assistant Surgeon. Detailed as inspector of unserviceable property at the port of Port Townsend, Washington.

FRICKS, L. D., Assistant Surgeon. To proceed to Chicago and report to the medical officer in command for duty and assignment to quarters.

HOBBY, W. C., Assistant Surgeon. Granted leave of absence for seven days from December 15th.

BOGGESE, J. S., Assistant Surgeon. Granted ten days' extension of leave of absence.

BARNESBY, P. N., Acting Assistant Surgeon. Granted leave of absence for fourteen days from November 9th.

DE SOCARRES, R., Acting Assistant Surgeon. Granted leave of absence for one month from December 8th.

FRICK, JOHN, Acting Assistant Surgeon. Granted leave of absence for one month from January 1, 1902.

MASON, W. C., Acting Assistant Surgeon. Granted leave of absence for eight days from November 17th.

GAHN, HENRY, Hospital Steward. Department letter granting Hospital Steward GAHN leave of absence for twenty days from November 11th, is amended so that said leave shall be from November 18th.

MASON, M. R., Hospital Steward. Granted leave of absence for fifteen days.

SPANGLER, L. C., Hospital Steward. Granted leave of absence for fifteen days from December 14th.

Board Convened.

Board convened to meet at Washington, December 13, 1901, for the purpose of making a medical survey of an officer of the United States Coast and Geodetic Survey. Detailed for the Board: Surgeon G. T. VAUGHAN, chairman; Assistant Surgeon B. S. WARREN, recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending December 14, 1901:

AMES, ROGER P., Captain and Assistant Surgeon, will proceed to the Presidio of San Francisco for temporary duty, awaiting transportation to the Philippine Islands.

ASHFORD, BAILEY K., First Lieutenant and Assistant Surgeon, will proceed from Fort Slocum, N. Y., to Ponce, Porto Rico, for duty.

BAKER, DAVID, First Lieutenant and Assistant Surgeon, is granted leave of absence for one month on account of sickness.

BEVANS, JAMES L., First Lieutenant and Assistant Surgeon, will proceed from Decatur, Illinois, to Havana.

CARTER, W. F., Major and Surgeon, is granted leave of absence for ten days.

GUNN, HERBERT, Captain and Assistant Surgeon, will report for transportation to the Philippine Islands.

HARRIS, HENRY S. T., Major and Surgeon, will proceed to Fort Slocum, N. Y.

HARVEY, VALERY, Lieutenant-Colonel and Deputy Surgeon-General, is relieved from further duty as chief surgeon, Department of Cuba, and will proceed to Fort Monroe, Virginia, for duty.

HUTTON, PAUL C., First Lieutenant and Assistant Surgeon, is relieved from further duty at Fort Thomas, Kentucky, and will proceed to Fort Keogh, Montana, for duty, to relieve BOWER E. HIMES, Contract Surgeon, who will proceed to Fort Thomas for duty.

PERSONS, ELBERT E., First Lieutenant and Assistant Surgeon, will proceed to Fort Keogh, Montana, for temporary duty.

RAYMOND, THOMAS U., Captain and Assistant Surgeon, is honorably discharged as major and surgeon, United States Volunteers only, to take effect December 31, 1901.

SWIFT, EUGENE L., Major and Surgeon, having been found physically disqualified to perform the duties of a major and surgeon by reason of disability incident to the service, his retirement from active service as a major is announced to date from December 9, 1901.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending December 14, 1901:

BUCHANAN, J. B., Assistant Surgeon. Ordered to the *Columbia*.

COWAN, J. Pharmacist. Detached from the Boston Navy Yard, and ordered home to await orders.

DRAKE, N. H., Surgeon. Ordered to the *Philadelphia*.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending December 14, 1901:

DISEASES	Week end'g Dec. 7		Week end'g Dec. 14	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	66	21	64	19
Scarlet fever.....	109	12	230	11
Cerebro-spinal meningitis..	0	4	0	0
Measles.....	547	13	560	3
Diphtheria and croup....	320	48	234	43
Small-pox.....	17	2	16	2
Tuberculosis.....	20	144	231	141

Society Meetings for the Coming Week:

MONDAY, December 23d.—Medical Society of the County of New York; Lawrence, Massachusetts, Medical Club (private); Cambridge, Massachusetts, Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, December 24th.—New York Dermatological Society (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Virginia, Academy of Medicine and Surgery.

WEDNESDAY, December 25th.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society.

THURSDAY, December 26th.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Massachusetts, Society for Medical Improvement (private); Pathological Society of Philadelphia.

FRIDAY, December 27th.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, December 28th.—New York Medical and Surgical Society (private).

A Death from Leprosy, which occurred recently in Denver, has attracted considerable attention locally.

A Portrait of the Late Dr. E. C. Seguin has been presented to the Academy of Medicine by Mrs. Seguin.

A Physicians' Protective Association has been organized in Oswego, N. Y., with the object of protecting its members against being imposed upon.

A Dinner to Dr. Wende, the retiring health commissioner of the city of Buffalo, was given by a number of physicians of that city on December 14th.

Expectoration on the Sidewalk is prohibited in Grand Rapids, Mich., and an active campaign against the practice has been inaugurated by the local board of health.

Moving against Illegal Practitioners in San Francisco.—The California State Board of Medical Examiners recently appeared as complainant against nine men who had been arrested for the illegal practice of medicine.

The Wisconsin Board of Medical Examiners.—The following appointments have been made: Dr. J. R. Currens, of Two Rivers, reappointed; Dr. F. A. Forsbeck, of Milwaukee, reappointed, and Dr. J. V. Stevens, of Jefferson, vice Dr. H. M. Ludwig, of Richland Centre, who was secretary of the board.

A Doctors' Strike.—The county physician of Jefferson county, N. Y., has heretofore received the sum of \$400 annually for his services, including medicines. With a view to remedying this, an agreement has been entered into by many of the physicians of the county not to accept the position at a salary of less than \$600 annually.

Appointed Physician to the Shah.—News has just reached this country from Teheran that Dr. M. Elezarian Randolph, formerly in practice at 52 East Thirty-first Street, has been appointed personal physician to the Shah of Persia. Dr. Randolph is an Oriental by parentage, and we believe by birth. He was well known and quite popular in medical circles in this city, having been introduced by Dr. Vanderpoel, and the news of his selection for the important post of personal physician to the Shah will be welcomed here.

Osteopaths may Practise without a License in Wisconsin, according to a decision rendered in a case brought in Manitowoc, Wis., by Dr. J. R. Currens, president of the Wisconsin Board of Medical Examiners, against a Mrs. Sheehan. The construction placed upon the law by the court and attorney for the defense leaves the matter of registration or license for practising osteopathy optional. While defining clearly the points which constitute an offense against the law, the amendment makes no specific provision of a penalty, and osteopathic practitioners are privileged to continue to practise without application to the State board.

Dr. George A. Zellar, of Peoria, Ill., who is now in the Philippines, where he holds a commission as surgeon in the army, has been elected superintendent of the asylum for the incurable insane at Bartonville, Ill., by the trustees of the institution. He succeeds Dr. F. W. Winslow, who died recently.

Foreign News Notes.—Mme. N. Sieber-Schumow has been appointed temporarily as conductor of the department of biological chemistry in the Institute for Experimental Medicine at St. Petersburg, to succeed Nencki.—The sixth French Congress on Internal Medicine will open at Toulouse on April 1, 1902.

Hospital Concerts.—During the past year forty-one concerts have been given at the hospital at the Presidio in California for the entertainment of the sick and wounded soldiers. The entertainments have been managed by the ladies whose husbands are attached to the post and the results have been decidedly beneficial.

Erratum: Hysterical Dissociation of Temperature Senses with Reversal of Sensibility to Cold.—In Dr. McCaskey's article on this subject, published in our issue for December 14th, the following was accidentally omitted from the legend under Figures 2 and 3, p. 1098: "The continuous line in the figures indicates the field for white; the wavy line, the field for blue; and the dotted line, the field for red." This is essential for the proper understanding of the figures.

The Danish West Indies Declares a Quarantine against Philadelphia.—At an informal meeting of foreign consuls at Philadelphia, after a discussion of the small-pox situation, it was agreed that it was not necessary to declare a quarantine against Philadelphia on account of small-pox. Notwithstanding this informal agreement, however, the Danish West Indies have declared a fifteen-day quarantine against Philadelphia. The matter has been taken up by the Trades League, with a view to proving that the quarantine is uncalled for.

The Pathological Institute of the New York State Hospitals for the Insane.—The reorganization of the institute, made necessary by the resignation of the former director, Dr. Ira van Gieson, early last summer, has been proceeding slowly, but it is now announced that Dr. Adolf Meyer, of the State Hospital and Clark University, Worcester, Mass., has been appointed by the lunacy commission to fill the position of director of the institute.

It is further announced that the plan of work of the institute will be organized on a basis which should be satisfactory to the medical profession, to the physicians in the State asylums for the insane, to the various universities of the State, to scientists in general, and to the taxpayers. Dr. Meyer is to be left free to select his assistants in the various departments of the laboratory work, but will be assisted in this selection by the advisory board.

The Chicago Lying-in Hospital and Dispensary has increased the number of the directors and proposes to widen the scope of its usefulness by having the members of the board of directors drawn from different sections of the city, thus having representatives all over the city.

Small-pox Statistics in Bavaria.—During the year 1900 six cases of small-pox occurred, or about one case to each million inhabitants, a record showing the value of the German vaccination law and methods. In one of these cases, in which the patient had only been vaccinated once, the disease proved fatal.

To Care for Consumptive Patients at Toronto.—The National Sanitarium Association is building a sanitarium for tuberculous patients at Gravenhurst, which is nearing completion, and will there care for fifty poor patients from Toronto, free of charge. The association will also undertake the care of fifty additional patients before the close of 1902.

One-sided Breathing was recently recommended by a quack in Königsberg, Germany, to patients suffering from tuberculosis, so as to give rest to the lung involved. This, he gravely announced, could be readily accomplished by stopping with the finger on the nostril on the side affected, a patient whose right lung is affected breathing through his left nostril, etc.

Foreign University News.—Appointments have been made of *privat docents* as follows: Dr. Prochaska, for internal medicine at Zurich; Dr. Dorelli for anatomy, Dr. Ducceschi for physiology, Dr. Colombo for physical therapeutics, Dr. Casagrandi for hygiene, and Dr. Schupfer for neurology at Rome; Dr. Ceconi for medical pathology at Turin; Dr. Ciarella for otology and rhinology, Dr. Cucca for gynecology and obstetrics, and Dr. Martuscelli for laryngology at Naples; Dr. Carl Winkler for pathological anatomy at Breslau; Dr. Richard Hölscher at Kiel; Dr. Karl Adrian for dermatology at Strasburg. Professor Kümmel, of Breslau, has been offered the post of director of the otological clinic and extraordinary professor of otology at Strasburg.

Dr. Wende not Reappointed.—The newly elected mayor of the city of Buffalo has announced that he will appoint Dr. Walter D. Greene to succeed Dr. Ernest Wende as health commissioner of the city of Buffalo. Dr. Greene is at present deputy commissioner under Dr. Wende. He graduated at the medical department of the University of Buffalo in 1876, was appointed district health physician in 1882, and has been connected with the department ever since. He was the head of the department from 1889 to 1891, when he was succeeded by Dr. Wende. He is clinical professor of diseases of the kidney and bladder and attending surgeon at the Sisters of Charity Hospital and at the Erie County Hospital. An active canvass had been made to retain Dr. Wende at the head of the department by his friends.

Street Cars to be Fumigated.—The Buffalo Board of Health has decided to fumigate all street cars, with a view to preventing the further spread of small-pox.

A Medical Certificate as a Prerequisite for Marriage.—A bill has been introduced in the Bohemian Reichsrath making a medical certificate of physical and mental capacity obligatory on candidates for matrimony.

A New Building for the Medical School at Toronto University has been promised by the board of trustees, the announcement having been made at the recent dinner to the students given by the faculty.

The Naval Reserve.—Under the bill which has been introduced in Congress to create a naval reserve, officers who served in the war with Spain will be enrolled in the reserve at the same grade as held when discharged. All officers and men who have been honorably discharged from the navy, marine corps, coast survey, and revenue or life-saving service, or State naval militia, and all persons connected with the merchant marine will be eligible to enrollment. The reserve is to have a period of drill of not less than two weeks annually.

A Medical Society may Expel a Member for Unethical Conduct.—The St. Louis Court of Appeals has denied the application of Dr. W. H. Mayfield for a peremptory writ restraining the St. Louis Medical Society from expelling him from membership. The opinion handed down by the court states that in securing and publishing letters commending his professional work, certificates of his skill, and success as a doctor by issuing pamphlets to the public, the applicant had violated the regulations of the society and that its committee on ethics had tried the case in a fair and equitable spirit before recommending that he be expelled from membership.

The Late Dr. Thomas M. Markoe.—At the first autumn meeting of the Medical Board of Mount Sinai Hospital a committee of three members was appointed to take action upon the death of Dr. Thomas M. Markoe, and the following resolutions were subsequently adopted by it:

Whereas, Dr. Thomas M. Markoe has been for a period of forty-six years a consulting surgeon of Mount Sinai Hospital, and

Whereas, death has removed him from the profession in which he labored faithfully as a teacher of medical students and as an adviser of his colleagues; therefore be it

Resolved, That the Medical Board of Mount Sinai Hospital places upon its minutes this expression of its pride in his long and honorable career and of sorrow at his loss; and, furthermore, be it

Resolved, That a copy of these resolutions be forwarded to the family of the deceased and be published in the medical press.

ARPAD G. GERSTER,
HOWARD LILIENTHAL, } Committee.
ALFRED MEYER,

December 14, 1901.

The Woman's Medical Association met at the Academy of Medicine on the evening of December 18th.

The Anti-municipal Hospital Association has been organized and is carrying on a vigorous, in fact almost vicious, canvass to bring about the removal of the Municipal Hospital for Contagious Diseases to a less central location than that now occupied.

The Medical Improvement Society of Cambridge, Mass., recently appointed a committee consisting of Dr. S. W. Driver, Dr. Albert August, and Dr. E. A. Darling to take such steps as may be necessary to suitably impress the authorities with the urgency of the need for proper hospital accommodations of patients suffering from contagious diseases.

Dr. Van Reypen Renominated as Surgeon-General.—The present term of Medical Director William K. Van Reypen as surgeon-general of the United States navy expires on December 18th, and on December 9th he was nominated by President Roosevelt for another term of duty as surgeon-general. He is entitled to retire on December 26th, as he will then have completed forty years of service, and, by reason of his reappointment, will be enabled to retire with the rank and pay of a senior rear-admiral. Three months of Admiral Van Reypen's forty years of service were spent as a surgeon in the Second New Jersey volunteers, in which he enlisted in April, 1861, serving until the command was mustered out, three months later, when he endeavored, but without success, to obtain a commission in the volunteer navy, but did succeed in obtaining one by competitive examination in the regular navy.

The Massachusetts Surgical and Gynecological Society held its fifty-eighth session and twenty-fifth annual meeting in Boston on December 11th. Among the papers presented were the following: The Year's Progress in Gynecology, by Dr. Horace Packard; Medical Treatment in Gynecology, by Dr. Eliza B. Cahill; Surgery in Gynecology, by Dr. J. W. Hayward; Electricity in Gynecology, by Dr. Clara E. Gary. The following officers were elected: President, Dr. G. F. Martin; vice-presidents, Dr. N. H. Houghton and Dr. Eliza B. Cahill; general secretary, Dr. T. Morris Strong; associate secretary, Dr. Herbert D. Boyd; treasurer, Dr. Grace E. Cross; auditor, Dr. Frederick A. Davis; censors, Dr. Horace Packard, Dr. J. P. Rand, and Dr. F. C. Richardson. About 115 persons sat down to the annual dinner in the evening. Dr. Henry E. Spaulding, the retiring president, made an address on the progress of gynecology and surgery during the year. Dr. F. B. Percy was toastmaster. The following toasts were responded to: Mind vs. Matter, by the Rev. Everett D. Burr, Newton Centre; Matter vs. Mind, by Mr. James E. Leach, Boston; Matter, by Dr. J. P. Rand; Matter out of Place, by Dr. H. A. Whitmarsh; Mater Alma, by Dr. Eliza B. Cahill; Matrix, by the president-elect, Dr. Martin.

The New City Government, which will come into power under the administration of Dr. Seth Low, will work under a revised charter, which changes several things affecting medical matters. Under the present charter the health board is made up as follows: The president, who must be a layman; two medical commissioners, health officer of port (ex-officio), and commissioner of police (ex-officio). After January 1st the board will be made up as follows: The president (either medical or layman), health officer of the port (active), and police commissioner (active). Another important change is that taking Bellevue and the allied group of hospitals out of the department of charities, where they are now, and placing their administration in the hands of a board of trustees.

Dr. Ernst J. Lederle, who has been appointed health commissioner, was born in Staten Island thirty-six years ago. He is a Ph. D. of New York University, and completed a course in chemistry at Columbia in 1886, under Professor Chandler. He has been connected with the health department for twelve years. For seven years he was assistant chemist and for the past five years he has been chief chemist.

Dr. John McGaw Woodbury, appointed street cleaning commissioner, was born in New York and has always been a resident of this city. He graduated at Princeton in 1879 and studied medicine at Columbia and Bellevue, and later he pursued his studies at Vienna and at Heidelberg. He is a member of the Royal College of Surgeons of London, and a graduate of Heidelberg and Vienna. During the war with Spain he was assigned as division surgeon, with the rank of major, to the staff of Major-General James H. Wilson. At Ponce, Dr. Woodbury was placed in charge of the unloading of the transport of his division at 6 a. m., and completed the same by 2 a. m. of the following day. In no other case was the work performed in less than three days. Later, when wagon trains were to be pushed to the front, the train in Dr. Woodbury's charge got through on the same day, while of the other trains which started on the same afternoon, the next arrived two days later. Dr. Woodbury served for a time as sanitary inspector of the Island of Porto Rico, and during this period organized the first board of health of Ponce, superintending the cleansing of that town. After the war he was sent abroad by the United States Government to inspect, study, and report upon the sanitary conditions of the German army in active field operations. During this visit he inspected and studied the system of drainage, disposition of sewage, garbage, and general refuse, in Berlin, Frankfort, and Breslau, and also of the city of Paris.

The commissioner of public charities will be Mr. Homer Folks, who has been for many years the secretary of the New York State Charities Aid Association. He is well acquainted with the department of public charities, as he assisted in preparing the plan which was adopted in 1895 for the division of the former department of charities and correction into two separate departments—one of charities and one of correction—and personally inspected every institution in the department of charities for several years thereafter.

Foreign Obituary Notes.—Among deaths recently reported from Europe are those of Privy Councillor Bohuslav Edler von Jirus, professor of pharmacology at the Bohemian University at Prague; Dr. Karl von Liebermeister, professor of internal medicine at the University of Tübingen; Professor Löhlein, director of the female clinic at Giessen; Dr. E. de Rossi, professor of oto-rhino-laryngology in the University of Rome; Dr. G. Chiarleoni, professor of obstetrics at Palermo. In South America, Dr. Fr. de Castro, of Rio de Janeiro, and Dr. N. Guardia, formerly professor of obstetrics at Caracas, are dead. From Manila comes news of the death of Dr. A. Masoras, professor of medical pathology at the University of Manila.

Births, Marriages, and Deaths.

Married

ATKINSON—FARNSWORTH.—In Brooklyn, on Saturday, November 30th, Dr. Hugh Hamilton Atkinson and Miss Katherine Farnsworth.

BLAIR—EDMONSON.—In St. Louis, on Wednesday, November 27th, Dr. Henry A. Blair, of San Antonio, Texas, and Mrs. Lillian K. Edmonson.

BROWN—BAYLIS.—In Brooklyn, on Wednesday, December 18th, Dr. Frank Byron Brown and Miss Sara Cornelia Baylis.

GASKILL—SARTAIN.—In Philadelphia, on Wednesday, November 11th, Dr. J. Howard Gaskill and Miss Amy Sartain.

GOODSPEED—BOND.—In New York, on Tuesday, December 3d, Dr. Edgar J. Goodspeed and Miss Elfreda Bond.

SHERA—BISHOP.—In New York, on Wednesday, December 18th, Dr. George W. Shera and Miss May Bishop.

TUTTLE—LLOYD.—In New Haven, on Thursday, November 21st, Dr. Charles Alling Tuttle and Miss Edith Josephine Lloyd.

VAN LENNEP—LEAS.—In Philadelphia, on Tuesday, December 17th, Dr. Gustave A. Van Lennep and Miss Florence Leas.

WATERS—DECKER.—In New York, on Wednesday, December 18th, Dr. John Bradford Waters, of Hartford, Connecticut, and Miss Edith Mills Decker.

YENNI—LAFITTE.—In New Orleans, on Wednesday, November 27th, Dr. Albert Sidney Yenni and Miss Marie Adèle Lafitte.

Died.

BEERS.—In Danby, N. Y., on Wednesday, December 4th, Dr. John E. Beers, in the sixty-first year of his age.

CULP.—In Steelton, Pennsylvania, on Sunday, December 1st, Lillian Lorenz Culp, wife of Dr. John F. Culp, aged twenty-seven years.

DEAN.—In Newton, Massachusetts, on Friday, December 6th, Dr. James R. Dean, in the sixty-eighth year of his age.

EVANS.—In Hatboro, Pennsylvania, on Tuesday, December 3d, Dr. Isaac Newton Evans, in the seventy-fourth year of his age.

LEAKE.—In Philadelphia, on Friday, December 13th, Dr. Ephraim F. Leake, in the eighty-first year of his age.

McDILL.—In Fort Leavenworth, Kansas, on Wednesday, December 4th, Dr. David McDill, in the forty-first year of his age.

NORTON.—In Boston, on Sunday, December 8th, Dr. John B. Norton, in the twenty-seventh year of his age.

SWEETMAN.—In Baltimore, on Wednesday, December 11th, Dr. Leslie M. Sweetman, in the forty-second year of his age.

UTTER.—In New York, on Tuesday, December 10th, Dr. Francis A. Utter, in the sixty-first year of his age.

Pith of Current Literature.

Journal of the American Medical Association,
December 14, 1901.

The Surgical Treatment of Biliary Calculi, with Special Reference to Hepatotomy. President's Address Delivered at the Fourteenth Annual Meeting of Obstetricians and Gynecologists, Held at Cleveland, September 17, 18, and 19, 1901.—By Dr. W. E. B. Davis.

The Rôle of the Myocardium in Pericarditis. By Dr. Alfred Stengel.—The author is forced to the conclusion of Jürgensen, that pancarditis is the diagnosis of the future; its type may be endocarditic, pericarditic, or myocarditic, but the immediate result and the final prognosis are, to a large extent, dependent upon the degree of involvement of the myocardium. A few dangers, such as general infection, embolism or mechanical interference with the heart by extensive effusion, are independent of the condition of the heart wall, but, these conditions excepted, the important condition for prognosis is the condition of the heart muscle.

Adherent Pericardium. By Dr. Robert H. Babcock.—(See résumé of *Medical News*.)

Tubercular Pericarditis. By Dr. C. F. McGahan.—The author reports a case, interesting because of the sudden involvement of the left lung and pericardium when the case was apparently progressing favorably.

Cardiac Lesions as Observed in the Negro, with Special Reference to Pericarditis. By Dr. Frank A. Jones.—According to the author, the following are the cardiac lesions in the negro in the order of their frequency: (1) Aortic regurgitation in the negro is the most frequent, the most dangerous of all valvular lesions; (2) aortic stenosis; (3) mitral regurgitation; (4) mitral stenosis has not been diagnosticated from physical signs and symptoms; (5) tuberculosis and syphilis act both as exciting and predisposing causes in the production of muscular and valvular lesions; (6) syphilitic history in mitral regurgitation is more frequently found than is a rheumatic history; and (7), the murmur of aortic regurgitation, most frequently musical.

Some Points in the Treatment of Pericarditis. By Dr. Frank P. Norbury.—Pericarditis should be regarded as a serious disease and so treated, even if the symptoms are slight. All cases must come under the absolute rule of enforced rest and quiet surroundings. Milk is the most suitable diet and is best given in small quantities at frequent intervals. The ætiologic factor is to be considered in the systemic treatment of pericarditis, and, in this connection, it is well to remember that most cases of rheumatic pericarditis will get well if we will let them alone. A blister over the pericardium, cold applications, or an ice bag, may be used as needed for pain. Morphine may be used where these means fail. Trional promotes sleep and does not interfere with the heart's action. Strychnine may be given, and, if

further stimulation is necessary, digitalis with strophanthus. As for the effusion, it is best to let it alone; if absorption is delayed, frequent doses of calomel for prolonged periods are of use. The indications for surgical procedures are: Dyspnœa, small, rapid pulse, dusky, anxious countenance.

Complete Recovery from Double Neuro-retinitis, Clinically Resembling Albuminuric Retinitis, in a Case of Prolonged Hæmaturia with Symptoms of Bright's Disease. By Dr. C. A. Veasey.

The Value of Excision of the Superior Cervical Sympathetic Ganglion in Glaucoma. By Dr. George F. Suker.—In the author's opinion, sympathetomy is a justifiable operation, and a most valuable adjunctive procedure. It is always indicated when an iridectomy or sclerotomy in any form of glaucoma has failed. Iridectomy is still the classical treatment for certain forms of glaucoma, i. e., chronic and acute; it is the preferable procedure in glaucoma absolutum and hæmorrhagicum.

Report of a Case of a Peculiar Form of Carcinoma of the Skin of Slow Growth. By Dr. William Frick.

Rhinoscleroma. By Dr. Charles W. Allen.

The Rôle of the Mast-cells in Acute and Chronic Infections. By Dr. Herbert U. Williams.

Some Investigations upon Antivenene. By Dr. Joseph McFarland.

A Case of Localized Amnesia. By Dr. Edward E. Mayer.

The Treatment of Fractures of the Femur with the Ambulatory Pneumatic Splint. By Dr. Walter B. Metcalf.

Remarks on the Traumatic Neuroses. By Dr. Hugh T. Patrick.

Notes on Small-pox. By Dr. S. L. Jepson.

Medical News, December 14, 1901.

The Modern Urethroscope. By Dr. William K. Otis.

Adherent Pericardium. By Dr. Robert H. Babcock.—As to the diagnosis of adherent pericardium, the author asserts that this is difficult, if not impossible, when the sac is adherent to the heart, but not to the neighboring structures. The signs to be relied upon are inspiratory distention, instead of the normal inspiratory collapse of the external jugulars or other superficial veins, diastolic collapse of the cervical veins, known as Friedrich's sign, pulsus paradoxus, a by no means constant or trustworthy sign, and the detection of cardiac hypertrophy for which no adequate cause can be discovered.

Clinical Facts and their Meaning. By Dr. Joseph M. Aiken.—The author points out some of these clinical facts which, so numerous when presented to the family physician, are too often passed over carelessly in search for some organic lesion. Our failure of satisfactory results in treating ill-defined nervous complaints may be

discovered in our neglect to use rational means in overcoming the impoverished blood and vitality, the essential symptom of which is malnutrition. A few hours or days will develop the objective facts upon which we base our opinion accounting for the sensory disturbance preceding exanthematous and other acute diseases.

An Epidemic of Small-pox at the Michigan Asylum for the Insane, Kalamazoo. By Dr. Arthur MacGugan.

Rectocolitis. By Dr. William M. Beach.—Rectocolitis is a condition of the rectum and colon of varying degrees of inflammation. A knowledge of the anatomical bearings of the rectum and colon is necessary to understand the symptoms and reflexes. The symptoms are local and systemic. Rectocolitis may be catarrhal or ulcerative, acute, or chronic. When dependent upon polypus, hæmorrhoids, fistula, etc., the cure depends upon their removal. Chronic rectocolitis due to altered secretions, anæmia, and congenital narrowing of the sigmoid strait, is difficult to cure.

Medical Record, December 14, 1901.

Optimism vs. Pessimism in the Surgical Treatment of Cancer. By Dr. Robert Abbe.—There is, perhaps, no more stimulating reason for good work than the growth of opinion among practical men that cancer is almost uniformly a local disease at the start. Unmistakable evidence proves that, when the disease reappears after operation, the so-called recurrence is not a return of the disease, but a continued growth of left-over particles. The resources of surgery have so far mitigated the suffering from malignant disease and prolonged life that we may look upon the present control of the protean forms of the disease as making a long stride toward its mastery.

An Epitome of the Subject of Rheumatism as Cause and Effect in Inflammation of the Throat. By Dr. William Cheatham.—The author's belief is that chronic rheumatism causes frequent attacks of inflammation of the tonsils, pharynx, and larynx; that acute exacerbations in chronic rheumatism and acute rheumatism are frequently ushered in or preceded by an acute amygdalitis; that following these attacks, we may have all the heart, joint, and other lesions that we find in any rheumatic affection.

Rheumatic Affections; their Pathogenesis and Treatment. By Dr. Martin A. H. Thelberg.—The author has found that small, repeated doses of calomel, alkali, and saline cathartics in some form, a few hypodermics of morphine, ice to the affected joints, and, if necessary, to the præcordia, cold sponging, followed if necessary by some antipyretic, together with dietetic, hygienic, and hydrotherapeutic measures generally, have proved effective, and certainly more so than salicylates. Meat diet has not been contraindicated after the temperature has subsided. The principal thing is to give special attention to the digestion and absorption of a rational quantity of food of proper components, with an excess of nitrogenous matter. Attention to the elimination cannot, however, be too rigid.

Municipal Sanatoria. By Dr. Alfred Meyer.—The author believes that no system of municipal care of consumptive poor will be complete which does not also provide for the care of advanced cases within the corporate limits. The two types of cases—advanced and incipient—should be kept as strictly separate as the present status of medical science permits.

Treatment of Delirium Tremens and Alcoholic Toxæmia. By Dr. T. D. Crothers.—During the stage of delirium, it is the author's practice to keep the patient in bed as much as possible; but when he insists on being up, to keep him in a state of sharp muscular activity by means of baths, massage, walking, and other active movements. The evils to be avoided in all these cases are overdugging and overfeeding, and the object sought for should be to assist Nature to overcome the toxæmia and build up the deranged organism.

Post-operative Hæmorrhage Twelve Hours after Vaginal Hysterectomy; Laparotomy under Cocaine Anæsthesia; Hæmorrhage from Meso-cæcum and Mesoappendix. By Dr. Julius Rosenstirn.

Presbyopia of Civilization. By Dr. Norburne B. Jenkins.

Infusorial Diarrhœa. By Dr. M. Hartwig.

An Ephemeral Attack of Henoch's Purpura. By Dr. Charles H. Richardson.

Boston Medical and Surgical Journal, December 12, 1901.

Twelve Cases of Pneumonia Treated by Anti-pneumococcus Serum. By Dr. George G. Sears.—The author finds it impossible to assert that the injections produced any influence on the fever in these cases. While distinct benefit may not be positively ascribed to the serum, no ill effects, beyond what may occur from the use of diphtheria antitoxine, were observed. Skin eruptions, together with pain and swelling in the joints, were occasionally produced. Granting its antitoxic qualities, a great practical objection to its use is our ignorance of the strength of the serum and the consequent inability to measure the dose. Until this is possible, failure may always be explained by the inefficiency of the particular specimen, and definite conclusions are out of the question. The results obtained, however, seem to justify a further trial of this form of treatment.

Use of Antistreptococcus Serum in a Case of Septicæmia Following Mastoid Operation; Recovery. By Dr. Mary F. Hobart.—Up to this time the statistics of antistreptococcus therapy are too scanty to make any positive conclusions possible. It has been tried in a number of cases with negative results; septic symptoms have persisted in spite of its timely administration. The author's experience, however, has convinced her that in some well-chosen cases it may hold the one chance for life, and should be ventured upon fearlessly. The time may yet come when it may not be considered a last resort, but will be ad-

ministered at the first approach of sepsis with the same freedom with which we now employ antitoxine in diphtheria.

A Synopsis of a Three Months' Service in the Gynecological Department of the Boston City Hospital. By Dr. Charles M. Greene and Dr. Frank A. Higgins.

The Treatment of Tumors of the Breast. By Dr. John H. Gleason.—The author calls attention to the importance of a prompt diagnosis. He hopes for the early success of those who are working on the specific germ of cancer.

Massage and Movements in Hemiplegia. By Dr. Douglas Graham.

American Medicine, December 14, 1901.

The Relation of Appendicitis to Infectious Diseases. By Dr. J. M. T. Finney and Dr. Louis P. Hamburger.—The authors conclude that, for purposes of treatment, appendicular inflammation is rightly regarded as a local disease, subject to serious accidents, readily explained by anatomical and bacteriological factors. The inflamed appendix is a menace to the general peritoneal membrane and hence to the life of the patient. Every variety of appendicular inflammation is to-day essentially a surgical disease, the legitimate and grateful domain of surgical art.

Chancre of the Tonsil, with Report of Thirty-five Cases. By Dr. John Edwin Rhodes.—Chancre of the tonsil is often unrecognized because hypertrophy and inflammation are so frequent and are so closely simulated by the early symptoms, which often differ little from an ordinary sore throat. An enlarged and indurated tonsil with a superficial ulcer, accompanied by enlargement and induration of the contiguous submaxillary gland and unchanged by a prolonged course of treatment, renders a diagnosis of chancre probable. The character of the chancre depends upon the original condition of the tonsil as to size, density, the amount of follicular inflammation, and the coincidence of a mixed infection. A certain diagnosis cannot be made until the general eruption of the disease. The disease is contracted by direct contact or by various media, carrying the virus. Separate instruments should be used for examination and treatment of known syphilitics, but it is imperative that every operator should employ a rapid and efficient disinfection or sterilization of instruments after the examination or treatment of every patient. Most careful instructions should be given to patients as to the necessity of efficient isolation, the methods of infection, and the period of danger, and the use of individual household and other utensils should be enjoined.

Instrumental Perforation of the Uterus. By Dr. William Krusen.—The author reports a case occurring in the practice of another physician, which is only one of the many cases that show how easily accidents may occur even in the hands of careful men; and it emphasizes the necessity for care, cleanliness, and special training in intra-uterine manipulation.

Gunshot Wound of Spine. Paraplegia with Flexor Plantar Reflex. Operation: Canal Penetrated by Bullet; Dura Cut; Cord Apparently Intact. Necropsy: Central Hæmatomyelia. By Dr. F. W. Langdon and Dr. D. I. Wolfstein.

Pertinent Observations Concerning Appendicitis in the Female. By Dr. Andrew J. Downes.—The author calls attention to the necessity of bimanual examination in women as a necessary preliminary step in the conduct of a case with symptoms of appendicular inflammation. He also speaks in favor of the incision through the right rectus muscle, more often indicated than at present used by surgeons.

The Cardiovascular System in Interstitial Nephritis. By Dr. W. J. Conklin.

What Protection have the People against the Dairy? By Dr. D. M. McMasters.

Philadelphia Medical Journal, December 14, 1901.

Penetrating Wounds of the Heart, with Suturing of the Wounds. By Dr. H. L. Nietert.—The author reports a case of interest, and quotes from the reports of twenty-three other cases. Statistics show that more than ninety per cent. of all heart wounds not operated on prove fatal. The mortality in the cases referred to, although they deal with the most serious of heart wounds, is only seventy per cent. All wounds of the chest, where life is endangered from internal hæmorrhage, should be explored to the bottom if, in the judgment of the surgeon, the parts are accessible. That the greater portion of the heart is accessible, the author believes, has been clearly demonstrated.

The Division of the Sensory Root of the Trigeminal for the Relief of Tic Douloureux; an Experimental, Pathological, and Clinical Study, with a Preliminary Report of One Surgically Successful Case. By Dr. William G. Spiller and Dr. Charles H. Frazier.—As a substitute for all operations which depend for their success upon removal of all, or a part, of the ganglion, the author recommends an operation which depends for its success solely upon the division of the sensory root of the ganglion. Granting that it will effect a radical and permanent cure, this operation should be attended with a lower mortality, should obviate a number of difficulties, and its execution is, comparatively speaking, a simple one. It is practically complete when the posterior aspect of the ganglion and its sensory root have been exposed. The integrity of the cavernous sinus is never in danger. The risk of injuring the sixth nerve is avoided.

The Operative Treatment of Intercostal Neuralgia, Occurring in the Deformities of the Chest, Following Pott's Disease and Scoliosis. By Dr. Charles F. Painter.—According to the author, the problem which one has to face in these cases is a purely mechanical one, and sometimes can be wholly met by mechanical means. The technics of the operation is simply that of an excision of the rib, and the point at which to operate is not chosen with a view of finding the particular

nerve which is pressed upon, but to remove sufficient bone to give the other ribs more room.

Splanchnoptosis. By Dr. Byron Robinson.—*(Concluded.)*

Lancet, December 7, 1901.

Some War Sequelæ. By C. A. Morris, M. B.—The author in this article considers some of the results of illness and wounds acquired by the English soldiers in South Africa. Taking up first the medical cases, he states that, while inoculation certainly does not prevent typhoid fever, it renders the body far less vulnerable to the attack of the poison, and, if the disease is taken, it modifies the attack, lessening its severity and reducing the mortality. It cannot be a matter of surprise that inoculation does not confer full immunity, when we remember that one attack of typhoid fever itself does not prevent a second or third attack. The commonest complication of typhoid fever noted in South Africa was the occurrence of phlebitis and thrombosis. Dry arthritis was also quite frequently observed. The cases of dysentery in many instances left the patients with chronic troubles, such as dyspepsia and a relaxed and irritable condition of the bowels. The diseases due to exposure—pneumonia, bronchitis, nephritis, and rheumatism—were conspicuous by their absence. A most remarkable evidence of the privation, exhaustion, and mental strain that many had to pass through was seen in the numerous and severe cases of neurasthenia that occurred.

Wounds.—The wounds produced by shells are numerically unimportant as compared with those due to bullets. They usually suppurate, however, and may cause the most ghastly injuries. Bullet wounds have not been more numerous or more severe than in former wars, this being due to the greater range and the increased humanity of the bullet. Such wounds heal most satisfactorily for the following reasons: 1. The small skin orifice makes the wound almost subcutaneous, and a protective scab forms readily. 2. The climate is most favorable, the air being dry and pure. 3. The early application of the first field dressing. 4. The healthy condition of the wounded. 5. The injury is an aseptic one. 6. The rarity with which foreign bodies are carried into the wound. Wounds of bones were numerous; they were often clean perforations without comminution or fracture. But, at short range, the shattering was often extreme. Chronic sinuses were common sequelæ, through which sequestra continued to be extracted for months. In conclusion, the author cites a number of cases of wounds of joints, nerves, and of the spine, in which the injuries were very severe; yet the patients in most cases made complete recoveries.

Three Cases of Family Periodic Paralysis, with a Consideration of the Pathology of the Disease. By E. F. Buzzard, M. B.—A woman and her two sons suffered from attacks of paralysis of varying degree and duration. The mother was forty years of age; since childhood she had been the victim of attacks in which she fell suddenly to the floor, being unable to move hand or

foot. The attacks varied in severity and the paralysis lasted from a few hours to a day or two. The attacks came on during rest, but usually followed a spell of physical exercise, such as walking or cycling. There was no pain with the attacks, and the palsy passed off gradually. The two sons, aged thirteen and eleven years respectively, had been subject to similar attacks since infancy, but of less severity (lasting only an hour or two), and of greater frequency. The boys were both unusually healthy looking; careful physical examination gave negative results, and their muscles responded normally to electrical stimulation. No mode of treatment had proved beneficial. Similar cases of family periodic paralysis have been reported by other observers; in all, the attacks tend to follow hard exercises, and grow less frequent as age advances. The author reviews the various theories as to the causation of the condition, and rejects them all. His own views are: 1. That a chemical or physical change in the muscle plasma alone is, not only a possible, but the probable, explanation of the loss of contractility described in this disease. 2. That the important part played by the muscular system in the control of the lymph circulation points to an unstable condition of the latter or an abnormal, or perhaps toxic, constituent of the fluid itself, as possible sources for the changes in the muscles.

Pure Urea in the Treatment of Tuberculosis. By Dr. H. Harper.—Articles by the author on this same subject appeared in the *Lancet* for March 9th and June 15th, and were abstracted in this journal. He now reports seven cases, each of which represents a group of tuberculous cases, some recent and some old, in which he has used urea with success. *Suitable* cases for its administration are: 1. Circumscribed pulmonary tuberculosis, with an abundance of bacilli and few cocci. 2. Enlarged tuberculous glands. 3. Tuberculous pleurisy. 4. Tuberculous laryngitis. 5. Lupus. 6. Tuberculous peritonitis with fluid in the peritoneal cavity. 7. Hydrocephalus in children. 8. Tabes mesenterica. *Unsuitable* cases are: 1. Pulmonary tuberculosis where cocci predominate, and the tubercle bacilli are short and stumpy. 2. Acute miliary tuberculosis with high temperature. 3. Gastritis. 4. Last stages of tuberculosis. 5. When the patient has a temperature over 101° F.

Administration.—A beginning should be made with doses of from ten to fifteen grains thrice daily, gradually increasing them up to forty, fifty, or sixty grains, as a maximum. This amounts to one half of one per cent. of artificial urea added to the normal quantity circulating in the blood. The author has never met a case in which urea has done harm. One object of his paper is to show what a large amount of urea can be ingested without any increase in the urea excreted. In all cases where death followed after administering urea, mixed infection was the prominent feature. Uræmia cannot be induced with urea, for here the toxalbumins must be reckoned with.

The Pathogenesis of Fibrous Hyperplasia. By Dr. E. H. Colbeck.—The author endeavors to

show that the cause of all forms of fibrous overgrowth is fundamentally hypernutrition. The pathogenesis of hepatic cirrhosis, for instance, is that the functioning cells of the liver undergo chronic hyper-stimulation from overwork by means of excessive food, alcohol, and so forth, and in course of time the functioning protoplasm becomes unable to respond to the demands made upon it. This entails protoplasmic insufficiency and degeneration, and the consequent interference with function begets inability to control adequately cell nutrition and food supply, which leads to an increased nutritive stimulation of the fibrous tissue cells, and thereby to hyperplasia of these elements. The same explanation applies equally well to the pathogenesis of renal cirrhosis.

Acute Emphysematous Gangrene. By Dr. N. H. Choksy.—The author reports four cases of acute emphysematous gangrene, following hypodermic injections. Three of the cases were of plague, the gangrene following the injection of Lustig's curative serum. The fourth case was one of relapsing fever, in which hypodermic injections of caffeine, etc., had been given. In all the cases the gangrene was preceded by abscess formation. The three plague patients died; in the case of relapsing fever the gangrene remained localized, and incision and irrigation brought about a speedy recovery.

A Family of Three Cases of the Peroneal Type of Muscular Atrophy (Charcot-Marie-Tooth-Hoffmann). By Dr. W. B. Warrington and Mr. R. Jones, F. R. C. S.

A Few Words on Headaches of Nasal Origin. By Dr. A. Bronner.

Excess of Salt in the Diet a Probable Factor in the Causation of Cancer. By Dr. J. Braithwaite.—The author's theory as to the causation of cancer is as follows: 1. Excess of salt in the diet is one of four factors which originate the disease. It is the essential factor, but it is inoperative without at least one, and probably two of the others. Excess of salt may arise from individual taste, from salt meat, or from too much meat. 2. An over-nourished condition of body from more food than is required. 3. An impure condition of body owing to non-use and non-oxidation of food. 4. Some local irritation or stimulant, such as friction from the stem of a pipe, or ovarian stimulation.

A Case of Asthenic Bulbar Paralysis (Myasthenia Gravis). By Dr. W. K. Hunter.

Duration of Residence in Sanatoriums for Pulmonary Tuberculosis. By Dr. T. Campbell.

British Medical Journal, December 7, 1901.

Delayed Union, Non-union, and Mal-union of Fractures. By A. H. Tubby, M. S.—In this article the author discusses departures which occur from the normal process of union of fractures. Such departures are delay in union, failure of union, and union in bad position. Non-union includes all cases of delayed union, but the latter does not always imply the former. If, some

weeks after the accident, a mass of callus is present, and gentle passive movement causes pain or inflammatory signs, the case is probably one of retardation rather than of failure of union. The most common cause of delayed union is undue mobility of the fragments. This may be due to: (1) The position of the fracture, in the upper third of the femur it is impossible to obtain effective purchase upon the upper fragment; (2) incomplete fixation of the limb by inefficient splints; (3) local anæmia due to tight bandaging; and (4), imperfect apposition of the fragments. It is important to ascertain if there is any condition of the patient which is responsible for general mal-nutrition. Locally, the most important consideration is to immobilize the fragments effectively without undue pressure or interfering with the circulation. Delay is often due to the patient's being kept too long in bed. Absolute non-union is of very rare occurrence; nearly all fractures unite ultimately with patient treatment. The most common general cause of non-union is syphilis; among the rare ones are phosphaturia, pregnancy, scurvy, and rickets. It is a fallacy to suppose that non-union is particularly prone to occur in old people. Non-union occurs seven times as often in males as in females. The local causes of non-union are, as a rule, more important than the general. In a severe compound fracture with much comminution of fragments, succeeded by necrosis and extrusion of fragments, non-union is likely to follow. The result of non-union is a false joint. In very rare cases only is there any attempt at the formation of a true joint cavity; that is to say, a membrane of fibrous tissue uniting the two lone ends. The most striking symptom of non-union is abnormal mobility, which is often painless. Functional troubles in the limb are very common; if the fracture is near the trunk, most of the coarser movements are lost, and the part may waste. If union is so much delayed that it appears that complete failure may occur, one is not called on to operate immediately. Be patient, improve the general health, immobilize the fracture, and wait. In some cases massage may be of great value, and it is well to examine the fracture from time to time by the x rays. Certain methods formerly advised should be avoided. These are the injection of irritating fluids, acupuncture, the introduction of setons and foreign bodies, and electrolysis. Rubbing the ends of the fragments together and subcutaneous section of fibrous callus are also to be discouraged. But certain well-recognized measures have become permissible since the advent of aseptic surgery: These are refreshment of the ends of the fragments; resection of the fragments and fastening them together, either by wire or by screws, or by the application of a bone ferrule; and transplantation of bone. The success of wiring depends largely upon whether the anatomical conditions will allow safe access to the surfaces of the bone. In the case of the upper third of the femur, it is extremely difficult to expose the whole circumference of the ends of the fragments.

Colles's Fracture and its Treatment. By Dr. J. Griffiths.

A Case in which, after Erasion of a Tuberculous Elbow, a Thin Gold Plate was Buried in the Joint for Two Months. By C. B. Keetley, F. R. C. S.—The author reports the case of a girl, aged seventeen years, upon whom erasion of the elbow joint was performed for tuberculous disease. With a view to preserving the mobility of the joint, a thin gold plate was spread over the end of the humerus. The plate was removed two months later, the arm meanwhile having been kept in a plaster splint. Within a week the patient had acquired a great deal of smooth and painless mobility in the joint. She is at present at work, and uses her elbow freely.

An Oblique Pelvis Associated with a Congenital Dislocation of the Hip-joint. By L. Phillips, M. B.

An Outbreak of Epidemic Catarrhal Jaundice in Derbyshire. By Dr. H. Peck.—The author reports an epidemic of catarrhal jaundice coming under his observation. His conclusions are as follows: 1. He believes the disease to be icterus gravis, or epidemic jaundice, sometimes called Weil's disease. It differs from the accounts given of previous outbreaks in its onset being sometimes gradual, and in the comparatively low temperatures recorded. 2. The incubation period is perhaps six or seven days. 3. The period of duration of the disease, from exposure to infection to commencing recovery, is ten or twelve days, but the jaundice may persist after complete recovery in other respects. 4. The mode of infection cannot be deduced by consideration of the cases recorded in this outbreak. 5. The disease is not due to the ingestion of food or drink. 6. The disease is probably carried by individuals. About 140 cases occurred. The onset was gradual, with general malaise and headache. After a few days, vomiting would come on, followed in twenty-four hours by jaundice. Fever was present for the first day or two, but disappeared on the appearance of the jaundice. The spleen was frequently enlarged, and there was tenderness over the liver. One case proved fatal; the conditions found at the autopsy pointed to the death being due to acute yellow atrophy of the liver, probably accelerated by epidemic catarrhal jaundice.

Presse médicale, November 6, 1901.

General Enterococcæmia. By M. Hulot and M. Rosenthal.

When and how to Administer Salicylate of Sodium.—M. Alfred Martinet says that the first indication is to obtain the specific action of the drug in cases of acute articular rheumatism; the second is to secure an antithermic and eliminative effect in the acute infectious diseases, the diseases of nutrition, and the uric-acid diathesis; the third is to obtain a cholagogue action by modifying the biliary secretion. Intolerance, says the author, is rare. If nausea arises, it can be overcome by administering sodium bicarbonate simultaneously. If the nausea persists, methyl salicylate may be given in capsules. The nervous phenomena, such as tinnitus aurium,

cephalic congestion, and vertigo, may constitute a contraindication. Relative contraindications are pregnancy, old age, and recurrent attacks of rheumatism with visceral complications. Cardiac insufficiency and interstitial nephritis form serious obstacles to the employment of the drug.

November 9, 1901.

General Anæsthesia Obtained by High Spinal Cocainization.—M. Chaput says that, with intrarachnoid cocainization, one can obtain high degrees of total anæsthesia, even with small doses. To obtain anæsthesia of the upper extremities, a dose of four centigrammes is satisfactory. The face and skull cannot be anæsthetized by this means to a sufficient degree to operate without pain. Isotonic solutions are best and most rapidly absorbed. No serious accidents have followed injections of cocaine in small doses into the upper part of the spinal canal.

Two Immediate Deaths from Spinal Cocainization.—M. F. Legueu reports two such instances. One patient was an old man who had remained unconscious for many hours following a fall, in whom general anæsthesia was deemed inadvisable. Operation was necessary on account of his injuries. Immediately upon the beginning of the operation, the patient had convulsive seizures and died. He had received two centimetres of a one-per-cent. solution of cocaine. The second patient was a man, sixty-two years of age, who had a strangulated inguinal hernia. One centigramme and a half of the same solution was injected. The patient vomited immediately, became pale and covered with a cold perspiration, and dyspnœa appeared. He died in six or seven minutes. The author, in the light of his experience, regards cerebral congestion, arterio-sclerosis, and severe renal lesions, as contraindications to the use of cocaine by the intra-arachnoid method.

Gazette hebdomadaire de médecine et de chirurgie, November 3, 1901.

Surgical Intervention in Dystocia Due to Fibroids.—M. André Boursier concludes that fibroids may cause dystocia by creating a bad fœtal position, by interfering with uterine contractions, and by forming a mechanical impediment to delivery. The last-mentioned disturbance is usually caused by fibroids in the lower uterine pole or in the pelvis. Fœtal or uterine dystocia is justifiably a cause for obstetrical intervention, and dystocia due to fibroids is justly a cause for surgical intervention. Symphysiotomy should never be practised in these cases. Pelvic-abdominal fibroids should be removed by abdominal section. Total abdominal hysterectomy is the operation of election, while, in exceptional cases, the Cæsarean section or Porro's operation may be performed.

Berliner klinische Wochenschrift, November 4, 1901.

Histological Effects of the Tubercle Bacillus. By Dr. P. Baumgarten.—(Continued article.)

Antero-lateral Colpo-cœliotomy.—Professor Dührssen describes this operation of his devising and enumerates its advantages: 1. Parametric abscesses can thus be opened and, simultaneously, conservative operations on the tubes and ovaries can be performed. 2. It offers as good a route to the uterine appendages as a total hysterectomy. 3. It allows one to anchor infected pedicles into the vaginal wall entirely extra-peritoneally. 4. It permits of excellent pelvic drainage. The author enumerates the indications for incising the broad ligament as it must be done in this operation: 1. To reach ovarian abscesses and pyosalpingitides, which can be cured by simple opening and drainage. 2. To facilitate reaching the appendages when the uterus is tightly bound to one side of the pelvis by old perimetric and parametric adhesions. 3. To anchor, extraperitoneally, inflammatory inflamed appendages. 4. For drainage after soiling of the peritonæum by pus, etc. 5. To secure tight tamponing when there is bleeding from the peritoneal surface of the uterus from severed adhesions. 6. To suture and drain after rupture of the uterus.

Treatment with the Hot-air Douche.—Dr. B. Belzer reports the successful use of this apparatus in many cases of neuralgia, tabetic pains, sciatica, rheumatic pains, and scleroderma.

Pathological Anatomy of Spinal Paralysis in Children.—Dr. Placzek describes his findings in a case, the most essential point being that the gray anterior horns, in their entire length, were affected while the meninges and the white matter were untouched. He concludes that in children there can be a form of anterior poliomyelitis in the anatomical sense, which does not always correspond clinically with a myelitis.

Wiener klinische Wochenschrift, October 24, 1901.

Operations for Vesical Calculi.—Dr. Otto Zuckerkindl says that a radical cure may be obtained, either by a suprapubic cystotomy, or by the operation of lithotripsy. The latter has the advantage over the former, in that the mortality rate is lower and recurrences are fewer (except in cases of enlarged prostate with pockets or diverticula). Lithotripsy is practicable in stones of any kind that are movable in the bladder when the urethra permits the passage of solid instruments. Perineal lithotripsy should be performed in cases of prostatic hypertrophy, of urethral strictures and fistulæ, and when the urethra contains calculi. Cystotomy is to be practised when the stones are too large to permit of the free use of instruments in the bladder or when they are buried in diverticula.

Diagnosis of Aneurysm of the Mesenteric Arteries.—Dr. Gustav Gabriel, from the study of a case with autopsy, says that the diagnosis of this condition is a likely one when there has been a recent malignant endocarditis combined with hemiplegia and a rapidly growing tumor in the abdomen of a child, for which no other cause can be ascertained.

Tracheoplasty. By Dr. Roman von Baracz.

Riforma medica, September 14 and 16, 1901.

Ovarian Cytotoxine. By Dr. A. Ceconi and Dr. E. P. Robecchi.—The authors have attempted to prepare a specific cell toxine which will produce experimental lesions in the ovary. Their method of procedure was analogous to that employed by the investigators who have tried within the past few years to generate in one species of animals a cell-poison which would produce specific lesions in some organ of another species of animals. The cytotoxines of the kidney, liver, spleen, pancreas, brain, and spinal cord, etc., have thus been produced with more or less positive results. The authors used rabbits and guinea-pigs in their experiments, and proceeded somewhat as follows: They prepared an emulsion of the ovary and tubes of a guinea-pig, and injected the emulsion into rabbits. A series of these injections was given to the rabbits either subcutaneously or into the peritoneal cavity. After watching the animals and feeding them for a few days, they killed the rabbits, and obtained the serum from the blood of these animals under aseptic precautions. The serum was then injected into guinea-pigs, with the idea that, in this serum, there had developed a series of toxins, which resulted from the injection of the emulsion of the guinea-pig's ovaries into the rabbit's blood, and which in turn would produce in the guinea-pig inoculated with the serum, some specific lesions of the ovarian parenchyma. The guinea-pigs inoculated in this manner were therefore killed after a varying interval of time, and the ovaries examined. The authors did not find such lesions in the ovaries of these animals, as would justify a conclusion that the ovarian cytotoxine prepared by them was specifically toxic toward the ovaries of the species inoculated with it. They found, however, that when in contact with the cytotoxic serum thus prepared, the epithelial cells of the Fallopian tubes showed paralysis of their ciliary processes. This would indicate a mild toxic action on the part of the serum. Further experiments are needed to establish the significance of ovarian cytotoxic serum. If it were possible, for example, to keep a number of female animals which were not pregnant before they were selected, in cages with males, and to inject into the females, periodically certain quantities of ovaritoxic serum, and if, then, these females ceased to bear young, the effect of the serum on the ovarian function would be proved.

September 17, 18, and 19, 1901.

The Alleged Toxicity of the Secretions of Intestinal Worms. By Dr. G. Cao.—The author concludes from a study of the results of other observers, and from a long series of his own experiments, that the toxicity of intestinal worms is by no means proved. The results of his experiments weaken the toxic theory of helminthiasis to a considerable extent. Later experiments, conducted upon other species of worms, however, may give different results. The secretions of the worms with which he conducted his experiments, *Tania expansa Rudolphi*, *Ascaris lumbricoides*, and *Gigantorhynchus*, are perfectly innocuous.

September 21 and 23, 1901.

On the Minute Changes in the Cells of the Liver and Kidneys in Infections. By Dr. B. Pernice and Dr. G. Riggio.—The authors have examined the minute structure of the liver and kidneys, in a case of puerperal septicæmia, in two cases of epizootic in cattle, and in experimental infections with anthrax, *Bacillus pyocyaneus*, and staphylococci, in rabbits and guinea-pigs. They found that, not only were various degrees of intoxication produced by the toxins generated by the germs in question, but each infection was characterized, quantitatively as well as qualitatively, by its effects upon the cells. Thus, in puerperal septicæmia, the cells of the liver and kidneys gradually shrank, and became pale and granular; in anthrax, pyocyaneus infection, and epizootic, on the other hand, the protoplasm became vacuolated and broke down. The first type of lesion resembles, in a measure, the effects of malnutrition, inanition (cellular atrophy), while the second is analogous to the toxic effects of phosphorus.

Fratch, November 3 (New Style, November 15), 1901.

On Ruptures of the Liver. By Dr. B. K. Finkelstein.—The author reports four cases of rupture of the liver uncomplicated by other traumatic lesions of the abdomen. In three of these, laparotomy saved the patient's life. In the fourth case, the patient's condition was so grave that there was no hope for recovery. Not all wounds or ruptures of the liver indicate operative intervention. Small ruptures or tears sometimes are accompanied by slight clinical manifestations, and simply mean an accumulation of blood and bile under the vault of the diaphragm. This may be absorbed, or it may give, later on, symptoms of subphrenic abscess. In three cases reported by Netchaeff, there was a serous and biliary exudate under the diaphragm. The chief danger of such ruptures is in the hæmorrhage. Ice on the abdomen and quiet are the only measures advisable if we decide to wait and not to open the abdomen immediately. If hæmorrhage into the peritoneal cavity is diagnosed, the operation is indicated. Shock should not be considered a contraindication to laparotomy. In a total of 36 cases collected from literature the author finds 21 recoveries. The operative treatment consists in the arrest of hæmorrhage and in the drainage of the escaping bile. For this purpose, tamponing is the best means. Suturing the liver is not a good practice. In the 21 cases in which patients recovered from the operation, only three had sutures, 14 had tamponing, 1 had sutures and tampons, and, in one, scalding the ruptured surface with hot water was used. The Paquelin cautery, as employed in one case by Bardenheuer, is not to be recommended. The author believes that tampons should be introduced in all cases of rupture of the liver during the laparotomy, as, although the bleeding may have stopped at the time of the operation, it may start again later on after the abdominal wound is closed.

Cases of Stab-wounds of the Liver. By Dr. I. I. Grekoff.—The author reports three cases of stab wounds of the liver, and from a study of the subject concludes that the proper operative procedure for punctured and incised wounds of the liver is the application of sutures to the parenchyma. The application of sutures, however, is possible only in wounds of the liver that are situated in some accessible portion of the organ. Deep wounds, so situated that they cannot be exposed, should be plugged with tampons.

The Influence of the Condition of Accommodation upon the Curvature of the Cornea. By Dr. B. A. Dobroslavine.

The Diagnosis and Non-operative Treatment of Complete Rupture of the Uterus during Labor. By Dr. D. D. Popoff (*concluded*).—The methods of treatment are as follows: Tamponing of the rupture and peritoneal cavity; irrigation of the tear and of the peritoneal cavity; drainage by means of a tube and a wick of iodoform gauze; capillary drainage of the cervix and of the uterine cavity. Tamponing should be reserved for cases in which other procedures are not possible. Irrigations are not very promising, but cautious washing out of the uterine cavity may help to disinfect the parts and to facilitate the healing of the rupture. Tubular drainage is advocated by Klein, but other authors are not so enthusiastic over its value. Capillary drainage of the cervix, and in some cases of the uterine cavity, offers, according to the author, the best chance for success in uterine ruptures. The edges of the rupture must be first approximated as much as possible, by direct pressure with the fingers or by pressure from the outside through the abdominal wall. A strip of iodoform gauze is then introduced as far as necessary without reaching the wound itself. The author found that in a very few hours the wound began to heal, and that the drainage was all that was necessary to prevent infection.

A Case of Multiple Neuritis of Gonorrhœal Origin. By Dr. I. I. Kankarovitch.—The patient was a young man, twenty-two years of age, who had been married only ten days when he contracted gonorrhœa. He was treated with santalwood oil and silver protein, and on the third day was seized with an attack of chills, fever, pain in the head, pains in the limbs, and in every other part of the body. On the following morning there appeared a maculate eruption consisting of red spots of various sizes. On the fifth day a marked hyperæsthesia of the skin of the extremities, especially of the lower extremity, appeared. On the sixth day there was paresis of the extremities, especially in the legs and feet. Later on, there was also atrophy of the paretic muscles. The characteristic painful spots on the principal nerves were present. The case began, therefore, similarly to an acute articular rheumatism, and continued as a multiple neuritis. The author believes that in his case the neuritis was due to the absorption of the toxins of the gonococcus by the blood.

Proceedings of Societies.

SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

*Fourteenth Annual Meeting, Held in Richmond,
November 12, 13, and 14, 1901.*

The President, DR. MANNING SIMONS, of Charleston, in the Chair.

(Continued from page 1078.)

Aneurysm of the Abdominal Aorta.—Dr. E. G. WILLIAMS, of Richmond, reported a case which had been treated by injections of a solution of gelatin into the cellular tissue with marked beneficial results.

Closure of the Abdominal Incision, with Remarks upon the Cause and Treatment of Ventral Hernia.—Dr. I. S. STONE, of Washington, read this paper. Ventral hernia following abdominal operation, he said, was generally due to wound infection and suppuration, with loss of fat and cellular tissue. Hernia might, however, result from imperfect wound coaptation or be a result of some accident after the operation. It was not infrequently due to enteroptosis, which might prove an obstacle to success and defeat all attempts at relief, however well planned. In all ventral herniæ the skin and peritonæum would be found united, a condition which doubtless began soon after the wound was closed. Wound infection would usually result in suppuration with loss of tissue, which left a space between the parts and also permitted the sutures to become loose. This space was filled with granulation tissue as healing progressed, but an important change had already occurred, namely, the peritonæum and skin were nearer together than before, and the separation of the muscle and fascia had perhaps allowed the entrance of a wedge of peritonæum to still farther separate the walls of the wound. It was easily seen that in this way a ventral hernia was practically assured before the wound had entirely healed or, at least, before firm union had taken place. In fat subjects the greater liability to wound infection increased the danger of hernia, and in these there was the additional factor of greater intraabdominal pressure. The author had had excellent results with both buried and through-and-through transfixion sutures. He preferred the latter, because the material was sterilized with more certainty and the closure required less time. He preferred to make the incision in or near the median line; he did not avoid the muscle, but divided the fibres directly down to the peritonæum.

One of the precautions taken by the writer was to excise the long flap of peritonæum before placing the sutures. This excessively long flap was not well nourished, and, if allowed to remain, it favored a collection of blood or serum between it and the muscle in front. In any wound from three to six inches in length a strip of peritonæum one or two inches in width might be removed with advantage. This disposed of that portion of the peritonæum which had been over-stretched during the operation, had possibly been infected, and was not well nourished. The removal of the flap permitted of a perfect edge-to-edge coaptation and prevented, to some

extent, the wedge of peritonæum, which was the beginning of a ventral hernia.

My First Abdominal Section.—Dr. THADDEUS A. REAMY, of Cincinnati, read a paper with this title. The operation was done in February, 1864, at the patient's house. She was sixty years of age, married, the mother of three children. The cyst removed proved to be multilocular, weighing, with its contents, forty-six pounds. The incision was made in the median line, and was five inches in length. Adhesions to the parietal peritonæum were extensive and at many points comparatively firm. On their separation, which was done by the fingers, a sponge, and the handle of a scalpel, considerable and persistent hæmorrhage supervened. Before he attempted to extract the tumor, it was tapped with an ordinary trocar, and the patient turned upon her side to let the fluid flow into a vessel. The pedicle was ligated *en masse* by a heavy cord of shoemaker's thread (not silk). One interesting feature was the manner in which hæmorrhage was controlled in this case. Regarding this point, Dr. Reamy said: "The weather was cold, with an abundance of clean snow on the ground. I ordered some brought in. Compressing it with my hands into firm balls, it was held against the bleeding surfaces. The bottom of the pelvic cavity soon contained quantities of water from the melting snow, mixed with blood. This was sponged out and the compression with snowballs continued. In a comparatively short time, to my delight, the hæmorrhage ceased. The abdominal incision was closed by through-and-through sutures of the same material and size as that used for ligating the pedicle." The patient made an excellent recovery.

Dr. Reamy then briefly compared some of his more recent work with his earlier work, and said that the results had certainly not been better than those secured by other operators as favorably situated. In his last series of one hundred cases of abdominal section for all causes, the mortality was six per cent. In the preceding one hundred cases the mortality was eight per cent., three of the deaths being in bad pus cases. In the series of one hundred cases preceding this, the mortality was nine per cent. Excluding other conditions and selecting only cases of simple and compound ovarian tumors, out of the three hundred cases cited, the mortality was but two per cent. In making his estimate of the value of this experience, he desired to state that within the last six years, more than ever before, he had selected his cases. He declined to operate in cases of far-advanced malignant disease of the uterus where others would operate.

The whole number of abdominal sections done by him within the thirty-seven years intervening since the case reported was 1,600. This did not include 204 vaginal hysterectomies done by him, with six deaths and 198 recoveries from operations.

Some of the Avoidable Causes of Disaster in Appendicitis Work.—Dr. ROBERT T. MORRIS, of New York, read a paper on this subject. Among other things, the author said: "If we step out upon the street and get ten healthy policemen, and put half a yard of gauze into their abdominal cavities to-day, we shall find at the end of a week that 'we did not get them in time.' That is an excuse which is so often offered when we try to make a weak and

poisoned appendicitis patient bear what strong men cannot bear. If, in addition to the mechanical insult offered by gauze packing, we add the chemical insult of iodoform, we should have still fewer of these policemen in time. They would have what most house surgeons would call septicæmia. The differential diagnosis between septicæmia and dangerous iodoform poisoning is difficult to make, except on the objective evidence offered by the presence of iodoform in the wound, the presence of free iodine in the urine, and a wound of healthy appearance while the patient is failing. In insidious iodoform poisoning the wound looks well while the patient does not. In septicæmia neither the wound nor the patient looks well. That is a constant diagnostic difference. Gauze packing shocks the patient, lessens his natural resistance, and consequently interferes with his manufacture of phagocytes. Treatment of to-day should avoid interference with the patient's ability to furnish abundant leucocytes. Accessible statistics show us that we do not need to employ gauze packing in our appendicitis work.

"Extensive and multiple incisions lessen the patient's ability to furnish leucocytes for the occasion when all his natural protective powers need to be respected by the surgeon. A beginner needs a great deal of room at the patient's expense, but it is in the interest of the patient to work chiefly by the sense of touch through small incisions. In other words, to come as nearly as possible to letting the patient alone. Another approach toward the idea of letting the patient alone consists in rapid work without much exposure or handling of bowel. Almost any appendicitis operation, no matter what the complications, should be completed in from fifteen to thirty minutes. Many a patient who is holding finely to his natural resistance at the end of fifteen minutes has lost it at the end of forty-five minutes. The idea that the surgeon must get all the pus out of the peritoneal cavity is out of date. The leucocytes will attend to the matter more effectually. The principle is this: The bacteria and the leucocytes are at warfare with each other in any case of infection. The leucocytes may be almost on the point of winning, but not quite. If we step in and help the leucocytes by removing most of the pus, with its army of bacteria and toxins, the balance of power is transferred to the phagocytes, and they are competent to care for the case, as a rule, if the surgeon himself has not disabled the patient's resistance. It is a constant surprise to see how well appendicitis patients recover, and without post-operative complications, if we make the way easy for them. The best way, of course, to avoid disaster is for the surgeon to do the operation before the bacteria have operated very much. Physicians sometimes overlook the fact that while the patient is undergoing an operation the bacteria are still at work upon the appendix, so that it really comes to be a question as to who shall be allowed to operate in the case, the bacteria or the surgeon."

The President's Address.—Attention was directed to the deaths of Dr. Hunter McGuire, of Richmond, and Dr. W. D. Haggard, of Nashville, both founders of the association, who had died during the year. These gentlemen had been eminent in their profession, and honorable and upright in

their private lives, and their death was an irreparable loss to the association.

Speaking of medical societies, the president stated that they were the natural outcome of the development of the science and art of medicine and surgery, and for this reason they had multiplied in recent years to fulfill the purpose of discussing propositions bearing on the promotion of more systematic observation and plans of operation and of greater uniformity in the mode of publishing results, as well as for the consideration of matters on which the co-operation of corresponding societies was desired. To the wonderful development of medicine and surgery during the nineteenth century might be traced the increase of such organizations. Private scientific societies had originated chiefly during the past century, the demand for their existence being due to the necessity of increased organization of rapidly developing knowledge and the desire among workers for a common ground to meet, discuss and compare results, and collect facts for subsequent generalization.

There had been a general demand for specialism in every department of life in recent years, and in medicine and surgery particularly had this demand been evident, both in the profession and among the laity. Patients now demanded and required special treatment of their ailments, and this requirement had been met by the division of medicine and surgery into many departments. As was usual in the development of a new idea, there was a tendency to go to extremes, and we now found even the recognized specialties undergoing subdivision in accordance with the trend of individual inclination. It was probably admitted that general knowledge was the aggregate of special knowledge, but, conversely, individual special knowledge was attained at the expense of general information. Accurate diagnosis naturally formed the basis upon which successful operative work must rest, and it must be admitted that skilful diagnosis depended upon extensive general knowledge. Acuteness in diagnosis was the result of general learning and familiarity with all the elements conducive to a true appreciation of symptomatology and pathology.

With reference to qualifications, there should be some provision of a like kind for special examinations to determine the qualifications of those who desired to enter upon the practice of a specialty, and particularly that of surgery and gynecology. In these days of materialism it would seem out of season to speak of the sentimental aspect of medicine, but medicine certainly had its sentimental side. The times had changed, and physicians had changed with the times. The demands of modern medicine had to a large extent divested the practice of medicine of the sentiment that formerly surrounded it. It was a question to what degree specialism had led physicians into the paths and methods of ordinary business.

Results Obtained in Sixty Operations for Prostatic Hypertrophy, with a Demonstration of a New Cautery Incisor.—Dr. HUGH H. YOUNG, of Baltimore, read a paper on this subject. Stimulated by the work of McGill, Belfield, and others, and having performed prostatectomy in ten cases without a death, the author had encountered some cases

of prostatic enlargement in very old men which seemed to be entirely beyond the reach of a radical operation. On account of these cases he began a trial of the Bottini operation, and the present paper was intended to show a comparison of the two methods and the results he had secured. These sixty cases were classified as follows: Prostatectomies, 15; Bottini operations, 40; miscellaneous operations, castrations, etc., 5; total, 60. Taking the prostatectomies, 12 were suprapubic and 3 perineal. The ages were four between 65 and 67, two between 60 and 65, five between 55 and 60, two between 50 and 55, and two between 48 and 50. The condition was fairly good, in all but three cases. Calculus was present in 5 of the 15 cases, and in six the patients had led catheter lives. In 7 of the 15 cases the hypertrophy was very large; in 3 it was merely a small pedunculated middle lobe. In 11 cases complete enucleation of the entire prostate was done. In some cases the tumor removed was extremely large. Results: 15 operations, with 2 deaths. Both of these deaths should not have occurred. One patient was undoubtedly septic, had pus-kidneys, and should not have been operated until later. In the other case death seemed to have resulted from an infection of the breast after submammary infusion. Of the thirteen patients still alive, twelve have gone for periods between six months and three and a half years since operation. Of these twelve, ten might be classed as cured, having no prostatic obstruction and having normal urination. Two were perfectly cured so far as the prostate was concerned, but suffered from cystitis and a contracted bladder, which rendered urination frequent, though they were much better than before the operation.

Taking the Bottini operations, forty in number, six have not been followed. The thirty-four remaining operations were performed on thirty-one patients, three patients having two operations each. The ages were as follows: Over 80, three patients; between 75 and 80, three patients; all cured. Between 70 and 75, nine patients; between 65 and 70, six patients; between 60 and 65, six patients; between 55 and 60, four patients. In all, eighteen patients over 67 years of age; whereas, among the prostatectomy cases, none were over 67 years of age. Of fifteen cases over 70 years of age, all were now alive and well. In twelve of the thirty-one cases, the general condition had been very poor. The prostatic hypertrophy was very great in seventeen cases, moderate in eight, and slight in six. All forms and grades of prostatic hypertrophy were represented, from a large, soft, succulent prostate to the small, sclerotic, not enlarged prostate. Results: In all prostatic cases, the ultimate results depended not entirely upon a cure of the prostatic obstruction, but upon the condition of the bladder which persisted. If cystitis was present, it might lead to very frequent urination. If the bladder was markedly contracted, it also might lead to frequent urination, although all obstructive symptoms were absent. Then, again, if the prostate or bladder was of the irritable class, this, too, might simulate frequency from prostatic obstruction, so that as to ultimate results the condition of the bladder as well as the prostate had to be considered. In the author's experience, both after prostatectomy and after Bottini operations cystitis was likely to persist, although

generally very much improved in most of the cases. Of the thirty-one Bottini cases which have been followed, sixteen patients still had bladder infection, and others had not been heard from. In ten the capacity of the bladder was diminished, and in some cases the organ was markedly contracted. In two cases, although all obstruction was removed, there was no residual urine present and there was no infection. The irritability of the bladder persisted, and this at times rendered micturition extremely frequent, although prostatic obstruction was absolutely cured. It might be said that these condition followed all prostatic operations, and demanded that the bladder be systematically treated for some time after all prostatic operations.

In discussing the Bottini operation, the author brought out the point that the instrument devised by Freudenberg, while an admirable one, should have more than one blade, so that the operator might have a choice as to the depth of cut which should be made in accordance with the size of the prostate. The beak of the instrument was much too sloping, so that several cases had occurred in which the beak slipped into the urethra and caused dangerous hæmorrhage, sometimes with death. In order to correct this and other defects, the author had devised an instrument which, like the Freudenberg instrument, but with four interchangeable blades, could be used according to the case, whether the prostate was large or small. With this instrument he had now performed nine operations, using in those cases all the blades but one, and could testify to the great service of the ability to use some discretion in the size of the blade that was employed in accordance with the prostatic hypertrophy. The instrument seemed necessary for cases of small sclerotic prostate, which, although producing very serious obstructive symptoms, was so small that the ordinary Bottini operation was dangerous. By using blade No. 1 or blade No. 2 of the new instrument, the operation could be done with perfect safety, and a cure resulted in all cases.

(To be concluded.)

Book Notices.

BOOKS, ETC., RECEIVED.

Water and Water Supplies. By John C. Thresh, D. Sc. (London), M. D. (Victoria), D. P. H. (Cambridge), Honorary Diplomat in Public Health, Royal College of Physicians and Surgeons, Ireland, etc. Third Edition, Revised and Enlarged. Philadelphia: P. Blakiston's Son & Company, 1901. Pp. xv-527. (Price, \$2.)

The Four Epochs of Woman's Life. A Study in Hygiene. By Anna M. Galbraith, M. D., Fellow of the New York Academy of Medicine, etc. With an Introductory Note by John H. Musser, M. D., Professor of Clinical Medicine, University of Pennsylvania. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 7 to 200. (Price, \$1.25.)

The Baby. His Care and Training. By Marianna Wheeler, Superintendent of the Babies' Hospital, New York, etc. Illustrated. New York and London: Harper & Brothers, 1901. Pp. v-189. (Price, \$1.)

An Experimental and Clinical Research into Certain Problems relating to Surgical Operations. An Essay awarded the Alvarenga Prize for 1901 by the College of Physicians of Philadelphia. By George W. Crile, A. M., M. D., Ph.D., Professor of Clinical Surgery, Medical Department, Western Reserve University, etc. Philadelphia: J. B. Lippincott Company, 1901. Pp. 3 to 200.

Miscellany.

Medical Zolaism on the Stage.—The *Lancet* for November 30th gives an account of a new play by M. Eugène Brieux, the production of which in Paris has recently been interdicted. *Les Avariés* is described as a play having for its subject a study of syphilis in its relation to marriage; the piece, the author says, has in it nothing of a nature to cause scandal and contains no obscene word. It is divided into three parts. The first scene takes place in the consulting-room of a medical specialist who is called upon to advise a patient, "l'Avarié." M. l'Avarié, if for convenience he may be so called, is a young man who was about to make a successful marriage, a marriage indispensable from a worldly point of view, and otherwise desirable because he loves his *fiancée*. The preliminaries have been settled and the marriage contract is signed. Then M. l'Avarié, although rather a good young man (*pas coureur ni débauché*), has the misfortune to contract syphilis in the usual manner, whereupon he consults the physician and learns that for him to marry in his present condition will be a crime, the various ills which might affect his wife and children being duly pointed out to him. The physician comforts him by saying that in the course of three or four years a real cure can with care be effected. M. l'Avarié promises that he will not marry. At the beginning of the second act it is discovered that M. l'Avarié has married the lady and they have a baby, aged some months. M. l'Avarié, to his credit it must be observed, had postponed the marriage for a time and had undergone some quack treatment which was credited with having caused the disappearance of the prominent symptoms of his malady. All goes well and the marriage is a success. M. l'Avarié's mother is extremely fond of her grandchild and sees him as often as possible, for the child is out at nurse. Unexpectedly she returns with the nurse and the child, for the country doctor has ordered that wet nursing should be given up and that the child should be fed with a bottle. Then the grandmother, wishing to get at the root of the matter, consults a specialist who, as every experienced playgoer must expect, turns out to be our friend of the first act. The doctor asks to see the father of the child and recognizes his old patient. Madame l'Avarié has escaped infection, but the child has not. The wet-nurse ought no longer to run the risk of danger. So says the physician. But the grandmother wishes the nurse to stay, otherwise the child might die. What matter if the nurse runs a risk? If she becomes infected they can pay her. However, the nurse chooses to go and demands her money, whereupon M. l'Avarié refuses to pay. Then the nurse, touched in her pocket, turns on him and tells him that she knows the nature of the illness, and Madame l'Avarié overhears the end of the conversation. In the third act a new character appears, the father of Madame l'Avarié, a *député*. He is received at the hospital by the physician who presumes that he has come to get some information for use in the cause of hygiene. He has in reality come to obtain a certificate from the physician to enable him to sue for a divorce for his daughter who has returned to him. The physician declines.

He also advises that the nature of the child's illness should be kept secret. A cure is possible. A public scandal can never be obliterated. He advises pardon, patience for the present, and hope for the future. So the play ends.

"That the scabrous theme of hereditary syphilis," says the *Lancet*, "which has already been used as a *motif* by Ibsen, is here treated by M. Brieux discreetly may be true, but the production of such work at a theatre cannot be recommended. The lessons in practical life and morals may all be sound and forcibly inculcated, but most people expect recreation and the creation of pleasant emotions at the theatre; they do not want instruction in the pathological sequelæ of venereal disease."

Medical Examination and Marriage.—The *New York State Journal of Medicine* for December says that every few months we read that some State has passed, or contemplates the passage of, a law restricting the marriage of the unfit, forbidding marriage without a medical certificate of health, and denying it entirely to the subjects of syphilis, epilepsy, tuberculosis, and gonorrhœa. The idea seems to find favor with the profession, but the *State Journal* believes that it is pernicious in the extreme and would not be countenanced by those who have given thought to more than one side of the question. Contrary to a number of recent writers, it believes it is good public policy to make marriage as easy as possible. In countries where marriage has been made difficult, owing to ceremonial expenses, or impossible because of army service, a very large proportion of the unions are merely tentative and temporary, while the women are without any protection, legal or religious, and may be deserted with their children without notice. The attraction of the sexes is a natural and strong one, and if denied legitimate expression will find illegitimate channels. While we may admit the right of society, says the *State Journal*, to forbid marriage of idiots or the mentally diseased, we contend that the syphilitic and tuberculous have a right to marry; they have a right to what happiness they can get out of a diseased life, and to forbid this is none the less tyranny because exercised in the name of society. To be sure, they have a responsibility for their offspring, but it is not to man. The theory takes no account of the fact that the sound body does not by any means always mean the sound mind, and that such a law would deprive society of some of its brightest minds. Education is the only right way of limiting the marriages of the unfit. Show every man and woman, if you will, the dangers of disease, but if they persist do not forbid marriage, lest a rebellion against the social tyranny drive them to a course which is worse, both for them and theirs and for society.

The Treatment of Cough in Pulmonary Consumption.—Dr. Arthur Latham (*Scottish Medical and Surgical Journal*, May) considers most pernicious and productive of incalculable harm to tuberculous patients symptomatic treatment such as is implied in the general text book phrase. "The cough of phthisis must be combated by the usual remedies; most prescriptions contain a small dose of opium or morphine, together with tolu, ani-

seed, benzoic acid, or some other of the so-called expectorants." The cause of the cough that appears in the course of pulmonary consumption the author groups under the following heads: (1) Reflex irritation, especially from sources other than the air passages, without any need for expectoration. (2) The necessity of removing accumulated fluid. (3) Causes other than, though often dependent upon, the original disease. Naturally, the divisions of this classification, as in all other classifications, overlap one another, but a few examples will make it clear.

All forms of cough are, properly speaking, reflex, but as causes of (1) reflex irritation—in the somewhat restricted sense—may be mentioned exposure to sudden differences of temperature, wind, or dust, and exertion, as rapid walking, talking, and the like. Other causes are pleuritic irritation, or dryness of the throat—this latter brought on, perhaps, by the exhibition of belladonna for night sweats. Again, not infrequently a distressing cough comes on after food, and ends in vomiting. This may be due to various conditions of the stomach, which set up reflex cough by exciting the endings of the vagus nerve; or, it may be due to tenacious mucus tickling the fauces. As examples of (2) "the necessity of removing accumulated fluid," may be cited the morning cough of phthisis, due to the accumulation of the expectoration during the night, or the cough in advanced cases, brought on by the accumulation of material in phthisical cavities, or by a sudden change of position. Among (3) "causes other than, though often dependent upon, the original disease," may be mentioned chronic catarrh of the pharynx, which is the main cause of cough in a surprisingly large number of individuals who live in large towns. Other examples are tracheitis, laryngitis, whether tuberculous or not, an intercurrent attack of bronchitis, and the like.

The author recently had the good fortune to spend a few weeks at Dr. Walther's Sanatorium in Nordrach-Colonie, and was much interested by the fact that, during the time he was there, he hardly ever heard one of the sixty odd patients cough during the day time; a few of the more advanced cases occasionally had to get rid of expectoration; but this was done without any cough, in the ordinary sense of the term. Many of these patients went to Nordrach with a cough, but this symptom disappeared in a few weeks. Any one who is familiar with *effective* open-air treatment must have noticed this striking result. Therefore the author maintains that to alleviate a cough that is in any way dependent upon pulmonary tuberculosis, we must first place our patient as far as possible under ideal conditions for the treatment of the original disease. These ideal conditions are: (1) absolutely regular life, so that neither the body, nor any portion of it, is put to any severe strain; (2) good nourishing food; (3) constant supply of fresh air at a uniform temperature and avoidance of dust and all sources of irritation. Sudden changes of temperature must also be strictly avoided.

As to medicinal treatment, the cough which occurs first thing in the morning and is accompanied by expectoration, is useful, and must never

be checked by a sedative. We can aid by giving some warm drink, as milk or tea, before the patient rises. Or we may give a dessert-spoonful of rum to a claret glass of warm milk, or prescribe some alkaline draught. If this morning cough is accompanied by sickness, we must determine whether the sickness is due to the condition of the stomach or is brought on by reflex irritation of the fauces (by thick mucus and the like), and prescribe appropriate remedies. In such cases our patients, in spite of their sickness, should take a satisfactory breakfast.

When we have to deal with the *dry hacking* cough, which is so common in phthisis, we must first make certain that the upper air passages—which play such an important rôle in the ætiology of tuberculosis—are free from suspicion. If we find some form of inflammation in this situation, we must treat it. The author does not approve of those inhalations which involve the use of hot fluids, as it is most important that the air passages should be protected against any sudden change of temperature. He has no great faith in respirators charged with oil of eucalyptus and the like. Respirators, however, are useful in removing the cause of some forms of cough; for instance, in such trades as those of the hairdresser, baker, etc. The chronic granular pharyngitis, which is often the cause of this dry cough, may be treated with the following application:

℞ Iodi. 5 to 20 grains;
Potassii iodidi. 20 to 75 "
Olei menthæ piperitæ. 1 to 3 minims;
Glycerin. ad. 1 ounce.

M.

S.—To be painted over the back of the throat night and morning.

Temporary relief may sometimes be obtained in this condition by means of licorice, cocaine, or morphine lozenges.

A congested throat, with the tongue clean and the temperature but slightly raised, is frequently benefited by a mixture containing:

℞ Tr. ferri perchloridi. 10 minims.
Potass. chloratis. 10 grains.
Acidi hydrochlorici. 5 minims.
Tr. aurantii. ½ drachm.
Aquam ad. 1 ounce.

M.

S.—To be taken three times a day.

If the throat shows no signs of disease, but is simply irritable, the cough is not infrequently relieved by prescribing from 20 to 30 grains of a bromide mixture at night-time.

Tracheitis is not uncommon, and often yields to the following mixture:

℞ Sodii bicarbonatis. 15 grains;
Acid. hydrocyan. dil. 1 to 2 minims;
Syr. pruni virginiani. ½ drachm;
Aquæ destillatæ. 1 ounce.

M.

S.—To be taken three or four times a day.

It may be necessary to add a small dose of morphine to this mixture in some cases; in others,

sodium sulphate may replace the sodium bicarbonate.

If the cough is due to disease of the larynx, nothing does so well as fresh air at an even temperature. If we are forced to give drugs, we may use a two-per-cent solution of cocaine in a laryngeal spray; inhalations of oil of peppermint, menthol, and the like; or local treatment with thirty-per-cent. solution of lactic acid. If the dry hacking cough is due to pleuritic irritation at the apex of the lungs, nothing is better than counter-irritation, with equal parts of the liquor and tincture of iodine, or by means of a blister; if the irritation is basal, nothing succeeds so well as effective strapping of the lower part of the chest. When we can find no cause for this dry cough, we try some simple linctus, such as:

R Vini ipecac.....	5 minims;
Spiritus chloroformi.....	2 "
Tr. tolutanæ.....	5 "
Succ. limonis.....	15 "
Mucilag. acaciæ ad.....	1 drachm.

M.

S.—To be taken when required.

Or some form of simple lozenge, such as:

R Ext. glycyrrhizæ.....	3 grains;
Olei anisi.....	½ minim;
Massæ trochiscorum acaciæ...	10 grains.

M.

The following linctus is also effective:

R Acid. hydrocyan. dil.....	1 to 2 minims;
Liq. morphin. acet.....	3 to 8 "
Oxymel. scillæ et aq. aa.....	½ drachm.

M.

If the mucus is peculiarly tenacious, no drug succeeds so well as ammonium chloride in ten to fifteen grain doses three times a day—the taste being disguised by liquid extract of licorice, etc. In the later stages, when excavation is present, we try to get rid of the matter which accumulates in the cavities and larger tubes. No remedy does this so effectually, and with such benefit to the patient, as creosote in the form of vapor. Small doses of creosote and its derivatives are useful in checking expectoration when this is very profuse. Turpentine may also be given for this purpose. In the final stages of pulmonary tuberculosis we unfortunately have to rely very largely upon opium in some form or another for the relief of the cough and other distressing symptoms.

Tuberculosis as a Sequel of Ritual Circumcision. R. Bernhardt (*Centralblatt für Chirurgie*, May 11; *Edinburgh Medical Journal*, July) records the following case, which is of interest because it has been under observation for fourteen years. The tuberculous infection showed itself three weeks after the circumcision. Since the age of four years the child has suffered from tuberculous disease of the cervical glands and of the glands in the groin. At the age of fourteen, in spite of the disease in the glands, he presented the appearances of perfect health. There were still tuberculous nodules and ulcers on the remains of the prepuce and on the glans penis, the diagnosis being confirmed by histological and bacteriological examination.

Medullary Injections of Cocaine in Urinary Incontinence.—Albarran and Cathelin (*Giornale internazionale delle scienze mediche*, September 15th) have studied the effects of epidural injections of cocaine in painful affections of the bladder, and have noted that the injection of from thirty to forty-five drops of a one-half-per-cent. to two-per-cent. solution of cocaine determines frequently, though not always, a diminution of spontaneous sensibility to pain and of pain from the contact of instruments; while, on the other hand, the sensibility to distention by means of intravesical injections is not affected. In four cases of incontinence of urine from various causes (tuberculous cystitis, paraplegic cystitis) one or more injections of fifteen drops of a two-per-cent. solution of cocaine sufficed to reestablish voluntary micturition.

Nervous Diarrhœa.—Pariser (*Deutsche Medizinische Zeitung*, 1900, April; *Edinburgh Medical Journal*, July) distinguishes five forms of nervous diarrhœa, due to (1) central nervous influences; (2) toxic causes, as from tæniæ, nicotine, morphine; (3) reflexes from the pelvic organs, stomach, nose, or skin; (4) neurasthenia; (5) combined catarrh and neurosis. The diagnosis is easy when the primary cause is pronounced, especially when the symptoms point to neurasthenia, while one of the most valuable signs is presented in persistence of the diarrhœa after adoption of a simple non-irritating dietary. The great abdominal nervous plexuses are often hyperæsthetic; mucus is absent from the stool, save sometimes in the last form on the list; other objective signs are lacking. The treatment resolves itself into—First find the cause, then remove it!

Beer Yeast in Therapeutics.—M. P. Carles (*Répertoire de Pharmacie*, August) says that beer yeast has been a favorite remedy in furunculosis in northern countries for many years. Debouzy was the first to call attention to its therapeutic value in the medical press. In addition to furunculosis, this author asserts that he has cured with yeast an undoubted case of glycosuria. He administered it in doses of from two to three tablespoonfuls three times a day during meals. Patients who take this remedy have frequent eructations of gas. Brocq has found that yeast is also very useful in acne, and Tiercelin and Chevrey have recently used it with success in gastro-enteritis of infants. The use of yeast originated in a country of beer brewers, and the physicians employ it probably in order to destroy the excess of sugar in the organism before it reaches the kidneys. They always use fresh yeast, and this freshness seems to be an essential element of its activity. It may be that the lack of freshness accounts for the contradictory results obtained with yeast by various observers. It should be dried in vacuo at 35° C. and may thus be preserved for some time. When it loses its power of fermenting sugar, it becomes inert. Buchner found, by subjecting the yeast globules to trituration and to very intense pressure, that a liquid which he termed zymase might be obtained, which immediately inverted sugar and decomposed it into carbonic acid and alcohol. It is the gastric juice and thereby set free the zymase very possible that the yeast globules are dissolved in which they contain. Probably it is in this way that yeast acts upon the carbohydrates taken in the food.

Original Communications.

THE PREVENTION OF LACERATION OF THE PERINÆUM IN LABOR.*

By GEORGE B. TWITCHELL, M. D.,
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A certain number of tears of the perinæum are unavoidable. However, some can be avoided and others rendered smaller by proper care.

To be able to prevent a tear, one must know how tearing occurs. It is common to think of a tear as a split from the fourchette backward. This occurs in very slight tears, but I believe not often in serious ones. In these the whole perinæum gives way practically at once; indeed, cases have been observed in which the head was born through the perinæum, leaving the fourchette intact. To explain severe tears one must study the movements of the head when extension takes place.

In an occipito-anterior case the occiput is practically stationary under the pubes and the extension consists of a swing forward of the head, the radius of the swing being the suboccipitobregmatic diameter. This brings the head against the perinæum.

We may consider the vulva as a small oval through which the head must pass, and assume that the upper end of this oval is as stationary as the occiput itself at the time of extension.

When a child is to be born, this oval opening is not stretched as by an entering wedge, but by having the lower end pushed away from the upper. That is, if, in the swinging of the head, as it extends, it *slides* on the perinæum, the space between the pubes and the fourchette will increase; on the other hand, if the head *does not slide* during this swing the opening will not increase and the perinæum will follow the motion of the head. This causes a decided stretching of the perinæum, but no increase in the size of the vulvar opening. The perinæum under such circumstances may become very thin and get ready for a nasty stellate tear.

Different degrees of this sliding will occur in different cases. Even with perfect sliding, a precipitate labor may cause a split.

The more perfectly this mechanism is carried out, the safer will be the perinæum.

Consequently it is of primary importance to keep in the vagina a lubricant to facilitate the normal extension. The natural lubricant is the best and should be preserved.

Consequently douches, and especially antiseptic (usually irritating) douches, are to be avoided except when their use is imperative.

Digital examination removes a great deal of the lubricant and gets the perinæum ready for a tear. External palpation should be practised more. The vast majority of digital examinations made during labor are without reason.

Artificial lubricants do not replace the natural one.

Delaying a precipitate labor by chloroform will save the perinæum in some cases. In a protracted labor the extraction of the head with the forceps applied before the vagina becomes bruised and dry will prevent many lacerations, especially as the head can be extracted between pains.

The after-coming shoulder does no harm unless a tear already exists. In addition to following the plan here suggested in the case of the woman in labor, a little can be done in the way of support of the perinæum.

This is best accomplished by keeping the head from coming through too quickly. The special manipulations of the perinæum, through the rectum, etc., have never proved of value with me.

THE PREVENTION OF LACERATION OF THE PERINÆUM IN LABOR.

By MAURICE A. WALKER, M. D.,
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In the prevention of laceration of the perinæum during delivery, there are three elements to be considered: The passage should be made as large or as distensible as possible; the "passenger" should be presented in its smallest diameter; and it should be directed in the axis of the passage. Before the beginning of the second stage, the bladder and rectum must always be emptied. Otherwise part of the available space is unnecessarily occupied, while the full bladder tends to force the presenting part backward and so out of the axis of the outlet and against the perineal body. In these cases it is necessary to retard delivery long enough to allow the pressure of the presenting part to soften and stretch the outlet. Both subjective and objective measures are useful in retarding the descent of the head. Subjective measures are really negative ones, and consist entirely in the mother's refraining from the use of voluntary muscles. Of course, we cannot often entirely prevent the use of these muscles, but much may be done by explaining to her that she must not "bear down"—that she must not hold her breath during the pains. I remove all aids to the action of the abdominal muscles, such as the sheet or rope on which the patient has been pulling, as well as the hands of the long-suffering nurse or husband and

*The essay for which the prize is awarded in Series VII of Our Subscribers' Discussions

the support against which the woman's feet have been pushing.

Objective measures tending to retard a too precipitate delivery consist in pressure applied by the accoucheur directly to the presenting part, which for the present we will consider to be the vertex. I apply this pressure, the patient being recumbent, with the fingers pointing posteriorly and pressing against the (maternal) posterior segment of the head during each pain. This application of the hand, by retarding the advance of the frontal segment, tends to increase flexion and tends to retard the entire head while it allows of some anterior, or pubic, motion of the part, thus presenting the smallest diameter of the "passenger" to the vulvar ring, allowing time for the passage to be made larger, and directing the "passenger" through the axis of the outlet instead of permitting a large part of the uterine force to be expended directly on the perinæum.

I believe that the recumbent position should be used in multigravidæ or other women having relaxed abdominal walls, in order to prevent the fundus from falling forward and thus directing the cervix and foetal head backward. In many cases a modified Walcher's position, resting the hips on the edge of the bed, the feet being on the floor, is of value in protecting the perinæum, not only on account of its relaxing effect on that part, but also because it permits easy and constant observation of the parts.

An anæsthetic is required toward the end of the second stage, not so much for the purpose of simple analgesia as for its property of preventing voluntary and lessening involuntary muscular contraction in case of endangered perinæum. I much prefer chloroform, on account of the short time necessary for its administration and its greater relaxing power as compared with that of ether. In many cases it is necessary to carry anæsthesia to the surgical degree during the last few minutes of this stage.

In the intervals between pains, the hand that has been used to retard, flex, and push forward the head may be consigned to the duty of peeling back the perinæum from the head, and delivery should take place after the pain has terminated, while everything is relaxed.

Many perinæa are torn after the expulsion of the cranium by too sudden extension of the head, thus pulling the nose and chin through with a jerk. I avoid this by keeping head flexion complete until the largest diameter of the head has escaped from under the arch. Often, too, women are torn by the posterior shoulder, especially where a slight injury has already occurred, and care must still be exercised by supporting and lifting toward the mother's abdomen the foetal head, causing lateral flexion of

the trunk, while the other hand guides the shoulder safely over the perinæum.

I do not believe in the necessity, except in very rare instances, of deliberately infecting a carefully sterilized hand by inserting any part of it into the rectum of a parturient woman, when I never know that I may not be called on, almost instantly, and without further preparation, to handle gauze and then pack it into a sterile uterus, or to pass the hand itself into the same organ for the purpose of removing part or all of a placenta or membrane—and one sterile hand is not enough—in fact, when without a thoroughly trained nurse, I not uncommonly find that two sterile hands are not enough.

THE PREVENTION OF LACERATION OF THE PERINÆUM IN LABOR.

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It is necessary, first, to recount briefly the most frequent causes of perineal lacerations. The two forces furnishing the *vis a tergo* must be kept constantly in mind.

1. Uterine contraction, which is entirely involuntary and over which the woman has not the slightest control. 2. The contraction of the powerful abdominal muscles, which is voluntary and under the woman's will, and which is a most potent power for good or evil in the matter of perineal laceration. These two powerful forces have been busily engaged in driving a relatively large body through a relatively small passage. As the head approaches the vulvar outlet, the resistance is gradually overcome. *The necessity for the powerful force is gone, but the force is still present.*

A most frequent cause is imperfect flexion of the foetal head. The advantage of flexion lies in the fact that the occipitofrontal diameter, $4\frac{1}{2}$ inches, is substituted for the occipitomenal diameter, $5\frac{1}{2}$ inches. The danger of incomplete flexion is obvious.

Under the third head may be grouped (1) those cases in which there is relative disproportion of the presenting part and the outlet, either or both; and (2) those cases in which, owing to faulty mechanism, the presenting part is pushed too far posteriorly, and not allowed to emerge safely under the pubic arch. Finally, it must not be forgotten that a former unrepaired perineal laceration tends greatly to more severe laceration in the next labor.

The whole subject of the prevention of perineal laceration may be summed up in a few words, by

(1) patiently and persistently endeavoring to bring the longest diameter of the presenting part in relation with the longest diameter of the outlet, and (2) securing perfect dilatation of the soft parts at the outlet. A most important point is that the abdominal muscles play by far the most prominent part in the expulsion of the head from the vulva. This is a most wise provision on the part of Nature, for it is this force which we have under our control.

When the foetal head distends the vulva to the utmost, then the patient must be commanded to stop "bearing down" during the pain. In this way the perinæum can be alternately stretched and relaxed until it is dilated to its fullest capacity. A most important help in the prevention of laceration is the intelligent use of chloroform or ether. By relieving the dreadful agony of the patient, it puts her in position to obey the instructions of the physician and makes her of real service to him. Keep the head well flexed until (in occipito-anterior cases) the occiput passes under the symphysis pubis and begins to ride up in front of it. Accomplish this by pressure through the perinæum upon the forehead. Then allow the head to extend slowly. The ideal emergence of the head is *between pains*.

It is possible for the head to be shelled out over the perinæum between the pains, which is by far the safest method of delivery. It is believed that the rectum ought to be studiously avoided, especially the introduction of the finger, or fingers, for the reasons that (1) it does not seem to be necessary, and (2) the tendency to sepsis is so alarmingly great. Imagine the necessity of the introduction of the hand into the uterus for post-partum hæmorrhage or other cause after rectal manipulation.

It is believed that the teacher who coined the phrase "support the perinæum" is to be held accountable for many lacerations of the perinæum. It is *not* the perinæum which needs support, but the head, until the muscular structures have been stretched and dilated to their fullest capacity.

Proper position of the patient is most important. No one need expect that the much-discussed question of the best position in which to deliver a woman, whether on her back or on her side, is to be entered into here. Personally, the writer is much in favor of the lateral position. But, whatever the position, it is insisted that the vulva be thoroughly accessible to sight and touch. A disregard of this seemingly trivial but most important point is responsible for many lacerations. A delivery at the bottom of a "well" in the middle of a feather bed means a lacerated perinæum almost certainly. The obstetrician who delivers a woman, particularly a primipara, under the bedclothes, with a bad laceration resulting, can certainly not comfort himself with the "flattering unction" that "some" lacerations

are inevitable. The perinæum in labor is a tricky, uncertain quantity, and the eye is by far the best means for determining its dilatation, degree of dilatability, etc. With the spread of the belief that the obstetrician can in great part exercise his judgment as to the exact moment that the head shall be born, the number of perineal lacerations has grown "beautifully less."

A most important means of saving the perinæum in certain cases is the proper use of the obstetric forceps. It has been argued frequently that the forceps tends to produce lacerations, but the writer agrees thoroughly with Hirst in the statement, "Used in this way (properly), there is no better safeguard for the integrity of the perinæum than the obstetric forceps." For the correction of certain errors in mechanism, overflexion or overextension, the forceps is the best means available.

It is thought that the operation of episiotomy is rarely if ever useful in saving the perinæum. It does not seem to take into account the causes which produce perineal laceration. And, finally, after all the patient, persistent efforts to stretch the perinæum, no man can tell whether or not all the stretch is exhausted, all the "slack" taken in, and it may be that this seemingly much-abused structure will at the last critical moment yield just that little to prevent a tear.

Many lacerations of the perinæum are caused by the passage of the shoulders. Surely, these lacerations are much less excusable than head lacerations. If undue haste is avoided and the head lifted upward, one shoulder will be behind the symphysis, while the other is safely borne over the perinæum.

A RETROSPECTIVE SURVEY OF SOME OF THE ESSENTIAL AND VITAL PRINCIPLES PERTAINING TO ANO-RECTAL ANATOMY, PHYSIOLOGY, PATHOLOGY, AND NOMENCLATURE: IN AN EFFORT AGAINST THE PRESENT ATTEMPTS TO RADICALLY CHANGE AND SUBVERT THEM.

BY WILLIAM BODENHAMER, A. M., M. D., LL.D.

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The writer, in the discussion of this subject, will here remark incidentally, that on a recent occasion, in the *New York Medical Journal* for June 30, 1900, p. 1026, he proved beyond doubt what really constituted a true anatomical valve, and that no such organic structure existed in the rectal tube, nor did that organ in any sense require it. But the object of the writer on the present occasion is to offer additional arguments against the false theory of the

so-called anorectal valves and their many diseases; and also to point out the pernicious effects which such a theory engenders. He will give the anatomy, the physiology, and the true function of the plicæ and the circular muscular fibres of the rectum, and show that they cannot be constructed into valves. The writer will also show that every one of the few anatomists, who admit of what they call rectal valves, from Morgagni and Glisson to Houston, all of them designate the anorectal plicæ alone as their so-called valves. It will also be made evident by the heroic efforts of the distinguished anorectal valvotomist, Dr. Thomas Charles Martin, president of the American Proctological Society, that the rectum, with its terminal orifice, the anus, is to be radically changed in all its essential principles and parts by his Quixotic theory. The writer will also, in the course of his remarks, if time permits, show the many and the various munitions by which this revolution is to be achieved, and conspicuous among them is the shrewd change of the nomenclature, which is always the first thing a new sect or party in medicine effects. This nomenclatural change, together with the endless coinage of new terms, is a source of infinite evil and confusion. This deplorable condition prevailed in the time of Galen, who severely castigated the authors of it in his inimitable style. In this particular instance, it is only history repeating itself. Besides these changes by Dr. Martin, he has also made artful changes in the origin, meaning, and application of certain words, names, or terms. Now, such a sudden and radical change as contemplated in this instance would, in any science or art, most effectually subvert it, and it is this very effect that this theory, if successful, would produce; but it is so obviously unsound, and in conflict with so many facts, that it seems possible to attract to it but very few adherents.

The writer will now, for obvious reasons, briefly say that in the elucidation or the exegesis of any subject, it is of the highest importance to give in the first place the true etymology, signification, and application of its most important words, names, and terms. This self-evident truth is often neglected by authors, and it is especially so by the author of *A Practical Monograph on the Disorders and Diseases of the Rectal Valves* (Philadelphia, 1899). Now, the author, before publishing this unique book, should have first proved beyond all doubt, by dissection, by description, and by definition, the existence of valves in the rectum, their exact number, location, and true function, as well as their *modus operandi*; for the *onus probandi* devolved entirely upon the author. These vital facts, however, the author signally fails to demonstrate by any evidence he gives in his book. Indeed, a clear definition or description, of itself, sometimes renders argument

or controversy unnecessary, and is truly a Hercules against the sophist and a blazing torch in the hand of the explorer. Galen says that, anteriorly to the time of Hippocrates, physicians wrote little and defined nothing (*De Finitione Liber*). While the rectal valve devotees write very much and define comparatively *nil*.

The writer will say that the reader of Dr. Martin's marvellous book will find the subject of it profusely illustrated through one hundred and sixty-one printed pages, by the aid of many enormous wood cuts, representing, among other things, his colossal machinery and proctoscope, accompanied, too, by the use of most prodigious names and terms, all of which the writer will venture to say were never before paralleled; and all of which, too, are well calculated to alarm the fears of the student and deter him from the undertaking. Even Dr. Martin himself suspected that his technique for rectal research was quite too elaborate, and might justly be complained of (*op. cit.* p. 7). It is impossible for the writer to notice even a moiety of Dr. Martin's many and various principles and novel terms in the limits to which these observations are confined: he will therefore content himself with a few brief citations of some of the most salient points, taken from Dr. Martin's book.

Dr. Martin starts with the deliberate determination of fundamentally effecting this revolution by means of an unsubstantiated theory that there are valves in the rectum, and not only so, but that these valves themselves are very obnoxious to various and numerous disorders, diseases, and malformations; hence the absolute necessity for his book upon the subject. But the very idea of such diseases must alone be the pure figment or fiction of a vivid imagination; and, in the opinion of the writer, the rectal valves and their diseases are both of them phantoms or "will o' the wisps," with their luring and deceptive lustre, never to be reached, found, caught, or in any sense realized.

The writer must not forget to mention here the significant fact that Dr. Martin in his book parades twenty-five eminent authors on anorectal diseases, giving the names, titles, editions, and dates of their several works. Now, not one author in this bibliographical sketch says one word or gives the slightest hint upon the subject of anorectal valves. Yet Dr. Martin cunningly declares that these authors simply *omitted* to mention them (*op. cit.* p. 11 et seq.). But can any such inference for a moment be drawn or sustained, from the profound silence on the subject, of these eminent authors?

Now, Dr. Martin says that "The rectal valve is the chief feature of the rectum, and it provides a ready foundation upon which strictures may be quickly built" (*op. cit.* p. 6.). The writer readily

admits that the phantom rectal valves form ready, artistic bases upon which phantom strictures may be quickly built. It is a remarkable fact that Dr. Martin, who never ceases speaking of the rectal valve, always speaks of it as a constant source of disease, of affliction, of tribulation, and of trouble and annoyance, and that its tendency is to evil, and that continually; he never tells us of the good and excellent qualities of his rectal valves, and of their absolute necessity for our comfort; neither does he define and describe them, nor give us their true function and mode of action. If rectal valves exist, as Dr. Martin says he has found them, he could just as easily define, describe, and demonstrate them as he could a blood-vessel valve, a heart valve, an ileo-cæcal valve, a "trap-door" valve, or a pump valve. As a good and a true man, he should do this for the benefit of other anatomists, who might find them also, and thus verify his demonstration. Dr. Martin, however, does not fail to let us know that diseased rectal valves are very difficult to treat, and cannot be treated surgically and successfully except by anorectal valve specialists; and that he himself, in certain severe cases, performs a very novel surgical operation which he classically names valvotomy, and which he has tabulated (*op. cit.* p. 139, Fig. 73) *Rectal Plicæ, their True Nature and Function*. The writer declares that the plicæ of the mucous membrane of the rectum, from their very cause, structure, disposition, arrangement, and function, are completely disqualified from executing the functions or the offices of valves. They do not encircle or occupy the whole calibre or circumference of the rectal tube, and do not close it at any point. Their structure is precisely that of the mucous membrane of which they are simply folds. Their true function is to act as brakes to prevent a too sudden and rapid downward movement of certain gases and fluid fæces. Now, this corrugated state of the redundant mucous coat of the rectum is caused solely by the tonic or voluntary contraction of the muscular fibres of the organ, and the plicæ thus formed may be completely effaced by distention or dilatation. Dr. Martin says: "If it be the function of the normal rectal valve to beneficently retard the descent of the fæces, it is obviously true that it may be the especial property of the valve in certain other than normal conditions to maliciously obstruct the descent of the fæces" (*op. cit.* p. 102). The writer feels thankful to Dr. Martin for his unintentional, although very true, description of the rectal plicæ in this transcript; for it is the special function of the normal rectal plicæ to "beneficently" retard the descent of the fæces, or to act as brakes, but not so of a valve or valves; and when such plicæ are morbidly enlarged or hypertrophied, as they sometimes but rarely are, they of course by their bulk more or less

"maliciously" obstruct or hinder the descent of the fæces. But who, except Dr. Martin, would bestow such unfit offices upon any valve or valves?

The writer now speaks advisedly, when he declares that the plicæ of the mucous membrane of the rectum and anus are the only materials whatever, out of which rectal valves have been attempted to be constructed by all the few anatomists who maintain such, from Morgagni and Glisson down to Houston and Martin. Dr. Martin, however, not only claims all the plicæ, but almost everything else that pertains to the rectum, as material out of which to construct his rectal valves, as will be shown hereafter.

The Plica Transversalis Recti of Kohlrusch.—This particular plica, so called by Kohlrusch's friends, is situated in the superior portion of the rectum, and is one of the most important of all the rectal plicæ. It is this plica which Houston claims as and calls his most constant valve of the rectum; it is this same plica which Nélaton calls his superior sphincter ani; it is the same plica which Hyrtl calls his sphincter ani tertius; and it is this very same plica that caused Dr. Martin to exclaim "The so-called plica transversalis recti, sphincter ani tertius, superior sphincter, are one and the same thing, and this thing is essentially a valve" (*op. cit.* p. 31). Now, this description or elucidation of Dr. Martin's rectal valve is just about as luminous as a piece of white chalk in a dark room. It is thus seen that Dr. Martin agrees with Houston in calling and in claiming as a valve this very plica. But the writer repeats, that no rectal plica or plicæ can ever constitute either a valve or a sphincter muscle. A valve in any canal or tube, to be effectual as such, must include, at the point of location, the whole circumference of such passage and must control to some extent the parietes of it, and must also afford a free access to the contents of such passage, in one direction only. The writer declares that, neither one, nor all of the rectal plicæ, can accomplish this. He will also repeat here that no rectal plicæ, nor any arrangement whatever of the circular muscular fibres of the rectum into semicircles or into segments of circles; can constitute a true sphincter or constrictor muscle; for the aggregated form of the circular muscular fibres must, as a band, completely embrace or surround and close a canal, a tube, or an orifice, in order to be a sphincter muscle; and, above all, a sphincter muscle must have a constant and a uniform existence and a definite and permanent location, like the internal sphincter ani. Now, neither of those essential requisites is to be found in the descriptions and demonstrations given by those authors who have proclaimed the existence of redundant rectal sphincters. Then, in all reason, why dignify such abortions with the appellation *sphincter*?

The writer, in his anatomical investigations, has found in some of the small intestines, besides the so-called *valvulæ conniventes* of Kerkring, precisely such an arrangement of the small *plicæ* of the mucous membrane. The very important office or function of these *plicæ* of the small intestines, like that of those of the rectum, is to act as brakes to prevent the alimential mass from passing along the intestine too rapidly, before its nutritive particles are taken up by the absorbents, which it would otherwise readily do, being quite fluid. The larger *plicæ* in the duodenal portion of the small intestines constitute a very curious phenomenon, since the fluid contained in this portion possesses the most nutritive properties. The great Meckel speaks of several species of fish which present very analogous transverse *plicæ*; he says they are not very numerous and occupy the end of the intestinal canal (*Deutsches Archiv für die Physiologie*, Band iii, Heft 2, 8vo., Halle, 1815).

The Circular Muscular Fibres. As Dr. Martin asserts these fibres to be rectal valves or parts of valves (*op. cit.* p. 31), the writer will show that from their number, situation, distribution, peculiar action, and special function, they are not valves or any part of valves. But before proceeding to describe the circular fibres, the writer will first notice the objections of Dr. Martin to the natural and scientific division of the rectum into superior, middle, and inferior third. Dr. Martin objects to this division because it is both ancient and arbitrary, and he, therefore, by his own arbitrary will makes a brand-new, one which, of course, he thinks is entirely free from hoary antiquity and arbitrariness. He divides the rectum into three or four chambers according to the location of each valve, a chamber for each pet valve (*op. cit.* p. 65). His fourth chamber is not always occupied in consequence of the fourth valve being very inconstant and vacillating, only turning up occasionally, but his chamber should always be kept ready for him. Now, if any one wishes to see a scientific analysis of the three natural divisions of the rectum, showing the exact relation of each organ of the pelvis to that of each of the three divisions of the rectum, he will find it in the writer's work on *The Physical Exploration of the Rectum*, pp. 7, *et seq.*

The circular muscular fibres of the rectum are quite distinct and exist in all the portions of that organ; but, in the superior and middle, they are much less numerous, and are thin, pale, and segregated, but as they approach the inferior extremity of the middle portion, they lose their pale and delicate appearance, become more numerous, stronger, and more closely set together, until they reach the superior extremity of the inferior portion of the organ, where they become blended and constitute

the sphincter ani internus. Their function is evidently expulsive. The peculiar distribution of the circular and the longitudinal muscular fibres of the rectum seems to be a wise provision of Nature, and merits the careful study of both the anatomist and the physiologist. This peculiar arrangement of these two sets of the muscular fibres gives the rectum the power, to a certain extent, to retain and control its contents. The longitudinal muscular fibres are larger and stronger in the superior portion, especially anteriorly and posteriorly, and they become smaller and weaker as they approach the internal sphincter ani; while the circular fibres, on the contrary, are fewer, smaller, and weaker in the superior portion, where they are less needed, and where the action of the diaphragm and other abdominal muscles is sufficient of itself to propel the contents of the organ downward. As the circular fibres approach the inferior portion, they, as has been shown, become numerous and strong where they are most needed. It is in consequence of that peculiar distribution of the circular fibres already mentioned, that the superior and middle portions of the rectum are so capable of great distention, by the accumulation and retention of fæces. The force exerted by the abdominal muscles in the act of defecation is chiefly expended upon the superior portion of the rectum, where their antagonists, the circular fibres, are weakest, and it is exactly in the same ratio in which this force diminishes in the inferior portion that the contractile power of the circular fibres in this location increases. All these are anatomical and physiological facts which cannot be controverted and which cannot in any sense be used as material out of which to construct rectal valves.

The distinguished anatomist, Douglas, when speaking of the different locations of the circular fibres and of the sphincter ani internus in the man and in the dog, says: "In the dog the circular fibres composing the internal sphincter ani do not embrace the inferior portion of the rectum so high up as in man, and the reason of it is plain, because the presence and weight of the excrement is not so great on this part in the dog, the position of its body being prone, as it must be in man whose posture is erect" (*Descriptio comparata musculorum corporis humani et quadrupedis*, Cap. xxiii. *Lugduni Batavorum*, 1738).

The writer will here remark that Dr. Martin declares that quadrupeds, as rabbits, cats, dogs, and monkeys, are not provided with the rectal valves (*op. cit.* p. 69), but gives no reasons therefor. By the bye, according to the Darwinian chain, the monkey is the next link above the dog. Now, does Dr. Martin hold that these animals are not provided with rectal valves in consequence of their prone posture? If this is really so, the human bipeds might

went with themselves back to their original quadrupedal state, and so avoid the rectal valve plague. The rectum of the former is, however, exactly similar to that of the latter, except as to its position, having the plicæ, the circular muscular fibres, the internal sphincter ani, etc. Then why the wide distinction between the two? But the writer, regardless of all else, is most happy in this instance to agree with Dr. Martin—that the quadrupeds have not been provided with rectal valves. What a blessing for these poor animals, that Nature has so beneficently favored them by not providing them with those very detestable rectal “trap-doors,” which are so continuously out of order and always need repairing.

The writer will observe that about fifty years ago there existed wide differences among eminent anatomists regarding the location and distribution of the circular muscular fibres of the rectum in the different portions of that organ. The writer at that time, being eagerly studying the anatomy of the rectum, was greatly perplexed by this diversity in the experience and descriptions of these able men, and, being anxious to arrive at some definite conclusion upon this at that time moot question, resolved at once to ask the great American anatomist, Professor Horner, to favor him with his great experience on this particular point, he having been pleased to favor him on two former occasions on different points in rectal anatomy. The writer received Professor Horner's reply but a few months before this indefatigable anatomist finished his invaluable labors here on earth. He died on the 13th of March, 1853. His answer is as follows:

PHILADELPHIA, September 4, 1852.

Dr. W. Bodenhamer:

DEAR SIR: My special attention has been more directed to the circular fibres for four or five inches above the inferior end of the rectum, though I consider them to exist everywhere but in diminished amount in the superior two thirds, as they gradually adopt the characters of those of the sigmoid flexure of the colon, both in regard to color and quantity. My description, as published, is the result of frequent careful dissections, and can be verified on any robust male subject, if the part be prepared in Sp. of Wine. In attenuated subjects the fibres become emaciated, which may account for the difference of anatomical descriptions. I should say, in fine, that three inches at least of the rectum are furnished with closely set bands of circular fibres, strong, and augmenting very sensibly as they progress to the internal sphincter muscle, which they finally form.

An excursion from home, with a very recent return, has prevented an earlier attention to your esteemed favor on this subject. Very respectfully, your obedient servant,

W. E. HORNER.

The Physical Exploration of the Rectum.—No one hailed with greater delight, fifty years ago, than did the writer the beginning of many and various facilities in improved methods and instruments for the physical examination of the rectum. The very early efforts made toward a scientific system of rectal research were due alone to the writer, and, in 1870, resulted in his scientific treatise, *The Physical Exploration of the Rectum*, New York, 1870. No such systematic work existed previous to that time. Now, from that time to this, many valuable improvements have been made in anorectal exploration by able and ingenious men, consisting of new and improved specula and of various mechanical means and contrivances; first, by Andrews, of Chicago, in 1887; then by Kelly, of Baltimore, in 1895; and next by Martin, of Cleveland, in 1896. Now, with these ample measures at his command, no expert should fail in any case to discover, to demonstrate, or to verify with ease any object within that dark hole.

Atmospheric Air Inflation in Rectal Research.—The writer was requested to state whether he ever used the proctoscope in such a position of the body as to secure atmospheric inflation in the living subject. He would state in answer that he was intimately acquainted with the imperishable Sims, who began his very marvellous career in New York the same year that the writer himself came there, and who was the discoverer of the possibility of atmospheric inflation of the hollow pelvic viscera through the vagina, the subject being in the knee-chest or semi-prone posture. The writer will further state that he was just as prompt, as eager, and as anxious as was Dr. Van Buren, to adapt at that early day Sims's valuable principle to the rectum, as his works and his practice, both in New York and in New Orleans, prove. Dr. Van Buren, however, had the honor of first publishing the *modus operandi* of the principle, as he did, in the *American Medical Times* of May 7, 1864, p. 218. The writer at that time, in exploring the rectum, used a modified Sims's speculum and one of his own.

Dr. Martin declares that the reason why the rectal valves are so little known by the profession generally is the want of proper instruments and of technical art and skill in their use. This hitherto sore need of suitable implements and of dexterity in their use, the doctor says, he now for the first time abundantly supplies by his rectal exploratory system (*op. cit.*, p. 34, *et seq.*). The writer readily and most cordially concedes to Dr. Martin ability, genius, skill, and a peculiar fitness for research, as is evidenced in his very remarkable contribution to the technics of rectal exploration; and he also concedes to Dr. Martin sincerity in his earnest and zealous efforts in this very peculiar cause; all this is conceded and unquestioned. But the real and impor-

tant question in this affair is, Has Dr. Martin, with all his splendid acquirements in skill, genius and dexterity, together with his colossal armamentarium, including his proctoscope, ever discovered, demonstrated, or verified any valve or valves in the rectum? The writer has looked in vain in Dr. Martin's book for a positive verification of this important and essential fact. Indeed, he has not discovered anything, for the very anatomical organs of the rectum which he specifies, designates, and claims for valves were, before he was born, discovered, demonstrated, and verified under an entirely different name than that of valve. He merely, by the touch of his magic wand, erases or defaces those names and substitutes for them the word valve. For instance, he claims and names the plica transversalis recti of Kohlrausch as one of his most important valves (*op. cit.*, p. 31). Did Dr. Martin discover this plica and describe it as a valve? He did nothing of the kind, but merely applied the word *valve* to the word *plica*, which act, according to the very able French anatomist, M. Sappey, is "an abuse or an ill use of language" (*Traité d'anatomie descriptive*, tome iv, Paris, 1878). Similar instances could be given, but the writer will now show how very easy it is for Dr. Martin to construct a rectal valve out of the materials of others. He says: "The so-called plica transversalis recti, Falten des Rectums, sphincter ani tertius, superior sphincter, and detrusor fæcium muscles are one and the same thing, and this thing is essentially a valve" (*op. cit.*, p. 31). Now, this *ipse dixit* of Dr. Martin is purely an assumption, and is unsupported by any evidence. Indeed, the readiness of Dr. Martin to dogmatize is evident throughout his book, but readers generally will not take his dictum for either argument or proof. The assertion which asks acceptance as authority should be able to support its claim with at least some show of reason or evidence.

The writer here declares that all the anatomists previous to Dr. Martin who assert that they have found rectal valves made their discovery soon after death; while Dr. Martin, on the contrary, declares that rectal valves cannot be discovered *post mortem* (*Medical Record*, June 17, 1899, p. 885), but can only be demonstrated in the living subject.

Discord Among Rectal Valve Authorities.—The very few anatomists or authors who maintain that valves exist in the rectum and anus do not agree as to their number, their location, their certainty or constancy, their structure, or their exact and true function. Now, this great diversity of opinion upon this important subject evidently shows how vague, how varied, and how uncertain their opinions and conclusions must be upon this, to them, most important and vital object. No such abnormality and disparity ever occur in regard to any other valve or

valves of the whole body. But to ask or to seek for a simple reason or explanation from them for such very marvellous inconsistencies would seem unkind, if not unphilosophical; indeed, it would be like asking them to explain the inexplicable.

The Rectal Valve Mania.—The anorectal valve craze of to-day reminds the writer of the anorectal normal papillæ and sacculi furore which prevailed as an epidemic some years ago, principally in the West, but with the wide difference between them that, in the opinion of the writer, the former was not real, but purely fantastical, and with no manifest intention of any avaricious purposes; while the papillæ and the sacculi were really anatomical and physiological conditions, but, from either ignorance or cupidity, were diagnosticated as pathological ones. From the phantom rectal strictures of Dr. Martin the writer is also vividly reminded of the phantom rectal stricture mania which prevailed in England about sixty-five years ago.

The writer must now conclude by expressing the belief that he has fully proved that Dr. Martin's theory of rectal valves with their numerous diseases is a delusion, a fallacy, and a snare. In these efforts, the writer believes with many others, that he has met with success; but if he has not, he hopes and trusts that Dr. Martin or any of his theoretical friends will, through the medical press, demonstrate to the world his failure. The writer holds himself bound to reply to any candid, cogent attack which may be made against his doctrine, for throughout this whole affair he only pleads for the triumph of truth, as it seems to him; for truth, by whomsoever wielded, is not blunt, but, like the catling knife, is sharp-pointed and double-edged.

INDICATIONS OF TREATMENT IN CASES OF UTERINE MYOMATA.*

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When the attempt is made to state with precision the indications for operative intervention, in the case of uterine myomata, it will be found, on careful analysis, that the result is far from satisfactory. Such an attempt I made, several years ago, in a paper read before the New York Obstetrical Society, but larger experience has shown that the views then advocated must, in part, be modified. There are, it is true, certain well-established principles of treatment to guide us, but, nevertheless, it is necessary to consider the circumstances of each individual case to determine our action in the premises. As *myomotomy* has developed out of *ovariotomy*, it is easy to comprehend the train of reasoning of those

*Read before the New York State Medical Association, October 24, 1901.

who argued that, as it was a well-grounded rule of practice to ablate every ovary which was the seat of a neoplasm, so it logically followed that when the uterus became the seat of a myoma the operation of myomectomy was indicated. And, on first view, this standpoint has a show of reason on its side. The possibility of a growing myoma continuing to increase in its dimensions up to the time of the menopause and, at times, after that event, is to be taken into account, as such a possibility is inherent in every such myoma, and this enormous growth may, in itself, endanger life, in consequence of interference with the functions of neighboring organs. An operation performed at an early period may be a relatively slight affair, while, if we wait until a later period, the complication may be such as to render such an operation excessively difficult and dangerous. *Menorrhagia* and *metrorrhagia* may exhaust the patient and lead to thrombosis. The peritoneum covering the myomatous uterus may become inflamed and cause dangerous peritonitis and intestinal adhesions. Phenomena of incarceration may appear in the pelvis, and inflammatory processes in the endometrium may extend to the tubes, producing pyosalpinx. The myoma itself may undergo degenerative changes as putrefactive decomposition and calcification. Finally, the transformation of the myoma into *sarcoma* or even *carcinoma* is to be borne in mind. In the language of Kuestner, we may affirm, however, that "this radical standpoint to subject all myomata to operative treatment will, at all events, never find place in a science which makes the endeavor to help the suffering organism according to the standard of its individuality." "After all," says the great pathologist, Virchow, "the principle must be kept in mind that a myoma is an entirely local formation in itself benign, which brings for the body no other danger than that which is determined by its local effects and changes." Many myomata remain of a moderate size and interfere in no way with life or its enjoyment. And, notwithstanding the denial made by a number of gynecologists that these growths do not diminish after the menopause, it is, nevertheless, the law that after the menopause they *do* undergo retrograde metamorphosis, the cases contradicting the law being rare. Let us now pass in review rapidly the conditions demanding or seeming to demand operative intervention. Large size of the tumor and quick growth are usually regarded as imperatively demanding a radical operation. This indication, however, cannot be admitted without qualification. When a woman who is fifty years of age or more comes under our observation with a large tumor and suffers no considerable inconveniences therefrom, operative intervention is not indicated, in spite of its size. Neither is quick growth in itself an abso-

lute indication, as it by no means infrequently happens that a myoma grows rapidly for a time and then remains for years without increase of growth. On the other hand, when a woman is comparatively young, and the myoma grows rapidly and assumes large proportions, a radical operation is indicated. The symptom which most frequently brings the patient to the physician is *hæmorrhage*. The hæmorrhage does not cause death directly, but may do so indirectly by the extreme anæmia induced as well as by the effects of pressure of the tumor on the veins, the combined effect of which may evoke thrombosis of the femoral veins and even death by embolism of the pulmonary artery. Thrombosis of the larger veins is by no means infrequently observed in women the subjects of myomata, who suffer from chronic hydræmia. Another disastrous consequence of the impoverished blood is that pathological condition of the muscular tissue of the heart known as *brown atrophy*. The signs of this serious complication are a marked weakness of the heart's action, a small, easily compressible pulse, often irregular in its beats, and attacks of dyspnoea and syncope. Of course, such a state of things is a constant menace to the life of the patient, and operative intervention is attended with great danger. The treatment, when possible, I need scarce remind you, is *prophylactic*; the patient should not be allowed to lose so much blood that such a morbid condition could be engendered. Even under such unpromising circumstances, I may here remark, much may be done by a course of preparatory treatment with the view of improving the quality of the blood and invigorating the heart. Fehling¹ gives a very interesting account of a woman who had fever, was very anæmic, with weak, irregular pulse, a thrombophlebitis of the cruralis, in addition, complicating the case, and yet after a preliminary course of treatment of two months' duration the heart was so far strengthened that he was able to undertake the performance of laparotomy, which resulted favorably. Before, however, deciding to have recourse to a radical operation for this symptom, it has been my practice, which I cannot recommend to you with too much emphasis, to make use of curettage, because, as a rule, the hæmorrhages in myoma are caused by endometritis. Moreover, the endometrium is often the seat of polypi, which are met with usually at the lateral angles of the uterine cavity and may be ablated by the curette if not too large. After the curettage of the whole of the endometrium the uterine cavity is packed firmly with gauze, irrigating it first with a normal salt solution. In this way, by relieving the hæmorrhage, the patient has such relief and comfort that there is no necessity for a re-

¹Lehrbuch der Frauenkrankheiten, zweite Aufl., p. 281.

sort to myomotomy. The age of the patient is an important factor in determining the indication. A young woman in the thirties who suffers from recurrent attacks of hæmorrhage, and who has a rather large tumor, has too long to wait before the menopause and may die from anæmia and its consequences if not relieved. Under such circumstances the radical operation is indicated, supposing simpler measures have proved ineffectual. It has been asserted that now and then a myoma has undergone a transformation into sarcoma, but it is certainly unwarrantable to make such a remote possibility the ground for operative intervention.

It is probably true that the combination of myoma and carcinoma in the body of the uterus, which has been repeatedly noticed, may have an ætiological connection, but as it is impossible to demonstrate the existence of cancer, in the given case, and, after all, as sarcoma and carcinoma are such rare attendants upon myoma, the possible existence of either sarcoma or carcinoma can by no means furnish an indication for the performance of myomotomy. Cystic degeneration of the myoma is a pathological condition of such gravity as to furnish an indication for myomotomy as soon as its existence is demonstrated. It causes a rapid growth of the myoma, so as to interfere with the action of the diaphragm, with consequent dyspnœa. *Ascites* may furnish an indication for the performance of myomotomy, especially when it is caused, as I have observed, by a subserous myoma, which is attached to the uterus by a long and thin pedicle and so possesses great mobility, in consequence of which the peritonæum is mechanically irritated. In such cases the removal of the myoma is followed by entire relief of the ascites. It sometimes happens that the myoma is complicated by *peritonitis*, and this may furnish an indication for a radical operation, especially when it has recurred several times. Severe, exasperating annoyances may furnish an indication. The most important of these are phenomena evoked by incarceration of the myoma in the pelvis, especially disturbances in the function of the bladder, so that the urine is voided with difficulty or not at all. Under these circumstances, if the tumor cannot be carried above the promontory into the general abdominal cavity, an operation is imperatively demanded. Ischuria frequently recurring, therefore, is a positive indication for operative measures, especially if the patient is unable to have a physician's aid at short notice—to use the catheter—and this is true of many women living in the country. It is a striking fact that, owing to the slow growth of this form of tumor in comparison with the rapid growth of cystomata of the ovary, pressure symptoms are rarely the subject of complaint. Women with large interstitial or subserous

myomata often make no complaint and are hardly aware of their existence. On the contrary, in the case of subserous myomata, which develop between the folds of the broad ligament or underneath the peritonæum of the pelvic floor, the pains are persistent and of an annoying character. Olshausen² draws attention to one symptom which may occasionally furnish an indication for radical measures, although hardly mentioned by other authors, and that is *leucorrhœa*. It is, in fact, so copious at times that it constitutes the sole complaint of the patient. Reference has been made to the fact that retrogressive changes may be expected to occur at the time of the menopause. This has been denied, it is true, notably by J. Taber Johnson and P. Müller, but, nevertheless, it is the rule, as shown by the experience of the preponderating majority of observers. It is easy to explain the cause of this erroneous opinion. In the first place, the effect of the myoma is to postpone the time of the climacteric until the fifty-second to the fifty-sixth year. Müller ignores this fact, and, assuming the time of the menopause to be the forty-fifth year, he argues that myomata grow after this has taken place. It is absolutely necessary to take account of this law in order to make a correct prognosis. Again, Schroeder and Hofmeier long ago pointed out the fact that, when myomata began to develop at or after the time of the menopause, it was due to the circumstance that they were regularly nourished by extensive adhesions to the omentum and intestines. Such a case I had the opportunity of observing, last summer, upon which I operated successfully by laparomyomotomy. The patient had been under my care for eight or more years. I had controlled the hæmorrhage by curettage, but during the six months preceding the operation the patient suffered from profuse hæmorrhages and she had herself observed that the tumor was perceptibly enlarging. When the abdomen was opened extensive adhesions were found between the transverse colon, the omentum, and the myoma. The increased growth that the myoma experienced was evidently due to the new nutritive supply furnished by these extensive adhesions. The hæmorrhage was explained by the existence of an intra-uterine polypus, which was too large to be ablated by the curette and would have been hardly accessible, at any rate, if recognized. Quite peculiar relations exist where pregnancy is associated with the presence of a myoma. The question to be propounded in these circumstances, and it is a question sometimes very difficult to solve, is whether pregnancy can attain its normal end and whether birth can take place in the natural way. If this question is answered in the affirmative, we wait patiently until the birth takes place and behave as

under normal conditions. But if, on the other hand, the myoma is so large that the development of pregnancy, in addition, will cause serious dangers and unbearable annoyances, myomectomy in pregnancy is indicated. I believe this alternative will rarely present itself. I have not observed it in my experience. An important factor in the framing of the indication is the social position of the patient and her pecuniary circumstances. A woman who has to earn her living by daily toil cannot afford to lie by every month on account of menorrhagia. Such a patient will often be willing to undergo a radical operation in order to be restored to full health and with it the ability to work without more or less suffering. On the contrary a woman in the higher social scale of affluence may safely await the arrival of the menopause, meanwhile undergoing palliative treatment. In the next place, the peculiarities of the individual case must be taken into account. A submucous myoma which is more or less pedunculated may be removed through the vagina without opening the abdominal cavity; the operative procedure is devoid of danger and is, therefore, indicated. On the contrary, when the tumor is situated within the folds of the broad ligament and is firmly united with the pelvis, its removal is attended with much greater difficulties and dangers, and the symptoms must be very urgent that would warrant an operation. Statistics show that the dangers of myomectomy are continually diminishing with the improved methods of our technics and, consequently, the indications for operative intervention are extended. It still remains true, however, that nowhere in the whole domain of surgery is the difficulty of decision for the conscientious surgeon greater than just in the case of uterine myomata. Admirably says Küstner:³ "If, in any domain of operative surgery, is it in myomata peculiarly necessary to balance accurately the one against the other, the dangers and inconveniences growing out of the myoma for the patient, against the dangers of the operation plus the inconveniences produced by the eventual mutilation." It does not lie within the scope of this paper to touch upon the different methods of operation. I would only remark that, if possible, the way through the vagina should be preferred to that by the abdomen, as the chief danger in operative intervention is sepsis, and this danger is much less in operations through the vagina than when the peritoneal cavity is opened from above.

At the Meeting of the Medical Jurisprudence Society, held at the Academy of Medicine on Monday evening, December 9th, Dr. W. R. Inge Dalton read a paper on Commercialism and Responsibility in Connection with Antitoxines and Vaccine Virus.

Issues and Events of the Day.

REPORT OF THE COMMITTEE OF SEVEN OF THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK ON THE PROPHYLAXIS OF VENEREAL DISEASE IN NEW YORK CITY.

By PRINCE A. MORROW, M. D., CHAIRMAN,
NEW YORK.

(Concluded from page 1150.)

PROPHYLACTIC MEASURES.

Regulation.—To Question III, "What measures, in your opinion, are best adapted to limit or prevent this dissemination of venereal diseases in this city?" there were 1,065 recommendations, some advocating more than one measure. The onerous duty of analyzing this mass of material devolved upon the secretary, Dr. Weiss, and the thanks of the committee are due him for his work in classifying these answers for tabulation under appropriate headings.

As the committee has asked for an expression of views upon this most important question, it is proper and fitting that these recommendations should be duly considered.

Three hundred and forty of these may be grouped together as advocating the same radical measure—regulation.

In discussing the value of remedial measures for the prophylaxis of venereal diseases it would not be the part of wisdom to confine ourselves to the meagre statistics collected by this investigation which do not bear directly upon the subject. We should take a broader and more general survey of the question and utilize the results of the experience and observation of foreign students upon the practical workings of this system in countries where it has been tried, as a basis for conclusions.

The system of regulation in France serves as the type of that employed in other countries, and its main features may be thus briefly summarized. It represents an association or combination of effort on the part of the administration authorities and the medical profession with a view to render the practice of prostitution less dangerous to the public health by the elimination of sources of contagion in women who are engaged in it. A special corps of police is employed, every woman in the streets suspected of prostitution is arrested, her name is inscribed on a special register, and she is given a card which is an authorization to exercise her trade under certain conditions; the most important obligation is to report at stated intervals for medical examination. When found diseased, she is sent to a special hospital and detained until her contagious accidents are cured. This system, it will be seen, rests upon the tripod of police force, medical examination, and

³Grundzüge der Gynäkologie, p. 1.

hospital isolation—the hygienic feature is the medical examination.

The success of the system depends upon two factors, the activity and vigilance of the police in bringing women under supervision and the thoroughness of the examination in detecting sources of disease.

As regulation has been employed in France for over half a century and in other European countries for a longer or shorter period, there has been ample opportunity to test its value in reducing venereal morbidity.

Without presenting an analysis of the mass of statistical evidence accumulated, a calm and impartial study of the practical results of regulation would seem to demonstrate that it does prevent a certain amount of infection in men. The much smaller proportion of infections which can be traced to regulated prostitutes, and the much larger percentage of venereal disease in women not regulated, are evidences of its value.

It requires no prejudice in its favor to concede that the detection and enforced isolation of so many sources of infection must have a material influence in limiting the dissemination of venereal disease. For example, the statistics of Commenge show that, of the 15,095 syphilitic women sent to the St.-Lazare Hospital during a period of twenty years, the average detention was thirty days, which gives a total of 452,850 days in which they were prevented from all possibility of transmitting their disease.

Further consideration of this system might be dismissed on the ground that, whatever may be its value, public opinion forbids its introduction in this country. Sentimental objections should not, however, be allowed too much weight in the discussion of purely sanitary schemes. It is the high mission of the medical profession to educate and direct public opinion in all sanitary matters. As to the practical objection that the organization of our public hospitals is such that one most essential condition of this sanitary scheme is wanting, viz., sufficient provision for the isolation of a large number of venereal cases—it may be said that increased hospital facilities could doubtless be obtained. But there are other and more weighty objections to regulation which may be briefly referred to. The fatal defect of this system is to consider public or professional prostitutes the almost exclusive sources of contagion, when as a matter of fact they constitute only a small minority. It is and always will be defective and incomplete in its operation because only a small proportion of prostitutes can be subjected to its provisions. There is an invincible repugnance on the part of women to be labeled with a number, compelled to be inspected as articles of merchandise, and forcibly detained in a hospital. Not ten per cent. of the public women can by any police inter-

vention be collected, and of these about one fifth annually disappear from observation and become clandestine prostitutes. Regulation cannot be effectively applied against the large body of private, or clandestine, prostitutes; it cannot reach the great mass of masculine spreaders of contagion.

Another defect is that the medical examinations conducted once a week or ten days are insufficient to promptly detect sources of contagion. New infections of the women may be manifest the day after the weekly examination has been completed and in the intervals between visits every corner may be contaminated.

Again, the bacteriological examinations demanded by modern science as a test of the existence of gonorrhœal disease cannot possibly be made with thoroughness when a large number of women are to be examined within a short time. All specialists recognize the difficulty of detecting the initial lesion in women or of pronouncing positively upon the syphilitic character of certain accidents. Another defect is that the shortness of stay in the hospital, which does not average more than thirty days, is notoriously insufficient, especially in disease of prolonged contagious activity and with such frequent recurrences as syphilis. For these and other reasons the committee does not recommend the Continental system of regulation as a remedial measure; while it has the incontestable advantage of hygienizing a limited number of public women, the evidence is by no means clear and conclusive that it materially diminishes the sum total of venereal diseases in countries where it has been most perfected and employed. It has so many countervailing disadvantages, it is vulnerable from so many points of view, that the movement for its modification or abolition in many European countries will probably result successfully.

The committee is fully impressed with the conviction that private prostitution represents the most dangerous phase of the evil, both from a sanitary and moral point of view, and that one test of the value of a remedial measure is its influence in disseminating the evil and recruiting the ranks of clandestine prostitutes.

Segregation.—A further analysis of the replies shows that 203 recommend the segregation of prostitutes. In a medical sense segregation means the enforced separation of certain individuals from their fellows and their collection in one locality in a more or less isolated group.

The committee does not deem it wise at the present time to advise segregation of prostitutes in one specified quarter of the city, with the understanding that in this locality they may be permitted to exercise their vocation without molestation. Public sentiment is extremely sensitive to anything like

legal recognition or sanction of this evil, and it is impossible to approach the boundaries of toleration without entering the confines of authorization.

This question possesses a peculiar pertinence at the present time. As an outcome of the work of the Tenement House Commission, the elimination of prostitutes from the tenements and apartment houses of this city may be accepted as a foregone conclusion. The vigorous enforcement of this law will doubtless result in casting out many hundreds of public women; the question is, What shall be done with the outcasts? While the committee does not feel charged with the responsibility of suggesting a provision for this class of evil-doers, yet, since they are chiefly concerned in the propagation of venereal diseases, their disposition has some bearing upon the objects of this inquiry. From a common sense as well as a humanitarian point of view, it is evident that these unfortunates must be permitted a habitation. They cannot be forced into the river and drowned, as 800 of them were at one time under the edict of a French emperor. They cannot be driven forth into the hills and fields, denied food and shelter and left to perish, as was done at a later period at Edinburgh. The brutal methods carried out with savage energy which characterized former crusades against these unfortunates are opposed to the spirit of the age in which we live—certainly they find no place in the counsels of enlightened sanitary science. What shall be done with the outcasts is a most perplexing problem, as it touches at many points questions of morality, of law and order, as well as personal rights. It will be admitted that in principle prostitution is wrong and that its entire suppression would be the ideal condition; but this ideal is not realizable. Prostitution is inherent in the human race; it cannot be annihilated, it is a necessary evil in our social system. We are confronted with the fact that the prostitutes, like the poor, we shall always have with us. In dealing with this evil, speculative arguments, based upon an abstract principle which involves the perfectibility of the human race, should yield to the doctrine of expediency. The most feasible plan appears to be to compel all prostitutes to inhabit houses by themselves. Immoral women should not be allowed to dwell in the same house with moral families. This domiciliary separation should be absolute and complete. To accomplish this result no new legislation relating to prostitution *per se* is necessary, but rather a relaxation of the law applying to the existence of disorderly houses. By simply abandoning this evil to its own evolutionary mode, which is always toward aggregation, unless scattered by the force of repressive measures, it would naturally drift into certain streets or quarters, following, of course, the line of least resistance on the part of property own-

ers. Prostitutes are essentially gregarious, and the natural history of prostitution shows that, like other trades, it has a tendency to aggregation, obeying the same commercial law which determines the localization of certain lines of business in certain districts or quarters. The colonization of certain nationalities in distinct quarters, such as the Chinese, the negro quarters, etc., is another evidence of this tendency to aggregation. The committee is fully persuaded that the interests of public health, as well as of public morals and public decency, can be best subserved by the localization of this evil in certain streets or retired quarters of the city, where it will not obtrude itself upon observation, where it must be sought for to be found, and where it can most effectively be brought under control. The existing regulations which apply to solicitation in the streets, provocation to debauch through open windows or indecent exposure, and all offenses against public order and decency should be strictly enforced. All red light or other indications of the nature of such houses and all external and visible signs of prostitution should be rigorously prohibited. This arrangement would take out of the hands of the police the arbitrary power of levying tribute, which has proved so demoralizing to the force. The function of the police would be limited to the preservation of order and the repression of all scandalous behavior in the streets.

Regulation by the Board of Health.—Among measures suggested, regulation by the board of health is recommended by 152 physicians, report of cases to health department by 15, and isolation by quite a number of others.

It will be admitted that the control of venereal disease, as of other contagious diseases, naturally and legitimately comes within the province of our sanitary authorities who are the accredited representatives of the State in all matters relating to the protection of the public health. Now, venereal diseases, like other contagious diseases, are already subject to the control of the board of health; this board, however, does not officially recognize the existence of these diseases or employ any sanitary measures for their control. The first essential is to awaken the health authorities to a sense of their responsibility.

Sanitary control is not necessarily limited to the measures employed in the case of acute infectious diseases, *viz.*, compulsory notification and enforced isolation during the entire contagious period. These routine methods by no means represent the sole resources of sanitary science. Isolation contemplates brevity, and in dealing with chronic infectious diseases like syphilis or tuberculosis would be impracticable. The ordinary methods of sanitary procedure should be adapted to the peculiari-

ties of the particular disease, its nature, its mode of contagion, and the conditions under which it is spread.

When the health authorities proposed to bring tuberculosis within the sphere of sanitary supervision, it was certainly not with the view of isolating the great army of consumptives; the spread of tuberculosis has been combated by other means. A campaign of education was instituted, the public was taught that it was a communicable disease, instructed as to the agencies by which it was propagated in family life, of the risk consumption carried to others and the best means of avoiding these risks. A bacteriological laboratory was created to examine the sputum in suspected cases, so that the disease might be detected in its earliest stage, when it was amenable to cure. Increased facilities for its treatment were also provided. The work done by the health board of New York in their efforts to stamp out the seeds of consumption met with the most appreciative recognition in the last meeting of the Tuberculosis Congress in London.

The health department of this city is armed with full authority to enforce all measures which, in its judgment, are deemed essential to the preservation of the health of the community. The public is willing to submit to measures, if ordered by the board of health, which might be considered an infringement upon private and individual rights, while it would resent the imposition of similar restrictive measures by social reformers or others. There may be a difference of opinion as to the moral aspects of the social evil and the propriety of restrictive measures in so far as it constitutes an offense against morality, but there can be no strenuous opposition to a sanitary movement which has for its sole object the repression of disease.

This committee is not prepared to formulate a system of control complete in all its details and embodying the methods to be employed in combating the spread of venereal disease. It will be conceded that the problem is most difficult, but its solution should be undertaken, meeting the difficulties as they arise. While it is obvious that placing venereal disease under the ban of notifiable disease would not be judicious or practicable, there could be no objection, however, to the registration of all cases of venereal disease, the physician reporting the nature of the disease, the origin of the infection whenever practicable, without giving the name and address of the patient, and thus respecting professional secrecy. All public institutions, hospitals, and dispensaries should be required to report all cases of disease of venereal origin. The establishment of a distinct bureau under the Division of Contagious Diseases, with a special corps of sanitary inspectors, chosen for proficiency in the knowl-

edge of this class of diseases, with a bacteriological laboratory for the examination of disease secretions, and other administrative details, would be matters for further consideration.

The keepers of disorderly houses should be required to report all cases of disease occurring among the inmates of their establishment under penalty of a heavy fine, and such diseased women should be retired from circulation until their contagious accidents were cured. To meet this exigency there should be increased hospital facilities for the reception and treatment of venereal diseases.

From a hygienic standpoint, prostitution should be looked upon as a sanitary sin and supervised like any other trade which menaces the public health by the disease it engenders.

Penalizing the Transmission of Syphilis.—The question of penalizing the transmission of syphilis, as recommended in many of the replies, is viewed differently by members of the committee. The difficulty of positively identifying the origin of the infection in a disease of such prolonged incubation as syphilis and the impossibility of determining the source of the disease when promiscuous intercourse has been indulged in are complicating elements, yet there are many cases in which the penalty could be enforced without a miscarriage of justice. If such a law is deemed advisable, it should be drafted by those skilled in the framing of legislative enactments, with due regard to the nature of the disease and eliminating all possibilities of blackmail. It may be said that if public sentiment sustains the board of health in imposing a heavy fine for spitting on the floor of cars and public conveyances, with the remote possibility of the sputum containing tuberculous germs and with the still more remote possibility of its proving a source of infection to others, surely it would sustain a law penalizing the transmission of a serious disease. The mere existence of such a law upon our statute books would do much to educate the conscience of the public to the idea that the transmission of syphilis is not a venial offense—that it is a crime against society to recklessly scatter the seeds of a loathsome disease. Responsibility for the spread of syphilis should be narrowed down to the question of individual accountability. Such a law would have its special application in the protection of minors.

Safeguarding Minors.—The committee is convinced that no successful preventive measures against the dissemination of venereal diseases can be instituted which do not take into consideration the necessity of throwing special safeguards around minors. Statistical evidence proves that the existence of venereal morbidity falls most heavily in the latter half of the second decade of life. The large proportion of infections occur from the sixteenth to

the twentieth year in women, and from the eighteenth to the twenty-third year in men. The statistics of Le Pileur, in which the age of contamination in 718 syphilitic women was definitely traced, indicates that 62.9 per cent. were infected from the sixteenth to the twentieth year, 6.3 per cent. from the twelfth to the fifteenth year. These statistics show that the *débutantes* on the stage of vice, the young and the immature, are the chief victims as well as the chief sources of contagion to others. All experience shows that the large proportion of infections may be traced to young prostitutes; old prostitutes are less dangerous in disseminating disease, as many are immunized by time so that they cannot transmit syphilis. Besides, they are less attractive and therefore less sought after. In this country we have no statistics showing the age of contamination, but there are abundant indications of the precociousness of the youth of this city in acquiring venereal disease. All physicians who have charge of venereal clinics have been impressed with evidences of the growth of juvenile vice in this city. The statistics of Dr. Graenelli, of the Good Samaritan Dispensary, show an increase of from 8 to 15 per cent. of venereal disease in males below eighteen years of age within the past three years.

With a view to suppressing the prostitution of minors, a law raising the age of consent would be an additional safeguard. Prostitutes of minor age when apprehended should be sent to a protectory or reformatory and detained until the age of twenty-one.

No less important is the rigid enforcement of the law against proxenetism. The procurer must be regarded as a most active agent in the dissemination of venereal disease. The business of procuring young and innocent girls for introduction into a life of debauch, where they are almost inevitably doomed to contract and spread venereal disease, is a crime which has its hygienic as well as its moral aspects. The law should provide the most rigorous enactments to fittingly punish the panders to this vile trade.

Education and Treatment.—Among the miscellaneous measures proposed the most important may be grouped under the head of education and treatment, with enlargement of hospital and dispensary facilities. In the opinion of the committee, education and treatment comprise the most promising remedial measures which are immediately available and which all interested in this hygienic work, the repression and control of the effects of prostitution, will approve. They take cognizance of the rôle played by men in the propagation of venereal disease, as they apply to both men and women.

Education should begin in the ranks of the profession. In the organization of the system of in-

struction in many of our medical schools, the importance of a knowledge of this class of diseases is not recognized. The study of venereal diseases should be made an integral and essential part of medical education, and the practical as well as theoretical knowledge of these diseases should be made an indispensable requisite for graduation in medicine.

The importance of deciding intelligently upon the conditions of admissibility of marriage of venereal patients, for example, cannot be overestimated. The dangers introduced into the family life by the premature marriage of a syphilitic man or of a man suffering from a latent urethritis, to which the sanction of the physician may have been given, involve a heavy responsibility upon the medical profession. How many thousands of young men with an uncured gonorrhœa every year enter into the state of matrimony, it may be with the sanction of the physician who has made perhaps a superficial examination, and infected their wives, resulting in pyosalpingitis or peritonitis and ending in chronic invalidism and hopeless sterility. Speaking of this class of cases, Dr. T. Gaillard Thomas says: "Specific vaginitis transmitted to virtuous women by men who are utterly ignorant of the fact that the sins of their youthful days are at this late period bringing them to judgment is one of the most frequent, most active, and most direful of all the causes of serious pelvic trouble in women—one which meets the gynecologist at every turn and one which commonly proves incurable except by the dangerous procedure of coeliotomy." * * * "A marital quarantine is as necessary to-day in social life as a national quarantine is for contagious diseases in general."

Those charged with the education of young men in high schools and colleges should instruct them as to the dangers of promiscuous intercourse. Every young man should be impressed with the idea that venereal disease is almost invariably a concomitant of licentious living, involving consequences which may seriously compromise his health, and like an avenging Nemesis come to smite him, it may be, years after he has forgotten his youthful follies. This knowledge should be imparted with tact, discretion, and good sense. The physician would prove a most valuable auxiliary in this prophylactic education. Especially should he correct the traditional belief so universally accepted by the laity that gonorrhœa is a trivial affair, easily cured and leaving no permanent results. He should also combat the dangerous theory that sexual indulgence is necessary to health. As Sir William Gowers has said, "No man was ever worse for continence or better for incontinence." All medical men as well as moralists who have studied this

question look upon the promotion of masculine chastity as among the most powerful means of checking prostitution. Prostitution is largely a matter of supply and demand, and all conditions which diminish the demand for prostitutes on the part of men diminish the supply.

One of the most effective means at our command for preventing the dissemination of venereal disease is to promptly sterilize the sources of contagion by treatment, and thus shorten the period of their contagious activity. The number of infections that may be traced to a single source is often most remarkable. Every venereal patient should be looked upon as a possible focus for the spread of contagion, and the cardinal consideration should always be kept in view that the protection of others from risk of infection is quite as important as the cure of the disease. The patient should be fully instructed as to the nature of his disease, the duration of its contagious activity, the manifold means by which contagion may be effected, and the moral responsibility involved in exposing others to contagion. Every source of contagion suppressed by treatment, every infection avoided by enlightenment of the patient, represents a distinct gain in the reduction of venereal morbidity. Education along these lines should be generalized as much as possible among the public, especially among the poor and ignorant. In order to prevent blindness from neglected ophthalmia neonatorum among the poor, midwives should be instructed as to the cause, symptoms, and dangers of this affection and the necessity for prompt and skilful medical treatment.

The committee has already referred to the ban of ostracism which dishonors this class of diseases in their exclusion from general hospitals in this city, and would recommend that every general hospital receiving State or municipal assistance should be required to open its doors to this class of diseases. Fortunately, hospital care is not required in the large proportion of venereal diseases. Most of them are ambulatory cases, and dispensary treatment which does not interfere with their employment and with their wage-earning capacity is best adapted to their requirements. While only a limited number of dispensaries in this city have a venereal service, it has been found that patients are treated in a large number of dispensaries which ostensibly do not receive this class of cases. This treatment should be efficient and at the same time available, the attending physicians of the venereal classes should be specialists in this branch of medicine, and the service should be organized and conducted with special reference to the nature of the disease, that is, they should be conducted with all the privacy possible.

Among the subsidiary measures which are recommended are the absolute prohibition of all advertisements of "infallible cures" by charlatans in the public press and the placing of advertisements of "sure cures" for private diseases in urinals or in public places, also the prohibition of prescribing for venereal diseases by druggists.

In concluding this report it may be said that the closing years of the nineteenth century have been marked by a general awakening of interest in the chronic infectious diseases, tuberculosis and syphilis, and the convocation of international conferences for the discussion and adoption of the sanitary measures best adapted to their repression and control, as exemplified in the Congress for Tuberculosis and the Congress for the Prophylaxis of Syphilis and Venereal Diseases in 1899. It is now generally recognized that the ravages of these chronic infectious diseases are infinitely more destructive to the human race than cholera, small-pox, or the plague, and that their prophylaxis should be no longer neglected.

The object of this committee's work has been to ascertain, with some approximation to accuracy, the amount of venereal morbidity in this city, to stimulate the interest of the medical profession in this important but neglected class of diseases, and to urge the employment of all the resources of sanitary science to limit or prevent this spread.

It will be seen that no specific "State or municipal legislation for the repression and control of prostitution," as was contemplated in the resolution of the society creating this committee, has been recommended, and this from the firm conviction that such repressive measures would prove a failure. Because the source of venereal diseases cannot be extinguished there is no reason why we should shut our eyes to their existence and fold our arms in the helplessness of impotency. By a parity of reasoning it might be contended that because we cannot destroy the causes of acute contagious diseases we should cease to combat their spread.

While the committee does not indulge the Utopian idea that the extermination of venereal diseases is likely to prove entirely successful, it is fully persuaded that much may be done to limit their dissemination by intelligent and well-directed sanitary effort.

Sanitariums for Tuberculosis in Maryland.—The Maryland State Board of Health has devised and will present to the legislature of the State comprehensive plans for about seven sanitariums for the treatment of tuberculosis at different points in the State. At present there are only two hospitals open to this class of sufferers—namely, the Hospital for Consumptives at Towson and the Hebrew Hospital, which has beds for seven consumptives.

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the subsequent questions are as follows]

VIII.—In fractures of the upper third of the femur, how do you manage the tendency of the upper fragment to tilt forward? (Answers due not later than January 10, 1902.)

IX.—How do you treat gall-stone colic? (Answers due not later than February 10, 1902.)

X.—How do you treat puerperal convulsions? (Answers due not later than March 10, 1902.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested that the answers be short, no one answer to contain more than six hundred words. We shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers as original communications.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted this month has been awarded to Dr. George B. Twitchell, of Cincinnati, whose paper appears on page 1177, and is followed by Dr. Walker's and Dr. Andrews's.

PRIZE ESSAY NO. VII.

BIMANUAL DIRECTION OF THE HEAD IN CARUS'S CURVE.

Dr. James D. MacGaughey, of Wallingford, Conn., says:

When called to a case, the second stage being well advanced, and the head pressing upon and bulging out the perinæum, all other preliminaries having been completed, such as emptying the rectum, etc., and the occiput is approaching or has reached its subpubic position, and in the judgment of the accoucheur artificial assistance is necessary to guide this stage through successfully, the patient should be turned on the left side, and a pillow, rolled up as hard as possible and securely tied or a folded quilt placed between the knees. The patient should be brought sufficiently near the edge of the bed, so that the physician in taking his seat at the woman's back, his face looking toward her buttocks, will be in as comfortable a position as possible. The left hand is now passed over the right groin, down between the legs, over the vulvar opening, until the ends of the fingers touch the anterior edge of the perinæum, their palmar surfaces covering the presenting part of the foetal head, which is probably alternately advancing and receding between the labia. This position of the left hand and the power

it can exert make it as important as the right hand, in some cases even more so.

For the right hand, take a folded napkin, thick and soft, and place it against the perinæum, the fingers spreading out, reaching to the sulcus between the labium and the thigh on one side, and the thumb to the sulcus between the labium and the thigh on the other side, the centre of the palm corresponding with the centre of the perinæum, with the U shape between the base of the thumb and the base of the index finger flush with or near the perineal anterior edge, as it were, an imitation of a second perinæum. The duty of this much-misused, and often confused right hand, is to furnish support, if needed, to measure the pressure and force of pains, to note resistance, to grasp the, as it were, quantity of elasticity and flexibility of the perineal structures as they swell out into the open palm. Then it can easily be determined if pressure is exerted too much toward the rectum, the head being driven too much downward and backward before extension begins to take place. If needed, the fingers and thumb on opposite sides can press the perinæum laterally toward the centre, relaxing it, and strengthening it by concentration of fibres, modifying pressure on the rhaps, fulfilling the idea advanced some years ago by Playfair and spoken of by the late Dr. Goodell, of Philadelphia, as like a good general hurrying up reinforcements to a weak point. If necessary, the fingers can be brought up toward the anterior thinned edge of the perinæum, to meet those of the left hand from above, to assist in making stronger this weak point, where the rent almost invariably begins, also to aid in keeping the head under the pubic arch. Or if found answering a better purpose, especially between the pains, the fingers can be introduced into the rectum, the chin searched for and, if reached, hooked up, and extension completed or so nearly completed that in some cases the head is just ready to be born by the time the next pain comes on or gets to its acme. In this position, it will be of great aid in those cases, especially in primiparæ, when the head is driven so far down, and yet the pains are far apart, very weak, and unavailing, the accoucheur can, taking advantage of the pains when the latter disappear just short of urging the head through, by pressure from behind forward, push the forehead, face, and chin so much in extension that the head is shelled out before the next pain, and a great deal of time saved. There is rarely need of firm, direct pressure, as advocated by Ramsbotham in days gone by, with the elbows resting on the bed as a fixed point, forcing the distended perinæum against the oncoming head. This form of injudicious support now has no advocate; it is hurtful, impeding circulation and causing the tissues to become hot, dry, and inelastic; but,

with a napkin between the hand and perinæum, and common sense added, no harm can possibly be done, even if, in the obstetrician's judgment, it may be necessary to exert considerable force intermittingly. The bare-hand pressure is rarely if ever called for, but with the hand protected as recommended and placed as described, intermitting pressure can be safely used, if deemed necessary; the distensibility, dilatability, and tension of the perinæum can be determined—matters very necessary in some crucial cases—the correct direction in which to apply force can be appreciated, and manœuvres deemed necessary to meet emergencies be executed. Many other useful features of the right hand I may have omitted to mention, but no doubt the major part have been taken into consideration, the most important ones at least. Both hands should be free from set, dogmatic principles, but should play the proper part, guided by an intelligent brain, in a scheme which, if successful, will save our patients from never-ending troubles. The left hand exerts that control by supporting and directing the head and reducing to a minimum its powerful pressure on the thinned and weakened perineal edge, and thus will save that structure from demolition if any method can possibly do it. This hand is kept applied to the head while the perinæum is on the stretch, and the foetal head is passing the vulvar opening, except during the absence of pain; it can appreciate all its movements, and calculate the force of the uterine pains, and, as the tips of the fingers touch the anterior thinned edge of the perinæum, the danger, and condition of that structure can be pretty accurately determined. The whole process can be made more useful by the eye, for when the patient is on the side, the labor can, and ought to be, especially in the latter part of the second stage, watched ocularly. As labor advances, the head is driven farther down, the suboccipital point becomes fixed as a pivot, extension takes place, and the vertex begins to emerge more and more between the labia, the perinæum bulging greatly, put upon its utmost tension and thinned out until its anterior surface glistens and turns livid from arrested circulation, the fingers are kept pressed steadily and yet more firmly over the head, the tips on a level with where the perineal edge leaves off, to take the weight, as it were, from tired and exhausted shoulders to fresher and stronger ones (the fingers—left hand), offering the opportunity for the safe execution of the movement of extension as the fingers receive first the sinciput, forehead, face, and chin, sliding them upward into the palm of the hand, as they emerge, and continuing the foetal expulsion in the imaginary circle of Carus over the symphysis pubis. Sometimes the fingers can work to better advantage by pressing their tips below the anterior edge of

the perinæum, between the foetal head and the perinæum, increasing their power by the force which can be used from below upward, taking the pressure directly from the weakened and thinned perineal edge, transmitting the uterine pressure directly to the fingers, more than compensating for the increased thickness caused by this manœuvre in the head diameter plus the room taken up by the fingers.

After the head has been born, it can be held by the left hand, and the right used to assist the shoulders and support against the laceration which they cause or prevent them from continuing a laceration begun by the head. Quite often the shoulders will do more damage to the perinæum than the head, but the method here advocated will do more to get out of this difficulty than any other.

BOTH TOO RAPID AND TOO SLOW EXPULSION SHOULD BE PREVENTED.

Dr. John A. Lane, of Laleta, Cal., writes as follows:

There are some malpositions which expose the vulva to a greater diameter of the foetal head as in occipitoposterior face, and brow positions. If these conditions are recognized sufficiently early, the malposition should be corrected, thus avoiding the threatened danger.

Posture of the woman having very little to do with the perinæum, she is permitted to assume that posture most agreeable to her which does not interfere with the control and manipulation of the foetal head.

In order that the patient may be subjected to the least danger of the occurrence of laceration, labor must be neither too rapid nor too slow. A very rapid labor affords no time for the moulding of the foetal head or dilatation of the maternal tissues. Prolonged labor interferes with the circulation in the maternal tissues, causing thickening and œdema, which increase the resistance of the parts and render laceration more liable to occur.

When labor is too rapid, the head distends the vulva almost to the utmost and fails to recede as it has done after the previous pain, but remains in view until the next pain suddenly expels it through the widely stretched external outlet. The expulsive force, acting suddenly and being much greater than is necessary to overcome the slight resistance now offered by the soft parts, lacerates the tissues instead of dilating them as would happen were the expulsion of the head less sudden.

As this is the most frequent cause of laceration of the perinæum in normal vertex positions, it is comparatively easy to devise means to meet and overcome the difficulty.

From the time the occiput begins to protrude through the vulva until the child is born, the parts

should be under ocular inspection. The main requirement, in preventing laceration, is to regulate the expulsive force so that it is just sufficient to overcome the slight resistance offered by the distended perinæum, and, as an assisting measure, to restrain the progress of the head, should this force become too great or too suddenly exerted. It is obvious that the force of the uterine contractions cannot be moderated. It is just as plain that the force and duration of the abdominal contractions can.

Thus, if the contractions are too forcible, ask the woman to stop straining, to breathe rapidly, or to cry out. These acts inhibit the greater part of the expulsive force. If this does not overcome the difficulty, chloroform must be used to the point of overcoming the abdominal contractions. If a powerful uterine contraction should come on or if the woman should fail to obey the command to stop straining, the expulsive force must be overcome by making pressure against the child's head until the pain passes. This is done by placing the fingers of either hand on the head and reinforcing it by the fingers of the other hand placed diagonally over the first. When the pain comes on, the head is allowed to descend only so far as can be done without exposing the tense structures to risk of tearing. While we are impeding the progress of the head with the hands, it should be managed in such a fashion as to produce flexion of the head to the point of superflexion until the nape of the neck engages underneath the symphysis before an attempt is made to extend it, when it should be pressed toward the pubic arch. We thus liberate a small diameter of three inches and three quarters for one in an improper mechanism of five inches.

The perinæum having dilated sufficiently, the head is allowed to escape. As it is about to escape, rotate it slightly so that the nose and chin do not strike the middle of the perinæum. After the birth of the head, support it on the arm until the shoulders are born. Laceration by the shoulders may be prevented by lifting the head toward the mons Veneris, so that the anterior shoulder goes behind the symphysis pubis while the other escapes over the perinæum, then the anterior is allowed to escape. This enables one shoulder to be born at a time, and produces less strain upon the perinæum than when both are pulled out together with rude haste.

Should labor be delayed and the presenting part cease to advance, stimulate the uterus or withdraw the anæsthetic, if one is given. If this does not cause advance, the forceps must be used in imitation of normal pains. Traction must be slow, gradually increasing in force until the perinæum is put on the stretch, the head held there about a minute, then followed by a slow and gradual relaxation of the traction force. This is repeated in a few mo-

ments. In this way the perinæum is dilated sufficiently to permit the escape of the head without danger of laceration.

MANUAL RETRACTION OF THE PERINÆUM BETWEEN PAINS.

Dr. Theresa Bannan, of Syracuse, N. Y., writes as follows:

Laceration of the perinæum concerns primiparæ mainly. The indications are to relax the perinæum gradually, to utilize all the space of the inferior pelvic strait, to keep the foetal head completely flexed until the occiput clears the pubic arch, and to permit expulsion of the head only between the pains.

When the foetal head begins to show at the vulva, the patient should turn on her left side with the hips near the edge of the bed and the legs drawn up. The rectum and bladder should have been previously emptied. The index finger of the physician's right hand passed into the vagina tests the resistance of the perinæum. This resistance is lessened by gradually drawing the perinæum upward and backward toward the coccyx, a second finger being inserted and this gradual stretching continued either between or with the pains. Meanwhile the head advances, disclosing more and more of its surface at the vulva. Now, during a pain, the left hand of the accoucheur passed between the thighs of the patient, holds the foetal occiput firmly against the pubic bones, while the right hand, pressing upon the sinciput through the perinæum, maintains flexion of the head, thus presenting the smallest diameter to the pelvic outlet. This attitude is continued until the occiput clears the pubic arch. Only the soft tissues now offer resistance to the head, and these hug it closely in a tense band, threatening to rupture posteriorly through the fourchette and perineal body. Now the attitude of the attendant is changed. The left hand grasps the whole occiput, while the right hand, with the thumb in the distended rectum and the fingers spread out over the perinæum, control the sinciput just ready to slip from under or through the perinæum. The head is thus prevented from being expelled forcibly during pains which more and more distend and dilate the perinæum. The thumb in the rectum, by tentative efforts at extension of the head, gauges the rigidity of the perinæum, and upon the correct estimate of this rigidity depends perineal integrity. The slightest split at the fourchette is a sign of danger and demands increased watchfulness and patience. When experience tells us that the perinæum is sufficiently relaxed, a time between pains is chosen and the perinæum is slowly retracted over the brow, nose, and chin pushed gently and successively into view by the thumb in the rectum. The deep respiration

of the mother at this stage is seen in the gradually "breathing out" of the head beneath an intact perinæum. When the head has thus safely passed, the perinæum must still be watched. The gentle retraction of the perinæum over the posterior shoulder, and elbow follows the same principle as in the passage of the head—retraction between pains.

This conduct of labor is for the average primipara, the degree of care required varying with age, temperament, and physical condition. In every case the patient is sufficiently exposed to permit a view of the perinæum, ante-partum exposure and safety being preferred to the exposure of perineal repair. Chloroform is not used, the advantages of voluntary effort or restraint being preferred to the relaxing advantages of an anæsthetic.

THE VALUE OF PARTIAL ANÆSTHESIA.

Dr. Frank S. Nicholson, of St. Paul, Neb., sends the following:

In considering this subject it will not be the purpose of this essay to discuss those methods for the prevention of laceration of the perinæum which are purely theoretical, or which might be productive of evil results, but rather those which, in my estimation, may be of use in actual practice.

Let us, for the sake of simplicity, take up the methods for the prevention of laceration under the following five headings, viz:

1. With regard to the position of the patient.
2. With regard to the position of the child.
3. To endeavor to promote, if possible, relaxation and dilatation of the perinæum.
4. To arrest the advance of the child's head, slow its exit, and prolong the perineal stage.
5. To avoid all interferences which may be apt to produce injury.

It has been my experience that laceration of the perinæum is less apt to occur when the patient is lying on the left side, with the thighs and legs flexed, the right leg being thrown over the left. The dorsal position certainly tends to increase the risk of laceration by bringing the weight of the child to bear more directly on the perinæum. The same may be said of the half-sitting, or squatting, position.

Malpositions of the child must be attended to. Defects of flexion and extension must be corrected, but, as these do not come properly within the scope of this paper, it will not be necessary to do more than mention them.

In order to promote relaxation of a rigid perinæum, hot fomentations may be applied. In promoting dilatation we have at our command several methods which I shall proceed to describe.

Relaxation may be greatly assisted by placing the thumb and forefinger of the right hand on either

side of the perinæum, and pushing it gently forward over the advancing head at the height of the pain, while at the same time, if found advisable, the tips of the fingers may exert some pressure on the advancing vertex. The same result may be obtained by hooking the index finger of the right hand into the rectum and drawing the perinæum forward toward the pubes, at the same time making pressure on the advancing head with the thumb.

Another method for aiding dilatation is to introduce the finger into the rectum and hook it either into the child's mouth or under its chin, so that instead of the head receding between pains, it may be kept in contact with the perinæum, thus producing a constant pressure on it and facilitating dilatation.

The last two methods will doubtless be repugnant to both patient and accoucheur, but all delicate feelings must be set aside and only the welfare of our patient considered.

Another procedure which may be used to great advantage is to insert the first and second fingers of the right hand between the advancing head and the perinæum in an inverted V shape, palm upward. This manœuvre removes the direct pressure from the perinæum, at the same time guiding the head in a forward direction.

Our strongest ally for the prevention of laceration is narcosis. This should not be complete, but just sufficient to arrest the advance of the child's head and slow its exit. Our object is not to suspend labor, but to retard the force of the uterine and reflex forces in order to allow time for dilatation to take place.

The same object may be accomplished, but to a lesser degree, by the use of the forceps, using only a moderate force of resistance. The combined use of the forceps and narcosis is better than the use of either separately, as, when they are used together, the expelling force is lessened and resistance to propulsion increased. The expelling force may be lessened somewhat by requesting the patient not to bear down during the pains, but to continue breathing naturally or to cry out if so inclined.

Avoid all interferences, such as attempting to retard the advance of the head to any extent, as this only tends to increase the expelling force of the uterus by a reflex stimulation. Ergot should not be administered until after the delivery of the head.

Incisions of the over-distended perinæum have been practised when laceration seemed to be inevitable, but have not given good results.

In conclusion, it may be said that, do what we will, in some cases laceration occurs, and the practitioner should make it a practice to ascertain, either personally or by a competent nurse, whether laceration has taken place, and should such be the case, and he finds it at all extensive, to repair it at once.

FOMENTATIONS AND EPISIOTOMY.

Dr. Stanley P. Warren, of Portland, Me., writes as follows:

The first requisite for preserving the perinæum at delivery is to encourage extension of the presenting part while it is passing through the vulvar ring. It must be compelled to hug the pubic arch closely, moving in the radius of a circle whose centre is the lower border of the symphysis. The time to do this is when the head or breech begins to show itself in the outlet. The simplest and best way to keep up the extension is to hold the bulging perinæum in the hollow of the hand (left hand, if the patient is lying on the left side), with the thumb pressing upon one side of the rhapshe and the fingers upon the other. Most of the pressure should be with the thumb and fingers, not with the palm. A second method is to pass the left arm and hand between the thighs, and to grasp the presenting part with that hand, while the other hand makes the pressure from below as just described. By this method the presenting part can be held under perfect control, kept from emerging until the desired relaxation of the soft parts is gained, and extension can be made to the utmost. Simply pushing against the perinæum will not cause the desired extension, and invites rupture.

A third method for compelling extension is to make deep rectal pressure with one finger, better two fingers, against the part still within the lower strait, and pulling it forward. The *vis a fronte* should be exerted, like the *vis a tergo*, steadily and intermittingly, not suddenly and continuously. The fingers should be covered with rubber finger-cots to preserve the asepis.

A fifth method is to apply the short forceps, if the head is presenting, and pull upward, thus encouraging extension.

All these methods aim at the same result—extension, thereby compelling the dilating wedge to pass out only in its smallest diameter, and are effectual according to the degree of the extension resulting.

Next to methods for encouraging extension are those that tend to increase the elasticity of the pelvic floor. The best of these is the use of very hot fomentations to the perinæum. Packs of absorbent cotton or towels wrung out in very hot lysol solution are held with the hand against the perinæum. They must be as hot as the patient will bear and be renewed often. Medicated solutions or unguents (containing cocaine, belladonna, etc.) in my experience are not useful to any such degree as the simple lysol or sublimate solutions. The longer the fomentations, the more the stretching, and I have seen none but the best results from them.

Anæsthesia, to lessen or even entirely stop the patient's bearing down, conserves the perinæum. In the extremes of pain, just as the part is about to pass out over the fourchette, many women will be unable to resist the impulse to strain, even though urged not to do so. Deep anæsthesia will check almost all voluntary action.

Another defense against rupture of the perinæum is to turn all angular projections to one side of the rhapshe when they pass out. The sutures, the nose, the chin, the acromion, the olecranon, and the knee, all should not directly stretch the rhapshe, but rather the side of the outlet. If a tear is to come, which does not heal after suturing, repair will be easier if the wound is in a lateral sulcus, because less liable to infection from the lochia, and subsequent vaginal prolapse will also be less than if the tear is central.

The little operation of episiotomy has sometimes been of service to me in preventing rupture. It is to be done when the vulvar ring is at its greatest strain, and when the parietal bosses are just about to pass out. A snip of the scissors into the thin edge of the sphincter, about at the juncture of the middle and lower thirds, will open the outlet for the presenting part, and the more important perineal body be saved from tearing. After the birth, the wound of mucous tissue can be sutured easily, and will leave little trace afterward.

After all the devices for defending the perinæum have been faithfully tried, it may still give way, without warning or reason. But, even so, the obstetrician will feel that it is not his fault, because he has done what he reasonably could to prevent it.

(To be concluded.)

Therapeutical Notes.

Ointments for Chronic Adenitis.—*Ἱατρικὴ πρόδοσις* for October gives these:

℞ Lard. 30 parts;
Ammonium hydrochloride. 5 "
Camphor. 2 "

M. To be applied morning and evening.

Or

℞ Potassium iodide. 1 part;
Distilled water. 5 parts;
Extract of cicuta. 2 "
Lard or vaseline. 30 "

M.

For Constipation with Flatulence.—*Ἱατρικὴ πρόδοσις* for October gives the following:

℞ Extract of colocynth. $\frac{1}{3}$ of a grain;
Venice turpentine. $\frac{9}{10}$ " "
Powdered Socotrine aloes. $1\frac{1}{3}$ grain;
Extract of nux vomica. $\frac{1}{6}$ of a grain;
Extract of hyoscyamus. $\frac{9}{10}$ " " "

M.

For one pill. One such pill to be taken twice daily.

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THE MEDICAL DEPARTMENT OF THE ARMY.

For many years it was a notorious fact that service in the medical corps of the navy was so uninviting to young men properly qualified for such a career that great difficulty was encountered in the attempt to obtain enough medical officers to meet the needs of the service. But now that difficulty seems to have been in great measure surmounted by the establishment of better conditions than were formerly the lot of naval surgeons. On the other hand, the army medical service, which until recently has been eminently attractive to young medical men, appears to have fallen upon troublous times. Nobody who now enters it can hope to live to be retired with suitable rank and emolument; moreover, as the Army Regulations are now, the medical officer's recommendations may be ignored and himself insulted by the line officer in command with entire impunity. The result of all this is to make a career in the medical service of the army not only unalluring, but positively repugnant. It is due to the degradation which Congress—unwittingly, we believe—inflicted upon the service a year ago. But of far greater moment than the impaired dignity and lowered remuneration of medical officers is the needless mortality of the army on certain notable occasions. This was most effectively set forth last October by Major and Surgeon W. O. Owen, who has been in the service for twenty years or more, in a paper read before the Cincinnati Academy of Medicine and published in the *Journal of the American Medical Association* for October 26th, and it has more recently been eloquently depicted by Dr. Charles A. L. Reed, of Cincinnati, in an address delivered before the Marion County (Ohio) Medical Society. In our issue for December 14th we called

attention to some of the faults needing correction, basing our remarks largely on such portions of Dr. Reed's address as had found their way to us. We are gratified at being able to state now that both Dr. Owen and Dr. Reed have since assured us of their full concurrence in everything that we said in our article.

Major Owen and Dr. Reed both graphically describe the fearful consequences that ensued during the Spanish-American war upon the disregard of sanitary advice from medical officers by line officers in command of camps at which there could be no excuse on the score of military necessity, for they were on our own territory and of our own selection, and there was not the remotest danger of attack or probability of any immediate offensive move. It seems that insanitary conditions have sprung up even at some of the permanent posts, largely as the result of omission to obtain medical advice in operations of construction, and that these defects have ultimately to be remedied at an expense that would have been wholly avoidable at the outset. Not only are lives needlessly sacrificed and in the long run great expenditure required that might have been made unnecessary, but it is only by a piece of sheer good fortune that in the recent war we escaped the stigma of violating the spirit of the Geneva Convention. Our Army Medical Department does not own or control its ambulance wagons or the animals that draw them; it borrows them from the Quartermaster's Department, and when they are needed again for purely belligerent purposes, they have to be given up. As they are not used solely in the field hospital service, they are not properly entitled to the protection of the Red Cross, and it is a reproach to us that they should ever have been handled as if they were entitled to such protection. Says Major Owen: "Should a field hospital be captured under present conditions, the first question by the enemy would be: 'To what department does this material belong? Can the Line of your army take any of this material from the Medical Department and convert it to its own use, or is it exclusively for the use of the Medical Department?' The answer by our medical officer of necessity must be that 'the axes, stoves, cooking utensils, hospital tents and all other tents, hospital flags and guidons, horse equipments, wagons, ambulances, mules, and horses, one and all, belong to the Quartermaster's Department;

that they were liable at any time to be taken by the Line, used by them for fighting purposes, and that the Line was the sole judge of when and for what reason this was to be done.' The enemy will very promptly say that 'you are sailing under false colors. We have no time for fine distinctions. We will take the whole outfit.' "

Major Owen and Dr. Reed deserve the thanks of the medical officers of the army and those of the entire medical profession of the country for so thoroughly exposing the defects of the Army Regulations under which this unfortunate state of affairs is made irremediable for the time being, and we trust that their efforts will lead to searching Congressional inquiry and to such legislative action as will do away with the present impossibility of holding anybody to account for the gross negligence that involves much needless loss of life and avoidable expense. Congress cannot be too prompt in remedying past enactments under which the inglorious conditions in question have sprung up, and especially in restoring to the medical service of the army those features that have in the past served to fill its ranks with men of the best sort.

PUERPERAL ECLAMPSIA AND "ECLAMPTISM."

There seems to be discernible in recent literature a pronounced tendency to break away from the idea that puerperal convulsions are due to the retention of any one excrementitious substance or the formation of any one special poison in the blood. This tendency has seemed to us particularly noticeable in the writings of the French, who perhaps more than the rest of the world are inclined to attach great pathogenic importance to disease of the liver. It is held that the state of pregnancy predisposes to self-intoxication by reason of the retention of various toxic principles, and the morbid condition thus produced—which is prone to result in convulsions, but may show only certain prodromes, such as attacks of headache and impairment of vision—is denoted by the term *éclampsie*.

This doctrine has had apparently some effect in modifying the treatment resorted to for the prevention and cure of puerperal convulsions, as is well shown in a recent clinical lecture by M. Maygrier, published in the *Journal de médecine interne* for September 1st. Prophylactic treatment, says M. Maygrier, must be begun as soon as the least sign

of self-intoxication is observed, and the prime measure to be enforced is an absolute milk diet. It should be kept up for a week, and, if scrupulously observed, it will almost always protect the woman from the disease. This is set down as "Tarnier's law." Other preventive measures, such as baths and purgatives, must not be neglected, but the milk diet is the most important.

In the curative treatment, there is a tendency to revive the employment of bloodletting, but not, however, the abstraction of such large amounts of blood as were drawn in former times when other theories prevailed. Not more than from ten to fourteen ounces should be taken, and that is for the purpose of ridding the patient of the toxins it contains. The bulk of the blood is to be restored by subcutaneous and intravenous injections of serum and by forced feeding with milk. The serum injections are to be omitted if there are decided signs of retention of urinary elements in the blood, for in such cases serum is a dangerous poison; if they are employed, the amount of serum injected should equal that of the blood abstracted. As an incidental advantage of bloodletting, it is remarked that the prognosis may to a great extent be founded on the degree of toxicity shown by the blood when an animal is inoculated with it, but as to this point M. Maygrier makes no precise statements. Together with the bloodletting and the dilution of the remaining blood with serum or milk, purgative treatment is to be employed, but it will be seen that the main reliance is on the blood-replacement process, much as it has been practised in cases of poisoning with illuminating gas.

OIDIOMYCOSIS OF THE SKIN.

We have long been familiar with the ætiological relation of *Oidium albicans* to the disease known as thrush, or stomatitis parasitica, and by some writers that fungus has been held to be identical with *Saccharomyces mycoderma*, but a recent contributor to the *Journal of Medical Research*, Dr. Howard T. Ricketts, of the Rush Medical College, Chicago, would include in the genus *Oidium* the organism that gives rise to the blastomycetic dermatitis of Gilchrist. Dr. Ricketts's communication constitutes the entire December number of the journal mentioned, a monograph of 170 pages of text illustrated with numerous half-tone cuts and eleven

figures belonging to three colored plates. These illustrations are beautifully executed, but, unfortunately, as the editor announces, the descriptive text designed to accompany the colored plates was lost by the company that made the plates, and there must be some delay in obtaining fresh copy, as the author is at present out of the country.

The so-called protozoic disease of Posadas, Wernicke, and others, Busse's and Curtis's saccharomycosis hominis, and Gilchrist's blastomycetic dermatitis are, according to Dr. Ricketts, only different manifestations of the same disease. The organisms isolated from various cases differ in minor respects among themselves, he says, but are so closely related morphologically and biologically as to justify their inclusion in the genus *Oidium*, and he thinks that in a pathogenic sense they are analogous to the fungi that cause actinomycosis and to those that give rise to trichophytosis. As regards morphological variations, he would group the organisms under these three types: The blastomycetoid, or yeast-like, the oidium-like, and the hyphomycetoid. Histologically, the skin disease may be divided into two forms, the eosinophilous and the non-eosinophilous, the first-mentioned form being associated with the moult type of the organism. From certain cases that have been recorded from time to time the author is inclined to think that, in addition to these cutaneous manifestations, the oidium-like organisms may cause other severe pathological conditions in man.

Dr. Ricketts's monograph will doubtless receive careful consideration at the hands of dermatologists and bacteriologists. Not the least of its merits is the fact that the clinical aspects of the subject are not lost sight of in a maze of bacteriological observations, as is too apt to be the case in investigations of a like nature. Clinical observation and laboratory research are always at their best when, as in this essay, they go hand in hand.

THE SUCCESSOR TO THE RUSSIAN MEDICAL WEEKLY, *VRATCH*.

Vratch, the leading Russian medical weekly, which has been regularly abstracted in our department of the Pith of Current Literature, will no longer be published after the last week of December. This journal was founded and edited for many years by Professor V. A. Manasseine, of St. Petersburg, who was a prominent and active worker for the ad-

vancement of the medical profession in Russia. He was an exponent of the strict code of ethics in vogue among Russian physicians, and his paper reflected the high ethical ideals of its editor. Dr. Manasseine died a year ago, and in his will expressed the wish that *Vratch* should not be published after his death, except during such time as was necessary to complete the current volume of the journal. In obedience to his wish, the publishers announced soon after his death that the publication of *Vratch* was to be discontinued at the close of the year.

The successor to *Vratch* will be *Roussky Vratch* (the *Russian Physician*), the first number of which appeared on October 27, 1901. The editors are Professor Podvyssotsky, the dean of the Medical Faculty of the University of Odessa, and Dr. S. V. Vladislavlieff, of St. Petersburg, who was acting editor of *Vratch* during the illness of Dr. Manasseine and has conducted the editorial work of that journal since the latter's death. *Roussky Vratch*, so far as may be judged from its first number, promises to be one of the best medical weeklies in Europe. In addition to the usual departments, we notice a very complete index of titles contained in the leading medical journals in all languages, including the *New York Medical Journal*, the *Journal of the American Medical Association*, the *Philadelphia Medical Journal*, and the *Medical Record*, which are abstracted in the order named; as representatives of American medical journalism. We notice, however, that in most instances the titles only of articles are given, with but very few words in explanation in Russian, but no distinction in this respect is made between Russian and foreign journals.

VENEREAL DISEASES IN NEW YORK.

Last week we published that portion of the report of the Committee of Seven of the Medical Society of the County of New York on the Prophylaxis of Venereal Disease in New York City which dealt with the ascertainable facts. In this issue we print the concluding portion, in which the committee give their recommendations. The chairman of the committee, Dr. Morrow, has evidently given to the important subject of the committee's investigation the same careful and discriminating consideration with which a few years ago he inquired into the social aspect of leprosy. We look upon the committee's work as thoroughly commendable, especially because the sentiment of the community is taken into account at every turn and no attempt is made to overturn it. It is better to do what can be done in the way of reform, rather than to attempt the impracticable, and whatever is repugnant to the great mass of the people is, as a rule, difficult if not impossible of accomplishment. From the strictly

medical point of view, we believe that the most important thing to be done in preventing the spread of venereal disease is to rid the streets of depraved women. The old-fashioned brothels, the "parlour-houses," were visited only by men who went to them deliberately, but the "cruisers" bring sudden temptation to young men who may have paralyzed their prudence with drink, but entertain no wrong purpose to begin with. Such young men are very numerous and, of the entire adult male population, they are the least fitted to elude the blandishments of the *nymphes du pavé*. We hope the new city government will do something to remedy the evil that was innocently wrought under the Strong administration.

OUR SUBSCRIBERS' DISCUSSIONS.

So popular has this department of the *Journal* shown itself to be that one of the most influential of our pharmaceutical contemporaries, the *American Druggist and Pharmaceutical Record*, announces in its issue for December 23d that it has decided to establish a similar department. The conditions announced by the *Druggist* are almost identical with our own, and we feel flattered at being so closely copied. We are sure that the *Druggist* will never regret its new step. As regards our own series, we now for the first time publish in this issue three competing essays as Original Communications, and we regret that under that heading we have not space for more of them. Our contemporary's first question is: "What is the best method of filing prescriptions?" In this question the medical practitioner feels an interest which the pharmacist may not fully realize; it is a well-chosen topic.

AN ALLEGED NEW INTESTINAL ANTISEPTIC.

Press dispatches announce that Professor Frederick G. Novy, of the University of Michigan, has discovered a new intestinal antiseptic, "benzozone," which is prophesied to rid the world of dysentery, cholera, and certain other diseases having prominent intestinal manifestations. Dr. Novy himself maintains a discreet reserve, as was to be expected, for he is too scientific and conservative a man to be lightly led into therapeutic optimism, and least of all into extravagant forecasts. A real intestinal antiseptic is among the most pressing of our desiderata—one that will not waste its energy in the disinfection of fecal matter, but, being absorbed into the blood and then eliminated by the intestinal mucous membrane, will act upon the substances that are actually in contact with that membrane. We hope that Professor Novy has produced such an agent.

News Items.

Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending December 20, 1901:

Smallpox—United States.

California....	San Francisco....	Dec. 1-8.....	1 case.	
Georgia.....	Elberton.....	Dec. 12.....	12 cases.	
Indiana.....	Evansville.....	Dec. 7-14.....	3 cases.	
Maryland.....	Baltimore.....	Dec. 7-14.....	1 case.	
Massachusetts..	Boston.....	Dec. 7-14.....	60 cases.	6 deaths.
"	Cambridge.....	Dec. 7-14.....	1 case.	1 death.
"	Medford.....	Dec. 7-14.....	1 case.	
Minnesota.....	Winona.....	Dec. 7-14.....	2 cases.	
Nebraska.....	Omaha.....	Nov. 30-Dec. 14.	22 cases.	
"	South Omaha....	Nov. 30-Dec. 14.	40 cases.	
New Jersey....	Camden.....	Dec. 7-14.....	10 cases.	
"	Jersey City.....	Dec. 1-15.....	23 cases.	
"	Newark.....	Dec. 7-14.....	26 cases.	3 deaths.
New York.....	New York.....	Dec. 7-14.....	10 cases.	2 deaths.
Ohio.....	Ashtabula.....	Dec. 7-14.....	3 cases.	
"	Cincinnati.....	Dec. 6-13.....	6 cases.	
Pennsylvania..	Allegheny City..	Nov. 30-Dec. 7..	1 case.	1 death.
"	Lebanon.....	Dec. 9-16.....	25 cases.	
"	Norristown.....	Dec. 7-14.....	2 cases.	
"	Philadelphia....	Dec. 7-14.....	125 cases.	8 deaths.
Tennessee....	Memphis.....	Dec. 7-14.....	7 cases.	
"	Nashville.....	Dec. 7-14.....	1 case.	
Utah.....	Salt Lake City..	Dec. 7-14.....	2 cases.	
Vermont.....	Burlington.....	Dec. 7-14.....	4 cases.	
Washington....	Tacoma.....	Dec. 1-8.....	1 case.	
W. Virginia....	Wheeling.....	Dec. 7-14.....	1 case.	
Wisconsin.....	Fond du Lac.....	Dec. 3-10.....	1 case.	
"	Green Bay.....	Dec. 8-15.....	11 cases.	

Smallpox—Foreign.

Austria.....	Prague.....	Nov. 16-23.....	7 cases.	
Brazil.....	Pernambuco....	Oct. 15-31.....		72 deaths.
Canada.....	Quebec.....	Dec. 7-14.....	25 cases.	
"	St. John.....	Nov. 30-Dec. 7..	16 cases.	
"	Windsor.....	Dec. 7-14.....	1 case.	
Colombia.....	Panama.....	Dec. 2-9.....	25 cases.	
France.....	Paris.....	Nov. 23-Dec. 30.		2 deaths.
"	Rheims.....	Dec. 16-20.....	2 cases.	
Gt. Britain....	Glasgow.....	Nov. 29-Dec. 6..	4 cases.	
"	London.....	Nov. 23-30.....	427 cases.	23 deaths.
Russia.....	St. Petersburg..	Nov. 16-23.....	1 case.	

Yellow Fever.

Mexico.....	Vera Cruz.....	Nov. 30-Dec. 7..		8 deaths.
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Cholera.

India.....	Bombay.....	Nov. 12-19.....		2 deaths.
"	Madras.....	Nov. 9-15.....		17 deaths.

Plague—Insular.

Philippines...	Manila.....	Oct. 12-25.....		5 deaths.
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Plague—Foreign.

India.....	Bombay.....	Nov. 19.....		181 deaths.
"	Karachi.....	Nov. 10-17.....		49 deaths.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending December 21, 1901:

DISEASES.	Week end'g Dec. 14		Week end'g Dec. 21	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever....	64	19	69	14
Scarlet fever....	230	11	212	14
Cerebro-spinal meningitis....	0	3	0	3
Measles.....	596	23	659	22
Diphtheria and croup.....	234	43	277	40
Small-pox.....	10	2	12	1
Tuberculosis.....	231	141	218	131

Society Meetings for the Coming Week:

THURSDAY, January 2d.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, January 3d.—Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, January 4th.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Massachusetts, Medical Society.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Two Weeks ending December 21, 1901:

BEATTY, WALTER K., Contract Surgeon. The leave of absence granted him is extended one month.

STARK, ALEXANDER N., Captain and Assistant Surgeon, is relieved from further duty at Fort McHenry, Maryland, and will proceed to West Point, N. Y., to relieve **JOHN M. BANNISTER**, Major and Surgeon, who will report in person to the commanding officer of the troops to be sent to the Philippine Islands on the transport *Buford* from New York, on or about January 15, 1902, for duty as surgeon *en route*, and upon arrival in the Philippines will report for duty there.

WALL, FRANCIS M., Contract Surgeon, is relieved from further duty in the Division of the Philippines and from temporary duty in the Department of California, and will proceed to Fort Thomas, Kentucky, for duty.

Marine-Hospital Service:

Official List of the Changes of Stations and Duties of Commissioned and Non-commissioned Officers of the United States Marine-Hospital Service for the seven days ending December 19, 1901:

ANDERSON, J. F., Assistant Surgeon. Relieved from duty in the office of the United States Consul at Liverpool, England, and directed to return to the United States.

BOGGESS, J. S., Assistant Surgeon. The ten days' extension of leave of absence granted Assistant Surgeon **BOGGESS** by the Bureau telegram of December 10th is revoked.

CARTER, H. R., Surgeon. Granted leave of absence for ten days from December 26th.

FOX, CARROLL, Assistant Surgeon. Assigned to duty in the office of the United States Consul at Liverpool, England, relieving Assistant Surgeon **J. F. ANDERSON**.

FRICKS, L. D., Assistant Surgeon. Granted leave of absence for thirty days from December 16th.

GOLDBERGER, J., Assistant Surgeon. Granted leave of absence for fourteen days from December 21st.

GOODMAN, F. S., Hospital Steward. Relieved from duty in the Hygienic Laboratory, and directed to proceed to Key West, Florida, and report to the medical officer in command for duty and assignment to quarters.

GREENE, J. B., Passed Assistant Surgeon. To proceed to Malone and Rouse's Point, N. Y., for special temporary duty.

GRUBBS, S. B., Assistant Surgeon. Granted leave of absence for nine days from December 26th.

HOBBS, W. C., Assistant Surgeon. To proceed to Jacksonville, Florida, for the purpose of making a physical examination of the local inspector of hulls at that port.

STIMPSON, W. G., Passed Assistant Surgeon. Detailed as inspector of unserviceable property at the San Francisco Quarantine Station.

WATTERS, M. H., Hospital Steward. Relieved from duty at Boston and directed to proceed to Washington, and report at the Bureau for orders.

The Manhattan State Hospital.—Dr. M. B. Weyman, of New York, has been appointed first assistant physician.

Erratum.—In Dr. Minor's article, On the Feasibility of a Hygienic Cure of Pulmonary Tuberculosis, in our issue for December 21st, p. 1138, left-hand column, line 17 from the bottom, the words "I will confess the use of the term," should read, "I will confine the use of the term."

The S. R. Smith Infirmary, Staten Island.—Dr. William B. Pritchard has been appointed consulting neurologist.

The New Medical Building at Toronto is to be erected to the northeast of the School of Practical Science, on the spot now occupied by the Midde House.

A University for Hamburg.—All the scientific institutions of the city of Hamburg, Germany, are to be grouped together into a university. The directors of these institutes and the lecturers, who have the title of "professors," will form the professorial college, which every year will elect its own president. It will also be the duty of the college every year to draw up a programme of lectures and practical courses. The programme for the current winter semester includes courses by 117 lecturers. This movement is a step toward the foundation of a fully equipped university in Hamburg, a project which has long been under consideration.

A Prize of Four Hundred Dollars is offered by Dr. J. B. Mattison, medical director of the Brooklyn Home for Narcotic Inebriates, for the best paper on the subject, Does the Habitual Subdermic Use of Morphia Cause Organic Disease—If so, What? The contest is to be open for two years from December 1, 1901, to any physician. The paper may be submitted in any language. The award is to be determined by a committee, composed of Dr. T. D. Crothers, of Hartford, Conn., editor of the *Journal of Inebriety*, chairman; Dr. J. M. Van Cott, professor of pathology, Long Island College Hospital, Brooklyn, and Dr. Wharton Sinkler, neurologist to the State Asylum for the Chronic Insane, Philadelphia. All papers are to be in the hands of the chairman by or before December 1, 1903, and are to become the property of the American Association for the Study and Cure of Inebriety, and to be published in such journals as the committee may select.

The Dean of McGill Medical Faculty Resigns.—Dr. Craik has resigned his office as dean of the medical faculty of McGill University to accept a higher post in the university, though the details as to this future appointment have not been made public. It is currently reported that Dr. Thomas G. Roddick, M. P., will be nominated as successor to Dr. Craik. Dr. Roddick was born at Harbor Grace, Newfoundland, and graduated from the McGill Medical School in 1868. In 1872 he became connected with McGill University and has successively held the positions of lecturer on hygiene, demonstrator of anatomy, professor of clinical surgery, and professor of surgery, and still holds the latter chair. He has also had a long and distinguished military career, having been retired in 1900 with the rank of lieutenant colonel in the Medical Reserve of Officers. He was elected president of the British Medical Association at the Montreal meeting in 1897. He was elected to the Canadian House of Commons in 1896 and was re-elected last year. In that body he has ardently advocated the Dominion registration of medical men, a measure providing for this being now before the House.

The California Lunacy Law Unconstitutional.

—The Supreme Court of the State of California has declared that the new lunacy law of 1897 is unconstitutional. The question was raised in application of W. H. Lambert for a writ of habeas corpus. The petitioner alleged that he was illegally restrained of his liberty in the Napa State Hospital by Dr. A. M. Gardner, the superintendent. Gardner replied that he held the petitioner by virtue of an order of commitment made by the Hon. A. J. Buckles, judge of the Superior Court of Solano county. The Supreme Court holds that the Act of 1897 was evidently based upon the New York statute of 1896, but "the New York statute contains many provisions and safeguards for the individual that are not contained in the law of this State." The court then proceeds to point out the lack of safeguards which permits two qualified medical men to pass upon the insanity of an individual and permits a court, without requiring the presence of the supposed insane person, to commit him to an asylum.

In Memory of Dr. Marston.—The following resolutions were adopted at a recent meeting of the Alumni of the City (Charity) Hospital:

"Whereas, We, the members of the Society of the Alumni of the City (Charity) Hospital, have learned with deep regret of the untimely death from pneumonia, on Sunday, June 9th, of our late fellow member and associate, Daniel W. Marston,

"Resolved, That the society has met with a real and, to many members, a personal loss in the death of one whose high mental and professional attainments, together with his great enthusiasm and devotion to his chosen work in life, had already brought him honors and advancement such as come to few so early in their career.

"Resolved, That we tender to his family our sincere sympathy in their bereavement, and that a copy of these resolutions be entered upon the minutes of the society, and published in the medical press.

(Signed)

"E. G. WHERRY,

"M. G. BURGESS,

"C. G. CHILD, JR.,

"Committee."

Contagious Diseases Near Cincinnati.—An epidemic of contagious diseases, mainly among children, prevails in Covington and Newport, the Kentucky environs of Cincinnati. The public, parochial, and private schools in both cities have been closed, as have the children's departments of the public libraries. In Covington the Ministers' Association decided to aid in the preventive measures to stop the spread of the diseases. Scarlet fever and small-pox are slightly prevalent and measles are veritably raging. There is no emergency hospital in either city, and last week Dr. McCormack, of the Kentucky State Board of Health, visited the cities and started a movement to provide these necessary institutions to check the spread of contagious diseases. The Newport city government acted promptly and virtually agreed to purchase a house and grounds in an

isolated place, but as it was not as far removed from the limits of the city as prescribed by law, the deal was not consummated. The officials are still negotiating for other places to be used for an emergency hospital. While the present conditions exist there is an unprecedented demand in the trade for vaccine points, fumigants, disinfectants, and the like.

The Conference between the Two County Societies.—Following up the suggestion of Dr. Frank van Fleet, president of the Medical Society of the County of New York, that the two county medical organizations meet and confer with reference to a union of the two organizations, the New York County Medical Association adopted the following preamble and resolutions at the stated meeting of the association, held on December 16th:

"Whereas, the following resolution has been received from the Medical Society of the County of New York:

"Resolved, That the president of the Medical Society of the County of New York appoint a committee of five, of which he shall be chairman, provided a similar committee be named by the New York County Medical Association, to confer with that body with reference to a union of the two organizations; and that this committee be requested to report to the society at the stated meeting in January, 1902, or sooner, in order that this society may, if desirable, make a recommendation to the Medical Society of the State of New York at its next annual meeting"; and,

"Whereas, the subject of union of the medical profession in this State, as expressed in the foregoing resolution as presented by the Medical Society of the County of New York, is wholly a State question; and,

"Whereas, the published charter and by-laws of the New York State Medical Association do not allow its county associations to act independently on State questions; be it

"Resolved, That we heartily favor a union of the profession in one State medical body, and respectfully suggest that the Medical Society of the County of New York request the Medical Society of the State of New York to appoint a committee to consider this question; and be it further

"Resolved, That the New York County Medical Association request the New York State Medical Association to appoint a committee of conference in case the Medical Society of the State of New York shall appoint a similar committee."

Dr. Reed on the Lack of Authority of the Army Surgeons.—Much attention has been attracted by the publication in the daily press throughout the country of portions of an address delivered by Dr. C. A. L. Reed, of Cincinnati, formerly president of the American Medical Association, at a banquet given in his honor by the physicians of Northern Ohio at Marion, on December 10th. In the address Dr. Reed criticized the organization of the United States army in that, as now organized, the medical officers are practically without authority to enforce regulations which they pre-

scribe. The following excerpt from his speech was sent out by telegraph:

It seems, from evidence that has recently come from within the army itself, that the medical department has not only been degraded, but that it is practically without authority. This was strikingly, indeed tragically, illustrated during the recent war.

A commandant was in charge of a quarter of the entire army. His command was made up of the flower of American manhood, and was encamped at a health resort. He, however, in violation of the precedent of the usually cultivated and competent gentlemen of the line, but acting under the permission of existing army regulations, not only set aside recommendations of his sanitary officers, but by personal example incited his men to violate the most fundamental sanitary laws. The result was what might have been expected. Of the 50,000 men in his command, 12,000 were invalidated, while nearly a thousand died from preventable causes.

If, in an active military operation, the commandant had ignored the advice of his scouts and had led his command into ambush with similarly disastrous results—12,000 wounded and 1,000 killed—he would have been court-martialed and doubtless dismissed from the service. The regulations, however, I am advised, fix no responsibility for this parallel calamity, the enormity of which is only beginning to be understood. It is not surprising that efforts have been made to suppress knowledge of it.

I am advised that the Army Investigating Committee, in the interest of public decency, omitted from its public report much testimony on this phase of the conduct of the war. An officer in the service who to-day agitates this unsavory subject is banished to the Philippines.

No wonder the Surgeon-General cannot fill the sixty and more vacancies now existing in his corps; self-respecting medical men are not offering themselves for a degraded service that is dominated by gag-law and tyranny.

It will not do to cry, "Out, out, damned spot"—it will not out. We of America may blush, but the scandal is ours. The Congress at the present session is to be asked to intervene in this matter—a matter that appeals to every soldier, to every home that furnishes a soldier, to every patriot that is proud of the army, to every citizen that is actuated by the ordinary impulses of humanity.

The agitation cannot stop until the responsibility is fixed for the enforcement of a regulation under the present terms of which the bumptiousness of an accidental and incapable commandant may, with impunity to himself, deprive an entire army of the benefactions of science.

New Hospital Government in New York.—On February 1st the control of Bellevue, Fordham, Harlem, and Gouverneur hospitals and the Emergency Hospital, in East Twenty-sixth Street, New York, will pass from the commissioner of charities to a board of trustees, and the method of governing them will undergo a radical change. The commissioner of charities, however, will be ex-officio a member of the board. The trustees are to be appointed by the mayor upon the recommendation of the United Hebrew Charities, the Particular Council of New York of the St. Vincent de Paul Society, and the Association for Improving the Condition of the Poor. Selections are to be made from a list presented by these organizations. Each society may submit a list, or two or more of them may join in presenting names. The mayor cannot go outside of the lists in making up the board, which is to consist of seven members, and the full term of office is seven years. The members of the first board are to be appointed for terms ranging from one to seven years. Their successors must be named for the full term. They are to serve without compensation and cannot be removed except on charges. To the sinking fund commissioners has been allotted the task of preparing a plan for the

separation of Bellevue and the allied hospitals from the Charities Department. Provision is made for the retention of all employes and subordinates in the institutions when the trustees take office. The medical board is also to be retained, but any vacancies occurring are to be filled by the trustees from the medical profession of the city. House and medical officers are to be appointed upon the recommendation of the medical board.

The Troy Medical Society.—At a meeting held on December 3d three new members were elected and papers were read by Dr. M. D. Dickinson, Dr. H. C. Gordinier, and Dr. E. R. Stillman.

The Metropolitan Medical Society.—At the last meeting of this society the following officers were elected for the ensuing year: President, Dr. W. M. Leszynsky; vice-president, Dr. F. L. Wachenheim; recording secretary, Dr. W. M. Brickner; corresponding secretary, Dr. S. Yankeuer; treasurer, Dr. I. Pierce Oberndorfer.

The American Electro-therapeutic Association will hold its twelfth annual meeting at the Kaaterskill, Catskill Mountains, N. Y., on Tuesday, Wednesday, and Thursday, September 2, 3, and 4, 1902. The officers of the association are: President, Dr. Fred H. Morse, of Melrose, Mass.; secretary, Dr. George E. Bill, of Harrisburg, Pa., and treasurer, Dr. R. J. Nunn, of Savannah, Ga.

The Church Hill Medical Society held its annual meeting and banquet at Murphy's Hotel, Richmond, Va., on December 12th. Dr. R. D. Garcin presided at the banquet. The following officers were elected: President, Dr. R. D. Garcin; first vice-president, Dr. St. J. Oppenheimer; second vice-president, Dr. A. L. Leftwich; secretary, Dr. B. A. Hord; treasurer, Dr. B. L. Taliaferro; executive committee, Dr. C. W. Massie, Dr. W. S. Beasley, and Dr. G. E. Barksdale.

The Eastern Medical Society of New York City held its annual meeting December 14th. The following officers were elected for the ensuing year: President, Dr. A. Abrahams; first vice-president, Dr. Joseph Barsky; second vice-president, Dr. E. K. Browd; secretary, Dr. Maurice Fishberg; treasurer, Dr. B. Gordon; chairman of ways and means committee, Dr. A. Hymanson; chairman of committee of ethics, Dr. A. A. Himovitch; trustees, Dr. A. Brothers and Dr. William S. Gottheil.

A Physicians' Union in New York.—It is reported that there is a movement on foot to establish in New York a union of physicians. The purpose of the organization will be protection against blackmail and the establishment and circulation among members of lists of patients who do not pay their doctors' bills. The agitation began in the West, where the union idea is gaining many adherents. The proposed union will, it is believed, secure competent counsel to fight blackmailers, who apparently make a practise of accusing reputable physicians of malpractice. The union will also, it is said, circulate at intervals lists of those who refuse to pay its members for professional services.

The Richmond Academy of Medicine and Surgery, at its annual meeting held on December 10th, elected the following officers for the ensuing year: President, Dr. Lewis C. Bosher; first vice-president, Dr. W. F. Mercer; second vice-president, Dr. Ramon D. Garcin; third vice-president, Dr. Moses O. Hoge; secretary, Dr. M. W. Peyser; assistant secretary, Dr. W. H. Parker; treasurer, Dr. E. J. Moseley; librarian, Dr. Marvin E. Nuckols; judiciary committee, Dr. W. S. Gordon, Dr. H. H. Levy, Dr. M. D. Hoge, Dr. D. J. Coleman, Dr. Meade Mann, and Dr. J. M. Winfree. The matter of erecting a handsome home for the academy was brought up and discussed at length. No action in this direction was taken, but it is proposed to keep the project before the profession of the city.

The New York Academy of Medicine.—At the annual meeting, held on December 19th, the following officers were chosen for the coming year: Vice-president, Dr. Virgil P. Gibney; trustee, Dr. Joseph D. Bryant; member of committee on admissions, Dr. Walter L. Carr; member of committee on library, Dr. W. B. James. The following papers were presented: On the British Congress on Tuberculosis and the Prevention of Tuberculosis, by Dr. E. G. Janeway; on the Difference between Bovine and Human Tuberculosis, by Dr. Theobald Smith, Dr. H. M. Biggs, and Dr. W. H. Park; Origination of Tuberculosis from Cow's Milk, by Dr. A. Jacobi, Dr. W. H. Northrup, Dr. J. E. Winters, and Dr. D. Bovaird; Need of Sanatoria for Tuberculosis, by Dr. G. L. Peabody, Dr. S. A. Knopf, Dr. Alfred Meyer, Dr. H. P. Loomis, Dr. Stubbett, and Dr. L. Weber. At a meeting, held December 18, 1901, Dr. Emil Mayer was elected chairman and Dr. Z. L. Leonard secretary of the Section in Laryngology and Rhinology.

The Western Surgical and Gynæcological Association held its eleventh annual meeting at Chicago, December 18th and 19th, under the presidency of Dr. A. F. Jonas, of Omaha. Among the authors from whom papers were promised in the programme were: Dr. R. B. Davis, Omaha; Dr. C. E. Ruth, Keokuk, Ia.; Dr. A. E. Halsted, Chicago; Dr. H. D. Niles, Salt Lake City; Dr. William Jepson, Sioux City, Ia.; Dr. W. O. Henry, Omaha; Dr. J. E. Summers, Jr., Omaha; Dr. Van Buren Knott, Sioux City, Ia.; Dr. G. G. Cottam, Rock Rapids, Ia.; Dr. R. Harvey Reed, Rock Springs, Wyo.; Dr. F. Robert Zeit, Chicago; Dr. Joseph Eastman, Indianapolis; Dr. O. Beverly Campbell, Chicago; Dr. Miles F. Porter, Fort Wayne, Ind.; Dr. Franklin H. Martin, Chicago; Dr. W. W. Grant, Denver; Dr. M. L. Harris, Chicago; Dr. J. E. Moore, Minneapolis; Dr. D. S. Fairchild, Clinton, Ia.; Dr. George Halley, Kansas City, Mo.; Dr. C. Lester Hall, Kansas City, Mo.; Dr. J. P. Lord, Omaha; Dr. Alexander Hugh Ferguson, Chicago; Dr. Lewis Schooler, Des Moines, Ia.; Dr. A. C. Bernays, St. Louis, Mo.; Dr. C. H. Mayo, Rochester, Minn.; Dr. Louis E. Schmidt, Chicago, and Dr. J. B. Murphy, Chicago.

The Medical Society of the State of New York.—Several of the questions to be discussed at the coming annual meeting of the Medical Society of the State of New York will be of particular importance, including the establishment of a State hospital for the treatment of patients suffering from incipient tuberculosis, the question whether tuberculosis can be communicated from animals to man, the treatment of cancer by the use of the x ray, and the treatment of tetanus. The meeting will begin on Tuesday, January 28th, and will close on the evening of January 30th. It is expected that one of the meetings will be held in the assembly chamber, at Albany. The ordinary sessions will be held in the common council chambers in the City Hall. The scientific part of the programme is being prepared by the business committee, which consists of Dr. Nathan Jacobson, of 430 South Salina Street, Syracuse; Dr. George R. Fowler, of Brooklyn, and Dr. William C. Krauss, of Buffalo. Members and delegates desiring to read papers should communicate with the chairman of the committee, Dr. Jacobson, of Syracuse. A rebate will be given by the railroads to the members and delegates attending the meeting, but in order to obtain it a certificate must be obtained from the ticket agent at the starting point, which the agent will furnish on application.

Hospital Staff Changes.—Dr. Ralph A. Hoyt has resigned his position as house surgeon at St. Catherine's Hospital, Brooklyn.—Dr. James H. B. Dowd has resigned as house surgeon at the Williamsburg Hospital, Brooklyn, Dr. John H. Telfair having been appointed to fill the vacancy.—Dr. A. J. Ranney, superintendent of the Boston Almshouse and Hospital, on Long Island, Boston Harbor, has been appointed superintendent of the Lakeside Hospital, in Cleveland, O. He will be succeeded at Long Island by Dr. Arthur S. Hartwell, who is at present assistant superintendent in the institution there.—The Philadelphia Board of Charities and Correction, at a meeting held on December 11th, elected the medical staff of the Philadelphia Hospital for next year. All the colleges of the city are represented on the staff selected, which is as follows: Surgeons—Dr. W. Joseph Hearn, Dr. L. W. Steinbach, Dr. Orville Howitz, Dr. Ernest La Place, Dr. Edward Martin, Dr. J. C. DaCosta, Dr. Alfred C. Wood, Dr. Charles H. Frazier. Physicians—Dr. R. G. Curtin, Dr. J. H. Musser, Dr. F. P. Henry, Dr. W. E. Hughes, Dr. S. Solis-Cohen, Dr. J. L. Salinger, Dr. James Tyson, Dr. Thomas G. Ashton, Dr. A. A. Eshner, Dr. Alfred Stengel, Dr. H. B. Allyn, Dr. David Reisman. Obstetricians—Dr. Barton C. Hirst, Dr. Edward P. Davis, Dr. J. H. Fisher, Dr. R. C. Norris, Dr. W. Frank Haehlen, Dr. Elizabeth L. Peck, Dr. John B. Shober, Dr. G. M. Boyd. Neurologists—Dr. C. K. Mills, Dr. F. X. Dercum, Dr. Charles W. Burr, Dr. F. Savery Pearce, Dr. William G. Spiller, Dr. Charles S. Potts. Ophthalmologists—Dr. G. E. DeSchweinitz, Dr. Charles A. Oliver, Dr. Howard F. Hansell, Dr. John W. Croskey. Dermatologists—Dr. H. W. Stelwagon, Dr. H. B. Hartzell, Dr. E. S. Gans. Pathologists—Dr.

W. L. Coplin, Dr. Joseph McFarland, Dr. Simon Flexner. Bacteriologist—Dr. L. N. Boston. Laryngologists—Dr. G. Morley Marshall, Dr. E. B. Gleason, Dr. Charles P. Grayson. Anæsthetizer—Dr. Charles Leonard. Dental Surgeons—Dr. R. H. Nomes, Dr. M. R. Cryer, Dr. I. Norman Broomall, Dr. C. Stelwagon, Jr. Orthopædic Surgeons—Dr. N. Augustus Wilson, Dr. J. P. Mann, Dr. G. C. Davis. Pædiatrists—Dr. William G. Hollopeter, Dr. E. E. Graham, Dr. J. P. Geozer Griffith, Dr. J. Madison Taylor. Registrars—Dr. Joseph Sailer, Dr. William C. Pickett, Dr. Robley D. Newton, Dr. B. Franklin Stahl, Dr. W. A. N. Dorland, Dr. J. H. McKee.

The reports of the two institutions show that the population of the House of Correction at the present time is 1,013, of which 837 are males and 176 females. There are 4,326 men, women, and children at present in the Philadelphia Hospital.

The resignation of Dr. R. F. Summerkamp as assistant physician of the department of the Insane at the Philadelphia Hospital, was received and accepted. The resignation of Dr. R. D. Burke as out-door physician was also received. Both vacancies will be filled at the next meeting of the board.

Hospital Buildings and Endowments.—The Swiss Cottage Hospital, with accommodations for about twenty small-pox patients, has been opened at Toronto. The building is a pretty and substantial one in Riverdale Park, on the east bank of the Don.—Designs have been submitted for an addition to the Samaritan Hospital at Broad and Ontario streets, Philadelphia.—Active measures have been taken toward aiding the Sisters of the Holy Family of Nazareth in the erection of their new hospital, near Leavitt and Division streets, Chicago. The new hospital will cost \$250,000, and all nationalities, irrespective of creeds or religious beliefs, will be cared for in the institution.—The new Newport News (Virginia) General Hospital has opened for patients with an excellent equipment.—The new Raybrook State Hospital for Tuberculosis will, it is expected, be open for the reception of patients within a year's time. An appropriation of \$150,000 is already available.—The City Hospital donation fair, at Rochester, N. Y., netted about \$9,000.—A new site has been selected at the corner of Prince Arthur and St. Urbain streets for the erection of the Montreal Maternity Hospital, the purchase of the lot in Durocher Street having been cancelled.—The newly built annex of the German Hospital and Dispensary, at Seventy-seventh Street and Lexington Avenue, was thrown open for inspection on December 7th. This new building, which was especially designed for private patients, is one of the most complete of its kind. Randolph Guggenheimer represented the city at the dedication and made a speech commending the work which is being done by the city of New York in alleviating the sufferings of the poor. Other speakers were August Zinsser, Carl Schurz, Dr. A. Jacobi, Dr. O. Kiliani, and Theodore Kilian, president of the hospital.—The contract has been let for the

erection of a new children's hospital and maternity house and for a hospital for contagious diseases in Philadelphia, adjoining the Philadelphia Hospital, at a cost of \$75,000.—Dr. C. R. Holmes, Captain J. D. Parker, Mr. Prescott Smith, and the mayor of Cincinnati composed a committee which recently investigated into the condition of the Cincinnati Hospital. The committee recommends the erection of a storehouse at the main hospital, two ward buildings at the branch hospital and repairs, furniture, new fittings, and appliances, etc., the whole requiring an outlay of \$40,904 at the branch and \$126,260 at the main hospital. An isolation hospital is also recommended at a cost of about \$4,000.—The McNulty dwelling, on Mount Royal Avenue, Montreal, which belongs to the city, is to be used as a diphtheria hospital.—Numerous contributions, ranging from \$50 to \$1,000, have been made to the building fund of the Hospital for Incurables at Albany. An excellent site for the hospital has been selected at Pine Hills.—A handsome structure, with a front of 50 feet on Porter Street, 130 feet on Second Street, with a wing 100 feet deep, and to cost \$40,000, is to be erected in Detroit for the joint tenancy of the Emergency Hospital and of the Michigan College of Medicine.—Edwin M. Wheelwright, of Boston, has been selected as the architect to draw up the preliminary plans for the new municipal hospital at Washington, D. C.—The city of Baltimore is having trouble over a site for a hospital for contagious diseases. The mayor has vetoed a bill providing for the erection of a hospital on the Reisterstown Road.

Births, Marriages, and Deaths.

Married.

ABERCROMBIE—SEYFERT.—In Reading, Pennsylvania, on Wednesday, December 11th, Dr. W. H. Abercrombie, United States Navy, and Miss Millie Seyfert.

HEUEL—HARRSHAW.—In New York, on Thursday, December 19th, Dr. Frank Heuel and Mrs. Adelaide M. Harshaw.

MCPHERSON—HOOVER.—In Columbus, Ohio, on Wednesday, December 11th, Dr. Charles T. McPherson, of Medford, Massachusetts, and Miss Anne Hoover, daughter of Dr. T. C. Hoover.

TANNAR—PURCELL.—In Baltimore, on Wednesday, December 17th, Dr. Frederick Nelson Tannar, of Vienna, Maryland, and Miss May S. Purcell.

Died.

BAYLES.—In Orange, N. J., on Friday, December 20th, Dr. George Bayles, in the sixty-fifth year of his age.

HENSHAW.—In New Rochelle, N. Y., on Thursday, December 19th, Dr. George B. Henshaw, of Cambridge, Massachusetts, in the thirty-fourth year of his age.

HUIDEKOPER.—In Philadelphia, on Tuesday, December 17th, Dr. Rush Shippen Huidekoper, in the forty-seventh year of his age.

JACKSON.—In Boston, on Thursday, December 12th, Dr. Alexander Jackson, in the eighty-third year of his age.

UNDERHILL.—In Brooklyn, on Thursday, December 19th, Dr. Albert E. Underhill, in the twenty-eighth year of his age.

WATERMAN.—In Boston, on Saturday, December 14th, Dr. Thomas Waterman, in the sixty-first year of his age.

WILEY.—In Newton Highlands, Massachusetts, on Friday, December 20th, Dr. Alfred Soule Wiley, in the thirty-first year of his age.

Pith of Current Literature.

Journal of the American Medical Association,
December 21, 1901.

The Evaluation of Anthropometric Data. By Dr. Winfield S. Hall.—According to the author, that method of evaluation which involves the use of arithmetical average is both time-wasting and inaccurate, while the method based on Quételet's median value is accurate, and is quickly and easily applied. The median value is the value represented by the median measurement of a series of measurements, that is, that measurement which has as many values above it as below it.

The Education of the Degenerate. By Dr. John Madden.—The author points out that education is a definite biological process, attended by a development of the cells in a tangible way, the increasing of their bulk and of the number, length, and complexity of their dendritic fibres. Certain individuals are born with deficient cell development, and to reform these is to bring about such cell development as will give them the normal individual's sense of right, and consequently sufficient power to control their vicious impulses, and make proper conduct possible. The education of any group of cells leads to the development, though in a less degree, of all cells with which these come in contact; so that if the individual may be taught nothing more than a few muscular movements, at first, those will assist him in obtaining a more general education.

Therapeutic Indications Suggested by the Condition of the Blood. By Dr. O. T. Osborne.

Treatment of Neurasthenia. By Dr. Harold N. Moyer.—The author believes that rest is the sheet anchor in the treatment of neurasthenia. In the more severe cases we should employ the rest cure of Dr. Weir Mitchell; but we should remember that there are many hysterics and neuropaths who do very poorly under, or indeed may be harmed by, the rest treatment, even in a modified form. Neurasthenics, however, are all benefited by rest. In only severe cases, in which there is a profound disturbance of nutrition, should complete rest be employed, and, oddly, it is found to be more efficient with women than with men. As a rule, neurasthenia in men rarely requires the full rest treatment, though a modified form may be employed with advantage.

A Simple Operation for the Radical Treatment of Hæmorrhoids. By Dr. J. Rawson Pennington.

Anatomical Treatment of Fractures of the Femoral Neck. By Dr. C. E. Ruth.

Herpes Zoster Ophthalmicus, with Brief Report of Five Cases. By Dr. William C. Bane.—Two of these patients were males. Four were left-sided. Three of the five cases were diagnosed as facial erysipelas. Two had corneal ulcers. Two had severe nasal involvement without implication of the cornea.

Corneal Lesions in Acquired Syphilis. By Dr. William H. Wilder.

Laryngeal Stenosis in Infants and Its Treatment. By Dr. Dunbar Roy.

A Study of a Fœtal Stomach, with Special Reference to the Origin of Acid-secreting Glands. By Dr. W. A. Evans and Dr. Wilhelm Becker.

Notes on the Intracellular Occurrence of Diplococcus Pneumoniæ in Cerebrospinal Meningitis. By Dr. Louis Blanchard Wilson.

Small-pox and Vaccination, with Special Reference to Glycerinated Lymph. By Dr. George Dock.

Philadelphia Medical Journal, December 21, 1901.

The Value of Blood Examinations in Diagnosis. By Dr. Frederick J. Kaltefleiter.

Hepatic Drainage. By Dr. John B. Deaver and Dr. Edward Kemp Moore.—The mortality of operations for gall-stone lies, not to the charge of the operation, but to the time at which it is done. Gall-bladder surgery ought not to be a "last resort" procedure, but should be done at the time when the chances of recovery are best. In an operation for gall-bladder disease, if there is any marked change in the gall-bladder it is better to remove it. The author believes that experience will in the future show us that the removal of the gall-bladder is nearly as necessary in operating for gall-stones as is the removal of the appendix in appendicular inflammation. In the early cases, removal of the gall-bladder prevents many an embarrassing case of biliary fistula, and assures us that we have removed the seat of nearly all cases of defective hepatic drainage. In advanced cases with cholangitis it is essential to freely open and drain the bile ducts, for, in the free escape of the infected bile, lies our only hope of curing the condition.

A Study of the Initial Symptoms in One Hundred Recent Cases of Small-pox. By Dr. William M. Welch and Dr. Jay F. Schamberg.—One hundred patients recently admitted to the Municipal Hospital in Philadelphia were closely interrogated as to the character of their initial symptoms. There was no attempt at selection of any particular type of small-pox. The number includes twenty-eight cases of confluent small-pox, fifteen patients with very profuse and semi-confluent eruptions, twenty-nine eruptions of moderate severity, and twenty-nine cases of mild variloid. Of this series of one hundred patients, twenty-two died. The various initial symptoms were present in the following percentages: Headache, 86 per cent.; chills or chilliness, 78 per cent.; backache, 70 per cent.; vertigo, 57 per cent.; vomiting, 55 per cent., with nausea in 10 per cent. more of cases. As to the earliest symptom: In 35 cases, chills; in 26 cases, headache; in 16 cases, backache; in 9 cases, vomiting. General aches and pains were the first symptom in seven cases; vertigo was the first symptom in two cases. The authors call attention to the fact that in a large percentage of the cases of small-pox admitted to the hospital during this year, the initial symptoms were interpreted by the physicians previously in attendance as the early manifestations of typhoid fever.

Operative Treatment of Bladder-descent and Sacculation. By Dr. George Erety Shoemaker.

On the Value of the Rectal Temperature in Pulmonary Tuberculosis. By Dr. J. C. Braine-Hartnell.—The author's conclusions are: (1) That in many cases the oral and axillary temperature records are untrustworthy; (2) that in a few cases there is very little difference between the rectal record and the oral record; (3) that the greatest discrepancy is found in the lower range of the temperature; (4) that the rectal temperature gives in almost every case a truer idea of the amount of pyrexia; and (5), that if we wish to do ourselves, our patients, and our treatment, justice, we should insist upon taking the temperature in the rectum.

Hallucinations: Their Pathogenesis, Clinical Import, and Medico-legal Value. By Dr. J. Leonard.—The author enters a protest against the habit of regarding hallucinations as compatible with perfect cerebral health. Neither, however, should one look on these phenomena as a distinct pathological entity. They are but parts of a more basal cerebral mischief, and, as such, are to be both considered and managed with the whole.

Treatment of Certain Purulent Conditions of the Antrum of Highmore through the Natural Openings. By Dr. Norval H. Pierce.—The author believes that we should in all cases, whether for diagnosis or treatment, try for the ostium or accessory openings before resorting to surgical puncture, whether through the inferior or middle meatus, the canine fossa, or the alveolar process. There is strong evidence to warrant the belief that, in diseased antra, accessory openings are more frequently found than in healthy antra.

A Case of Morphine Poisoning; Successful Employment of Cocaine as an Antidote. By Dr. Albert C. Barnes.

American Medicine, December 21, 1901.

Four Cases of Typhoid Cholecystitis: Two Followed by Gall-stones. By Dr. Charles G. Stockton and Dr. Albert T. Little.

A Case of Subcortical Glioma of the Lower Part of the Left Ascending Frontal Convolution Successfully Removed. By Dr. James Stewart.—This case is interesting as being an instance of a successful removal of a subcortical growth, the location of which had been correctly made out six weeks previously to the operation; also, as tending to show that dysarthria, and not aphasia, is the characteristic form of speech disturbance met with in growths in this situation. The growth was situated so as to compress the speech tract some distance from the motor speech centre, but still sufficiently near to involve the commissural fibres that pass over the right hemisphere in the corpus callosum. There was an ataxia of writing. This was present without any weakness of the right hand, and was therefore due to disturbance of coordination.

Surgical Malposition of the Gall-bladder. By Dr. E. D. Ferguson.—Though in its growth the liver fails to carry before it a complete envelope

of peritonæum, the biliary ducts may be considered as surrounded by that serous membrane; but, as mesentery and omentum are but two layers of this serous sac, outside of, but still encircling, certain organs, it is quite clear that, in the fold extending from the intestine to the liver, there not only may then be protrusion of some portion of the liver from its serous envelope, but portions of the biliary ducts may be so developed as to extend beyond the omental fold and lie outside of the peritonæum. Such is the author's explanation of these curious cases of malposition of the gall-bladder, three of which are detailed in this article.

The Question of Ovarian Pregnancy. By Dr. J. Clarence Webster.—The author believes that, on phylogenetic grounds, there is strong presumption in favor of the view that the fertilized ovum in the human subject can only begin its development in tissue derived from the Müllerian tract. Clinical and histological evidence points so strongly in this direction that it may be held as a working hypothesis, at least, until facts are produced to disprove it.

Blindness from Inhalation and Ingestion of Methyl Alcohol. By Dr. H. V. Wurdemann.

Angeioneurotic Œdema; Report of a Case, with a Review of the Literature. By Dr. Bernard Kohn.

Alcohol and Insanity. By Dr. Arthur S. Hamilton.

Boston Medical and Surgical Journal, December 19, 1901.

A Discussion of the Relation between Human and Bovine Tuberculosis, with Special Reference to Primary Infection in Children through the Alimentary Tract. By Dr. A. D. Blackader.—The author has collected the more important facts thus far obtained which have a bearing on this very interesting problem. The more one considers them, the more one is convinced that much clinical and bacteriological work still remains to be accomplished before the latest statements of Dr. Koch can be either accepted or contradicted.

On the Necessity for Special Study and Experience in Treating Children. By Dr. Frederick A. Packard.—The author points out that the way in which a child is handled differs decidedly in accordance with the familiarity with, or strangeness to, children on the part of the examiner. In addition to this it is very frequently the case that one dealing with the adult alone soon forgets intuitively to observe certain appearances in the child which, by one used to handling children, are noticed at once as a matter of course. One should remember that a child is not a man cut down, and should not forget how great a significance the diminutive size has in the severity of certain lesions. The attitude should be observed, e. g., the slight retraction or rotation of the head in meningitis, the grotesque attitudes of scurvy. The character of the cry is often diagnostic, and the cries of fretfulness, hunger, colic, and painful dentition, are as dis-

inctive as are the spoken complaints of the adult. From the character of the respiration we can learn fully as much as in the adult. The cough is, of course, frequently characteristic of certain conditions, yet it would be oftentimes a great comfort were we able to determine definitely from the character of the cough whether we had to do with pertussis or with enlargement of the bronchial glands. The puffy, lacrymose appearance of the face, seen in measles and in whooping-cough, receives but little mention in the text-books, but is, nevertheless, characteristic; and, in measles, is often seen before the exanthem is visible.

Notes on X-light: Radiable Windows in X-light Tubes. By William Rollins.—The author recommends that the tube be placed in a non-radiable box from which no x-light can escape, except the smallest cone of rays that will cover the area under treatment. The simplest way accurately to adjust the size of the cone of rays is to use an adjustable non-radiable diaphragm to reduce the size of the normal opening in the box.

The Formation of Cysts in the Faucial and Pharyngeal Tonsils. By Dr. J. L. Goodale.

Acute Intestinal Obstruction, Due (1) to Cancerous Stricture of Intestine, Resected by Dr. Charles McBurney, of New York; (2) to Internal Strangulation in same Patient, Five Years Later. By Dr. Homer Gage.

Medical News, December 21, 1901.

Report of the Committee of Seven on the Prophylaxis of Venereal Disease in New York City. By the Chairman.

The Medical Society of the County of New York and Its Objects. By Dr. Frank Van Fleet.

Three Points in the Treatment of the Deformities of Infantile Paralysis. By Dr. John Lincoln Porter.—The author's first point is that the most efficient treatment of the deformities resulting from infantile paralysis, is the preventive treatment. Treatment should be begun as soon as the extent of the paralysis is well defined, for we can then predict almost definitely what the resulting deformity will be. The second point is that every case of infantile paralytic deformity, however slight or severe, can be improved to some extent by appropriate treatment. The third point is that in cases where the posterior thigh muscles are spared but the anterior ones are paralyzed, simple tenotomy of the shortened tendons is of great benefit, aside from the release of tension and improvement of function that result. Tenotomy alone, however, for correction of a deformity caused by contractures, is disappointing. Unless the improvement caused by the operation is maintained by proper mechanical apparatus, the contractures and deformity will almost surely recur.

Artificial Milks. By Dr. Louis Kolipinski.—The author points out that an artificial milk should approximately represent all the component parts of the animal secretion, and should be

cheap and readily prepared. The percentages of salts and of water are of vital importance. The ingredients should be easily obtained, fresh, and sterile, and the mixture should be palatable. These requisites are fulfilled in the following general formula: Extract of malt (syrupy), one tablespoonful; olive oil, one tablespoonful; roasted flour, two tablespoonfuls; one broken raw egg. Beat up in a bowl or dish with a spoon or egg-beater for three or four minutes. Add by degrees, while stirring, a tumbler or gobletful of pure, cold drinking water. Season with table salt. To be taken one or two hours after meals. In hot weather add crushed ice or prepare the whole in a "milk-shaker."

On the Biological Relationship of Proteids. By Dr. P. A. Levene.—In a brief preliminary communication, the author gives the results of recent experiments which indicate that chemically-different proteids derived from the same or closely related animals have the power of producing similar "precipitines" when injected into animals. It seems, therefore, that human milk could be used for obtaining serum for the detection of human blood. The details of the work in progress will be published in full when completed.

Medical Record, December 21, 1901.

The Cure of Chronic Bright's Disease by Operation. By Dr. George M. Edebohls.—The author essays to demonstrate that chronic Bright's disease is curable by operation, and that the present state of our knowledge does not warrant us in accurately defining the limits beyond which operation can no longer avail. As the result of his experience, he is prepared to operate upon any patient with chronic Bright's disease who has no incurable complication or none absolutely forbidding the administration of an anæsthetic, and whose probable expectation of life without operation is not less than a month. In deciding for operation it must be remembered that renal decapsulation is not directly curative of chronic Bright's disease, but that it only leads to a cure or improvement of the disease by establishing circulatory conditions essential to such cure or improvement. The attainment of permanent cure or of the full measure of improvement possible in a given case, will necessarily require time, during which the patient will, especially in the severer cases, stand in need of the further guidance and treatment of his family physician.

An Improved Method for Introduction of the Stomach Tube. By Dr. H. Crenshaw.—The author proposes to freeze two or three inches of the extremity of the tube just prior to its introduction, the object being to secure slight temporary anæsthesia of the fauces and pharynx by means of the cold rubber. In this way cold is applied exactly where anæsthesia is needed, and the irritability is overcome.

Results of Osteotomies for the Correction of Genu Varum and Genu Valgum. By Dr. Homer Gibney.

A Method of Protecting the Perinæum during Labor. By Dr. L. E. Norfleet.—At the second stage, give the patient a whiff or so of chloroform at each pain and, as the head comes down enough to separate the vulva, give the chloroform to the assistant. When the occiput is well hooked under the pubic arch and the fingers feel the forehead slip under their control, give the word for full chloroform, and, with the help of your left fingers on the child's occiput, hold the head still until relaxation takes place; then slowly shell the head out by pressure on the forehead. Take time and do not go by jerks, but allow the perinæum to stretch as much as possible. The author believes that this procedure will save ninety-five per cent. of cases from a tear.

Lancet, December 14, 1901.

Personal Experiences in the Surgical Treatment of Certain Diseases. By T. R. Jessop, F. R. C. S.—The Bradshaw Lecture. (See abstract of the *British Medical Journal* for December 14, 1901, in this number of the *Journal*.)

A Model Hospital. By T. Bryant, F. R. C. S.

On Duodenal Ulcer and Its Surgical Treatment. By B. G. A. Moynihan, F. R. C. S.—Ulceration of the duodenum may be acute or chronic. It is usually situated in the first portion of the duodenum. In the majority of cases the ulcers are solitary; when two are present, they are not infrequently opposed. Ulcers in various stages of activity (perforating, chronic, cicatrizing, etc.) may exist. Patients of all ages may be affected; duodenal ulceration has been observed in a new-born child and in a woman ninety-four years old. Men are much more frequently affected than women. The symptoms are characterized by their lack of ostentation. In more than half the cases where the ulceration was discovered at the necropsy, symptoms were never present. The cardinal symptoms are: 1. Pain, which is generally experienced an hour after eating, and referred to the epigastrium. As a rule, the nearer the ulcer to the cardia, the more swift the onset of pain after eating. Pains radiating to the right shoulder are occasionally noted. 2. Hæmatemesis is an occasional and rather erratic symptom. It comes on about two hours after eating, and the vomitus may contain bile. 3. Melæna is not improbably overlooked in a large number of cases. The hæmorrhage may be overwhelming and lethal.

The following are the chief complications of duodenal ulcer: (1) Profuse hæmorrhage; (2) perforation (acute, sub-acute, and chronic); (3) cicatricial contraction and induration, and their sequelæ; (4) circumduodenitis; and (5), cancer. Death is usually due to hæmorrhage or perforation. Hæmorrhage is more common in chronic ulcer. Any of the larger arteries in the neighborhood may be affected. The ulcer may perforate at once and acutely, or may slowly destroy all the coats of the bowel. All duodenal ulcers in their healing tend naturally to contract. The results necessarily depend upon the position of the ulcer. The symptoms of acute perforation differ at first but little from those of gastric ulcer; sudden, overwhelming pain, abdominal rigidity and tenderness, and pro-

found collapse. In duodenal ulcer, however, after the first shock has passed off, the course taken by extravasated fluids leads to a more acute and an earlier involvement of the peritonæum on the right side and in the right iliac fossa. The clinical picture of appendicular inflammation is copied with great accuracy; in eighteen operative cases the first incision was made over the appendix.

The medical treatment of duodenal ulcer demands the same care as in cases of gastric ulcer. Surgical treatment may be called for: (1) When an acute ulcer perforates; (2) when sub-acute or chronic perforation leads to circumduodenal or subphrenic abscesses; (3) in chronic ulcer when pain or gastrorrhagia, or enterorrhagia are persistent or disabling; and (4), when cicatricial contraction and induration or circumduodenitis have caused narrowing of the calibre of the gut and dilatation of the stomach, or of the stomach and that part of the duodenum behind the stricture.

The author has compiled and tabulated fifty-one cases of operation for acute perforating duodenal ulcer. In these there were eight recoveries. In only eighteen cases was a correct diagnosis made before the operation. In such operations the utmost speed consistent with safety and thoroughness is desirable. The great value of large doses of strychnine in these cases does not seem to be appreciated. Excision of the ulcer is unnecessary; after closing the perforation, the abdominal cavity should be thoroughly flushed out with hot saline solution.

The author also gives a table of four cases of chronic duodenal ulcer operated upon by him for pain, dilatation of the stomach, vomiting, etc. In all, recovery ensued, gastro-enterostomy being performed in each case.

Experimental Hæmoglobinuria Caused by a Bacterial Toxine. By Dr. C. Todd.—The author has found that the *Bacillus megatherium*, when grown upon suitable media, is very powerfully hæmolytic for the corpuscles of certain animals (guinea-pigs), without causing death or serious illness. Such hæmolysis manifests itself as hæmoglobinuria. Normal serum possesses an antihæmolytic action toward this bacterial hæmolysin. By graduated subcutaneous injections of filtered cultures of the bacillus, animals can be immunized against its hæmolytic action. The *Bacillus megatherium* has hitherto been regarded as practically non-pathogenic. The results are suggestive in connection with the pathology of such diseases as blackwater fever and paroxysmal hæmoglobinuria.

Movable or Floating Kidney a Cause of Acute or Chronic Painful Dyspepsia. By Dr. A. Macgregor.—The author reports five cases of painful dyspepsia, all occurring in women, in which no cause for the dyspepsia could be found beyond the presence of movable or floating kidney. Treatment by pad and bandage was tried in each case, but did not prove satisfactory; yet in none of the cases was operation recommended. When in ordinary cases of dyspepsia medicinal treatment fails, movable or floating kidney should be suspected and examined for.

Chronic Epistaxis (?Vicarious Menstruation); Cauterization of the Nose, Followed by Great General and Local Improvement. By Dr. B. E.

Meyers.—The author reports the case of a young woman, aged twenty-three years, who had suffered from severe nose bleed since childhood. She had menstruated only once (at the age of thirteen years), and was extremely anæmic. Her nose bled several times daily, but once every three or four weeks the bleeding would amount to one half or two thirds of a pint during two days. Medicinal treatment proving of no avail, both sides of the nose were thoroughly treated with the galvanic cautery. Improvement was rapid thereafter, and no nose bleed has occurred for eighteen weeks. Menstruation has reappeared, although the amount of blood lost is still very scanty.

A Case Illustrating the Relief of Severe Headache by Correction of Refraction Error, with Remarks also on the Effect of Cycling in some Cases. By S. Snell, F. R. C. S.

British Medical Journal, December 14, 1901.

Nephrectomy, Nephrolithotomy, and Lithotomy. By T. R. Jessop, F. R. C. S.—The Bradshaw Lecture.

Nephrectomy in Children.—The author has performed nephrectomy for tumor in young children in 11 cases; 9 were operated on by the lumbar method, and 2 by the abdominal. Of these 11 cases, 1 patient died before the completion of the operation, and 1 lived only seven hours, death being due to cardiac thrombus. Nine recovered from the operation, but all died within 3 years, the longest survivor living only 2 years and 5 months. In how many death resulted from recurrence of the disease, the author has no means of knowing. In estimating the value of this operation, we must be informed as to the duration of life in those reported "cured," or statistics will only mislead.

Nephrectomy in Adults.—Here the results obtained are much more encouraging, partly because the operations are usually performed for other conditions than those of malignancy, and in part because of the lesser degree of malignity usually met with in tumors of the adult and the consequent diminished liability to diffusion and recurrence. The author has operated upon 16 adults, of whom 6 had tumor, 3 calculous pyelitis, 4 tuberculous or other forms of non-calculous pyelitis, 2 fistula following nephrolithotomy, and 1 uncontrollable hæmorrhage after nephrolithotomy. Of the 6 tumor cases, there were 2 recoveries, 2 deaths within a few hours from shock, 1 death on the third day after operation of intestinal obstruction which enterostomy failed to relieve, and 1 death on the ninth day, from exhaustion. The four patients who died presented large tumors, and, in all, the transperitoneal method was the operation selected. Two men, aged respectively sixty-three and sixty-one years, and a woman, aged thirty-four years, were the subjects of sarcoma of the left kidney. The fourth was a man, aged fifty-six years, with carcinoma of the right kidney. Of the 10 adults on whom nephrectomy was performed for conditions other than that of tumor, 2 died and 8 recovered. Of the 8 who recovered, 3 were the subjects of calculous pyelitis, and had previously undergone nephrolithotomy; 4 were operated on for tuberculous or other form of non-calculous pyelitis after nephrolithotomy, and 1

for urinary fistula following nephrolithotomy. In each the lumbar operation was selected. The author inclines to the opinion that the lumbar operation is to be preferred for those cases in which sepsis is known, or is assumed, to exist, and for those neoplasms in which the growth is of recent origin and of small or moderate size, while the larger renal tumors will be attacked from the front with more prospect of success in proportion to our increased knowledge of and attention to details in the operation itself, and to our ability to avert death from shock.

Nephrolithotomy.—Up to 1896 the author had operated upon 19 patients for stone in the kidney. In 5 no stone was found, in 1 a displaced stone was extracted from the perineal urethra, in 2 a severe hæmorrhage (fatal in 1) followed the incision over the stone, in 2 nephrectomy had to be performed for urinary fistula, and in 9 recovery was uncomplicated and complete. In none of these operations was the kidney withdrawn from its normal situation. Since 1896 the author has followed Morris's method of withdrawing the organ from its bed and of splitting the organ into two symmetrical halves. He has performed this operation in 5 cases with most satisfactory results.

Vesical Calculus.—In regard to operations for vesical calculus, the author has limited his practice since 1890 to litholapaxy and suprapubic lithotomy; to the former, whenever he has found it reasonably practicable, irrespective of the age of the patient, and to a great extent of the size of the stone; to the latter whenever existing conditions were such as definitely to forbid the use of the lithotrite and aspirator, and in a few cases in which the weight of evidence seemed to favor the shorter, if on the whole severer, measure. Perineal lithotomy is now all but relegated to the past.

The Sanatorium Treatment of Pulmonary Tuberculosis. By Dr. R. W. Philip.—The leading feature of the sanatorium treatment of pulmonary tuberculosis are as follows: 1. *Open air.* This is the one essential—the *conditio sine qua non*. The patient is to be allowed the freest access of fresh air day and night, at all seasons, provided he be sufficiently clad. 2. *Rest and release* from disturbing conditions. In almost all patients, rest is the immediate indication when treatment is commenced. Even the visits of friends or the receipt of letters may exercise a definitely harmful influence. 3. *Exercise.* As the necessity for rest lessens, the intervals of activity are correspondingly lengthened. 4. *Dietary.* Alimentary disturbance is a leading feature of pulmonary tuberculosis, and is to be corrected by a carefully studied dietary. 5. *Skin hygiene.* This is not merely a question of cleanliness; healthy skin activity is demanded. Hence both clothing and bathing should be carefully considered. The regular use of a rapid cold bath is in most cases not only possible, but highly beneficial. 6. *Medication.* It is remarkable how comparatively few drugs are indicated when the more cogent physiological indications have been fulfilled. Tuberculin has proved, in the author's hands, to be of immense diagnostic and therapeutic service. A sanatorium can be suitably established practically anywhere, provided that the immediate surroundings are free and open, and there is a suffi-

ciency of ground for the carrying out of open-air methods. The length of residence must necessarily vary; six months may be fixed as a desirable minimum.

An Electro-thermal Paraffin Bath. By Dr. R. H. Steen.

Prolonged Action of the Heart, Maintained by Artificial Respiration without other Signs in a New-born Infant. By Dr. J. J. Redfern and G. Newby, F. R. C. S.

Hernia of a Diverticulum, a True Littre's Hernia. By T. R. Smith, M. B.

Centralblatt für Gynäkologie, November 9, 1901.

Case of Vestibular Artificial Anus.—Dr. Georg Zander reports such a case in a primigravida who, on examination, was seen to possess three openings on separation of the labia, the urethra, the introitus vaginae, and an anus. The anus possessed an internal sphincter and the patient was able to control flatus and faeces. Owing to the small size of the vagina, it appeared that coitus must frequently have been practised in the anus. Often, after intercourse, the patient had experienced rectal tenesmus. Externally, where the anus should have been, there was no evidence of any.

Genuine Interstitial Pregnancy.—Dr. H. A. von Guérard reports an operation on a multiparous woman who gave the clinical signs of extra-uterine pregnancy. The operation disclosed a pregnancy developed in the uterine wall and completely shut off from the uterine cavity. The entire sac was excised and the wall of the uterus sewed. The appendages were perfectly normal.

Case of Facial Paralysis Following Spontaneous Birth. By Dr. Otto Gröne.

Centralblatt für Chirurgie, November 2, 1901.

Value of Functional Examination of the Kidney.—Dr. Leopold Casper has a short paper on the value of a simultaneous examination of the urine from both kidneys as a means of differentiating renal lesions and of making diagnoses of kidney disturbances from other abdominal diseases. The urine from each kidney is examined for nitrogen, for sugar artificially produced by the injection of phloridzin, and for the freezing-point. When the kidneys are sound, the figures of the three tests should be equal for both kidneys; when one kidney is diseased, the diseased one always gives lower figures than the sound one. "The more diseased the kidney, the lower the figures." The author cites from illustrative cases.

Gazzetta degli Ospedali e Delle Cliniche, September 8, 1901.

On a Simple Method of Liberating Mucopurulent Corpuscles in Urinary Sediments. By Dr. E. U. Fittipaldi.—Encouraged by the results obtained by Reale, by washing urinary sediments rich in urates with normal salt solution, the author used the same means in order to render

more easily distinguishable the mucopurulent elements of urinary sediment, and to show more clearly the presence of casts, he tried the addition of normal salt solution to which one tenth of a part of forty-per-cent. alcohol had been added. This did not alter the elements of the sediment, but rendered the optical differentiation of the nuclei, protoplasmic granules, fat droplets spores, etc., more clear. The author found that, with ordinary methods of examination, after centrifugating, the whole field of the microscope was covered with pus corpuscles, and casts could not be distinguished. In order to obviate this, he made use of the fact that the elements of the urinary sediment when centrifugated are deposited in a certain fixed order. First, the small calculi or large crystals of triple phosphate, large coagula, large and heavy masses of muco-pus or tissue, are thrown down; next, come the crystals of free uric acid, the crystals of calcium oxalate, smaller crystals of uric acid and of the other mineral constituents, save those of sodium urate, which are lighter and, as a rule, are found in the upper layers. The casts and cylindroids begin in the first layer, but, for the most part, are found in the second, where they are mixed with epithelium and other cellular elements. The author therefore used an interrupted process of sedimentation. First he turned the handle of the centrifuge at the rate of about fifty a minute, then at the rate of twenty revolutions, and finally at the rate of ten. After each sedimentation he decanted the upper part of the liquid and substituted the salt solution. In this way he was able to diagnose the presence of casts in doubtful cases.

The Serum Diagnosis of Pulmonary Tuberculosis. By Dr. Francesco de Grazia.—The author found that the serum of a number of animals in which tuberculosis was positively excluded was capable of agglutinating, more or less completely, pure cultures of the tubercle bacilli. He found, further, that the blood serum of various patients clumped these cultures in a degree of dilution greater even than that indicated by previous observers with the blood serum of tuberculous patients; so that no conclusion can be drawn as to the value of the reaction as a specific test of tuberculosis. The possibility of a specific serum reaction in tuberculosis was still further shaken by the fact that the serum of patients with pulmonary tuberculosis can agglutinate cultures of various bacteria, especially the staphylococcus, and in a lesser degree the bacilli of typhoid and cholera. The author concludes that the presence of a serum reaction is of no significance, either for diagnosis or for prognosis, in suspected cases of pulmonary tuberculosis.

On the Mechanism of Kernig's Sign. By Dr. A. Cipolani and Dr. D. Maragliano.—The authors give the following definition of the mechanism of Kernig's sign: "It is the pathological exaggeration of a normal phenomenon due to the disturbance in equilibrium between the extensor group of the leg, which is atonic, and of the flexor group, which is hypertonic."

Researches on the Post-mortem Formation of Sugar in the Liver after Injections of Glucose into the Veins. By Dr. Alfonso Calabresi.—The author finds that after the endovenous injection of a certain amount of glucose, the amount of sugar in the liver diminishes. This diminution is most marked within the first ten to twenty minutes after the injection, and disappears gradually.

Riforma medica, September 24 and 25, 1901.

On the Value of the Biological Method in the Diagnosis of Blood for Various Medico-legal Purposes. By Dr. Domenico Mirto.—The so-called biological method of testing a stain, in order to determine whether it is human blood or not, is based upon the principle, discovered by Bordet, that when the red blood cells of one animal are introduced into the blood of another animal, they produce substances in the body of the second which have the property of destroying or agglutinating the red blood cells of animals belonging to the same species as the first. The objections to this method in medico-legal practice are, that in such cases we do not have to deal, as a rule, with fresh corpuscles, but with dried stains, and that it is necessary to prepare by inoculation a series of ten or twelve hæmolytic sera specific in various animals. Uhlenhut, however, found that blood serum and defibrinated blood possessed the property of developing "agglutinins" and "precipitins," which are specific in the species corresponding to that of the animal from which the blood is taken originally. Stern found that if human blood serum was injected into rabbits, and the serum of these rabbits was added to the serum of human blood there would result a precipitate, which formed only with the serum of monkeys and with human serum, and not with the serum of any other species of animals. In this way, if the presence of monkeys is satisfactorily excluded, the stains can be absolutely recognized as human blood. The investigations of the author showed that the test above described was specific, and that it was very delicate, inasmuch as a reaction might be obtained with solutions of blood so dilute that a spectroscopic image could no longer be obtained, i. e., a dilution of one in thirty thousand parts. He also found that the best solvent for the blood to be tested was acetic acid. In order to test the value of the reaction upon old stains the author examined some blood spots that had been kept since 1891. He found that a positive reaction could be obtained with all three samples. The stains of bovine blood could be dissolved in normal salt solution, but the stains of human blood that had been kept for so long a time were soluble only in acetic acid or in some other solvents, such as caustic soda, and potash, etc.

A Case of Paralysis of the Recurrent Laryngeal Nerve as the Result of Cicatricial Œsophageal Stenosis. By Dr. Ugo Benenati.—The author reports the case of a man, aged fifty-one years, who presented a cicatricial stenosis of the Œsophagus, and in whom the possibility of carcinoma was excluded with certainty during life. The vocal cords were found to be paralyzed on both sides, but

especially on the left. The involvement of the recurrent laryngeal nerves was due to the peri-Œsophagitis, which enclosed them in a meshwork of new connective tissue. The left nerve was involved more than the right on account of its greater proximity to the Œsophagus. The case is the first of its kind on record.

October 1 and 2, 1901.

Contribution to the Study of Organized Bodies Lying Free in the Sac of a Hernia.—Dr. Augusto Severi relates a case in which he found a fibrous tumor lying free in the cavity of a hernial sac. The tumor consisted largely of elastic tissue, and the author believes that it is probably a detached fibrous excrescence, such as are often found on the omentum, though, if so, the fibrous tissue must have been largely replaced by elastic fibres.

Ergotine in the Treatment of Uterine Fibromyomas. By Dr. Gino Recchi.—In 1892, Hillebrand suggested the use of ergot hypodermically in cases of uterine fibroids. Various observers afterward tried this method, but with varying results, and therefore opinions on the subject are contradictory. Interstitial tumors, which are pure or nearly pure myomata, lend themselves best to the influence of ergotine. On the other hand, pedunculated and submucous fibroids do not do well with this treatment. The effect of ergotine in fibromyomata is, not only to contract the vessels, but also to contract the muscular fibres of the womb, thus diminishing the nutrition of the growth, and exercising pressure upon it. It is necessary, therefore, to make a distinction between the varieties of tumor present, and to prescribe Hillebrand's treatment when we are sure that the tumor is interstitial, and still a comparatively pure myoma. The treatment is to be kept up for a long time in interrupted "courses," repeated every three months. Not more than forty injections should be given at one period of treatment, in order to avoid ergotism. Twenty centigrammes of ergotine ($3\frac{1}{3}$ grains) daily are given in solution in distilled water, saturated with chloroform.

Vratch, November 10 (New Style, November 22), 1901.

The Success of Finsen's Method of Phototherapy. By Dr. O. V. Petersen.—Researches conducted under the auspices of the Institute of Experimental Medicine, Section of Phototherapy, concerning the influence of the chemical rays of light upon lupus, have been completed, and the method of Finsen may be now said to be established as the best mode of treatment in this affection. The only disadvantage connected with this method is the expense of fitting up an institute for the treatment of lupus, and the long sittings (an hour at a time) required for this treatment, so that but few patients may be treated at the same time. Work is now going on in Paris, and in Copenhagen with the view of perfecting Finsen's apparatus, and of making it less expensive. The results of Finsen's method in various skin diseases were recently reported by Forchhammer at the Congress of Dermatologists in Breslau. During the five years, from 1895 to 1900,

640 patients with lupus have been treated in Finzen's institute in Copenhagen. Of these, 74 per cent. had involvement of the mucous membranes in addition to the skin. On May 1, 1901, the treatment had been completed in 456. Of these, no recurrence had been noted for five years in 130, while in 326 the observation had extended only through one year. About 85 per cent. of the cases in which treatment has been completed have been cured. In 25 cases of cancer of the skin, 11 were cured by this method.

The Comparative Value of some Appliances for the Measurement of Blood-pressure as Apparent from a Study of the Literature and of Clinical Data. By Dr. L. I. Ousskoff.—The author has found that the chief disadvantage of the various appliances used to measure blood-pressure is the fact that they are not easily transported, and therefore that the practising physician cannot utilize them. The author has devised an apparatus which obviates this difficulty. He has changed the barometric tube for a siphon which is enclosed in the hollow of a wooden plate. The long arm of the tube is furnished with a stopcock, which is opened during the act of measuring the blood-pressure, and closed hermetically when the apparatus is not in use, so that the mercury cannot escape. At the side of this arm there is a scale reading in millimetres, and to the short arm are attached three branches, the two rubber bulbs that furnish the pressure, the pneumatic ring, and the rubber sleeve. A stopcock at the junction of these three branches of the apparatus enables a connection to be made between any one of the three and the manometer, and makes the closure of the short arm of the tube possible after the observation is finished.

On the Treatment of Eclampsia. By Dr. V. V. Stroganoff.—A reply to Professor Menge. Menge, in an article published in the *Centralblatt für Gynäkologie*, 1901, 31, expressed his astonishment concerning the results obtained by Stroganoff in the treatment of eclampsia, and suggested that some of the author's cases might have been hysteria or epilepsy. Stroganoff denies the renal theory of eclampsia, basing his view upon the results obtained by Ingerslew and Charpentier, as well as on the facts published in his own work on the Pathology of Eclampsia (International Medical Congress, Paris, 1900). He does not deny, however, that albuminuria exists with eclampsia, but he says that it is not certain whether the albuminuria of eclamptic women exists before the eclampsia. The fact that there are cases of eclampsia without albuminuria, and even without any changes in the kidneys, is sufficiently well proved. In speaking of his results, the author says that, in the past four years, he has treated over one hundred cases of eclampsia in about 9,000 labors, and in no case did the patient die if the condition before the treatment was begun was satisfactory. Of his series of 113 cases of eclampsia, only six died of complicating diseases, or because, before entering the hospital, they were in a condition of exhaustion from frequent attacks.

A New Syringe for the Injection of Diphtheria Antitoxine. By Dr. P. V. Timofeejeff.—The author has modified the syringe introduced by Ga-

britchevsky, which was constructed on the principle of the "wash bottle" commonly employed in chemical laboratories. The latter syringe included a bottle which held from ten to twenty cubic centimetres of liquid. At present this is unnecessary, as the antitoxine is made in concentrated form. The author's appliance consists of a doubly perforated rubber stopper, of such diameter that it will fit into the neck of the bottles ordinarily used for antitoxine, and, a short and a long metallic tube passing into this cork and bent in two directions as in the "wash bottle." One of these tubes, the longer one, is connected by means of a rubber tube to the hypodermic needle, while the other is attached to a rubber bulb of convenient dimensions. The rubber stopper is simply inserted into the vial of antitoxine, the vials being so nearly of the same size, no matter where manufactured, that the stopper provided will fit any of them, and the pressure of the bulb drives the liquid into the needles. The tube communicating with the needle must be inserted as nearly as possible to the bottom of the vial, so as to avoid leaving any of the antitoxine in the container.

Parascorbatic Affections of the Bones and Joints. By Dr. V. V. Siziemsky.—The author reports cases and quotes facts to show that, in districts where scurvy prevailed in the years 1899 and 1900, there was a marked increase of tuberculous affections of the bones and joints. He asks whether it may not be possible that there is a connection between these conditions.

On Intra-uterine Injections. By Dr. B. A. Liboff.—In order to determine the value of intra-uterine injection the author analyzed sixty cases in which 2,289 injections were made. The course of the disease was observed for periods varying between three months and two years, so that it was possible to judge of the permanence of the results. The injections were performed with every precaution, but in spite of all this, two patients (3½ per cent.) suffered from serious complications from which, however, they recovered completely. Before employing injections one should carefully weigh the peculiarities of each case, as not every patient behaves in the same way under this treatment. In general, patients regard this mode of treatment as a very painful one, and many refuse treatment after the first few injections. In such cases, the author recommends that the injections be given every other day, instead of daily, as he found that in this way very good results could be obtained. The pain may not come on until some hours after injection, and this is especially noticeable in nulliparæ. The author believes that the pain is due, not to carelessness in manipulation, but simply to the irritation produced by the introduction of Brauns's syringe. The author used a solution composed of 25 parts each of tincture of iodine and alcohol and of 2½ parts of yeast, the quantity being gradually increased from one or two drops to one cubic centimetre. He used Simon's speculum in introducing the syringe, and at first tried to inject the fluid with a soft catheter. The patient remained in bed for a few hours after each treatment. Bougies containing opium were rarely used. This method of treatment for chronic endometritis was introduced in Russia by Professor Grammatikati.

Proceedings of Societies.

NEW YORK ACADEMY OF MEDICINE. SECTION IN PÆDIATRICS.

Meeting of October 10, 1901.

Dr. WILLIAM L. STOWELL, Chairman.

A Case of Hydrocephalus was presented by Dr. SARA WELT-KAKELS. The patient was a male child, one year old, of Russian parentage. The family history was negative, with the exception of the fact that a previous child had died of the same disease. Two other children were alive and well. The child presented had been born without instrumental intervention after an uneventful pregnancy, and developed normally during the first ten weeks of his life; he had no illness, but suffered occasionally from obstinate vomiting, which was projectile in character. When he was three months old he had a discharge from one ear, which lasted only a few days. The child had never had any convulsions. The first tooth appeared when he was eleven months old. He never made any attempt to creep or play, and was generally dull.

At the present time the patient was well developed, weighing seventeen pounds. The head was rather large, the anterior fontanelle was not quite closed, the palate was arched, the eyes had a vacant stare, he was wholly apathetic, and he had a listless manner. The pupils were equal in size and reacted to light very slowly; sometimes his eyes followed the light; he started at any sound. He occasionally moved his hands and feet, but with little strength; he could not hold his head erect. The patellar reflexes are exaggerated; foot clonus is not present.

Physically, the child was perfectly well. He had a good appetite (breast and bottle-fed), and the bowels moved regularly. A blood examination had not shown anything abnormal.

The Modern Technics of Blood Examinations.—Dr. FRANCIS C. WOOD said that, for rapid and convenient estimation of the hæmoglobin contents of the blood, the color scale recently published by Tallqvist had proved useful in cases where great accuracy was not necessary. The use of the Jenner stain for routine blood examinations was considered advisable because of its simplicity. The speaker also suggested that by the use of a well-corrected lens of wide angle and low power much more could be learned from a cursory examination of a slide than if the investigation was made with a one-twelfth oil immersion, always excepting the finer details of cell structure.

The Blood in Infancy and Childhood.—Dr. GERTRUDE UNDERHILL LIGHT read a paper with this title (see page 1000).

Severe Secondary Anæmia in a Child of Two Years.—Dr. L. E. LA FETRA reported the case of a child that had never been nursed. She had been fed on diluted cow's milk during the first six months, and subsequently, in the winter of 1898-'99, on undiluted cow's milk. Her weight at six months was seventeen pounds, but she was very pale in spite of the fact that she was constantly out of doors.

During the summer of 1898 she had an attack of bronchitis and cholera infantum, and the following summer she again suffered from diarrhoea. Her weight gradually increased to twenty-five pounds, but her anæmia became more marked in spite of the administration of iron, and dropsy of the feet occurred. Subsequently there was some loss of power in the legs, so that the patient was unable to stand, and early in 1900 she began to suffer from attacks of "holding her breath," with cyanosis; these were apparently brought on by fits of temper. Her diet was changed to soup, cow's milk, and cereals, but, as there was no improvement in her condition, she was brought to New York from her home in Kentucky for treatment. The diagnosis that had been made there was that of pernicious anæmia, and an unfavorable prognosis had been given. When the child first came under observation here, aside from the marble pallor and the attacks of cyanosis, there were loss of appetite, marked general weakness, œdema of the feet, inability to stand, fitful sleep, and great irritability of temper. In order to make a thorough examination, it was necessary to administer chloroform. There was plenty of adipose tissue, but there was no abdominal tumor or distention. There was a faint cardiac murmur at the base; there was no evidence of renal trouble. A blood examination showed thirty per cent. of hæmoglobin; red cells, 2,100,000; white cells, 13,200; there were no malarial organisms.

The only treatment instituted in the case was a change in the method of feeding; the night feedings were reduced from five to three, and during the day the child was fed every four hours. The diet was not changed and no drugs were given. In about a week a marked improvement was noticed. The treatment was kept up, and, in addition, Fowler's solution was given. The child continued to improve and soon regained the use of her legs. A month later the hæmoglobin had increased to forty-two per cent., and the red cells numbered 3,560,000. About the middle of May, 1900, she returned to her home in Louisville, and in June her physician reported that she was improving; her cheeks, palms, and feet were quite pink in color and she was eating and sleeping well. On October 1st the physician reported that the child was in perfect physical condition.

In conclusion, Dr. La Fetra said this case showed: 1. No matter what the symptoms are, without a blood examination the diagnosis and prognosis are guesswork. 2. Strict regulation of the hours of sleeping and eating is fully as important as the character of the diet and medication.

A Case of so-called von Jaksch Anæmia.—Dr. C. HERMAN reported the case of an infant, eighteen months old, both of whose parents were healthy, neither giving a history of tuberculosis, syphilis, or malarial disease. The mother had had six children in all, the first and second being still-born. One child had died of pneumonia; the two remaining children were healthy. The child had never suffered from any disease. It had been breast-fed during the first five months and then given diluted boiled milk. There was no history of gastro-intestinal disturbance. The child had always been pale; the first teeth appeared at thirteen months.

The patient was seen for the first time on May 10, 1901. During the preceding month the mother had noticed that the child was growing paler, thinner, and weaker, and that its appetite had failed. Examination showed a small, pale, ill-nourished child, markedly rachitic, with flabby muscular tissues. The anterior fontanelle was open. There were enlarged cervical and occipital glands. The abdomen was enlarged, the greater portion of the left side being occupied by the spleen, which extended from the eighth intercostal space above to the crest of the ileum below. The liver was also enlarged. There was epiphysal enlargement at the ends of the radius and tibia. The urine was normal; the bowels were regular; there was no fever. An examination of the blood, made on May 14th, showed thirty-five per cent. of hæmoglobin; 2,800,000 red cells and 26,400 white cells. On June 1st a petechial eruption appeared on the face, arms, and legs. On June 27th, the child was admitted into Mt. Sinai Hospital. On July 10th there was forty per cent. of hæmoglobin; the red blood cells numbered 2,044,000; the white blood cells numbered 21,000. Treatment apparently had no effect on the course of the disease, and the patient died on September 1st of general weakness.

To recapitulate, the principal symptoms were as follows: Marked enlargement of the spleen; moderate enlargement of the liver and lymph nodes; the red blood cells ranged in number from 1,400,000 to 2,800,000; the white blood cells ranged from 21,000 to 37,000 and the hæmoglobin from thirty to forty per cent. The uninuclear leucocytes were about twice as numerous as the multinuclear.

A Case of Leucæmia of the Splenomyelogenous Type in a Child of Eight Years.—Dr. HENRY HEIMAN related the case of a girl with the following family history: The father had been an alcoholic and had died six years ago of cirrhosis of the liver and Bright's disease. The mother was living and apparently well. She had had one abortion. The patient's birth had been normal. She was the second of five children, bottle-fed on condensed milk and barley water. Her first tooth appeared at eleven months; she could walk at the age of two years. She had had measles and whooping-cough. She had never had bleeding of the gums or nose. When she was first seen at the Mt. Sinai Dispensary, four years ago, she was an emaciated girl of normal height, with a large splenic tumor extending almost down to the pubes. There were enlarged glands in the axillary and inguinal regions. The heart, lungs, and kidneys were normal. The liver was slightly enlarged. The child remained under Dr. Heiman's observation until the time of her death, a period of eight months. During her life a number of blood examinations were made, all of which were similar under the microscope. The blood findings were: Red cells, 3,000,000; white cells, 280,000. Among the latter were myelocytes, lymphocytes, eosinophilous cells, and multinucleated white cells. Among the red cells were microblasts and macroblasts, some of them multinucleated. It was a classical picture of splenomyelogenous leucæmia.

Dr. THEODORE C. JANEWAY briefly reported two cases of lymphatic leucæmia which had come under his observation. One was that of a child, four

years old, that had been living in a malarious district on Long Island. There was a history of chills, with languor and increase in temperature. The abdomen was enlarged and tender, and there were hæmorrhages from the nose and bowels. The picture, two weeks before death, was typical of acute leucæmia. The child was extremely pale, the skin having a lemon-yellow tinge; there was marked enlargement of the spleen, with some enlargement of the liver and moderate enlargement of the left cervical and inguinal lymph nodes. The abdominal lymph nodes were also palpable, and there were numerous blotchy hæmorrhages over the retina. The ordinary anæmic cardiac murmurs were present. A week before death vomiting set in, and there was an oozing of blood from the gums. Coincident with this, the size of the abdomen began to diminish, and at the time of death it was normal in size. At the autopsy scarcely any enlargement of the spleen was found; the enlargement of the lymph nodes had also disappeared and the tissues of the body were absolutely bloodless. This was probably due to the excessive loss of fluid through the bleeding and vomiting during the last week of life. The same was sometimes seen in cases of cirrhosis of the liver.

The other case was that of a child presenting the clinical picture of chronic lymphatic leucæmia and the blood findings of acute lymphatic leucæmia. The disease in this case had existed for four or five months, and the patient, to the best of Dr. Janeway's knowledge, was still under treatment.

Dr. HENRY D. CHAPIN said that a paper summarizing our knowledge regarding the various types of leucæmia would have proved an interesting and instructive addition to the papers of the evening. There was a great deal of obscurity in the literature on examinations of the blood, and those who were not actually working in that field were likely to become confused. With reference to certain of these blood tests, Dr. Chapin questioned whether they were always as accurate as they seemed to be.

Dr. DAVID BOVAIRD, Jr., said that he had been much interested in Dr. Wood's remarks regarding the simplification of the technics of blood examinations. Personally, he had found it impossible to carry out some of the older methods in his clinical work. He had found the Jenner stain very simple; it saved time and made it possible to employ it in daily practice.

Dr. CHARLES G. KERLEY said that if secondary anæmia was not the result of syphilis, tuberculosis, or one of the infectious diseases, the cause could usually be found in the gastro-intestinal tract. In the treatment of such cases, the regulation of the diet was the most important factor, and often gave gratifying and even surprising results, as in the case reported by Dr. La Fetra. In the treatment of this class of cases in the past, too much attention had been paid to the use of drugs—iron, arsenic, and so on, and not enough to fresh air, salt baths, cold rubbing, and a properly adjusted diet. In some cases oxygen was perhaps beneficial. The drug treatment was absolutely useless unless we got the gastro-intestinal tract into good shape.

Dr. LA FETRA said he was entirely in accord with the remarks made by Dr. Kerley. In the case he

had reported, improvement had begun after simple regulation of the diet and without the use of any drugs. The gastro-intestinal tract was usually at fault in this type of anæmia.

Dr. HEIMAN said that one objection to the Jenner stain was that it did not give us the exact color of the red cells; it also caused a great deal of precipitation. Secondary anæmia, the speaker said, was often due to certain diseases, especially those of a septic character, and in the treatment of such cases we must direct our attention to the primary disease. Iron in such instances was absolutely useless.

Letter to the Editor.

THE PREVENTION OF THE SPREAD OF MEASLES THROUGH THE PUBLIC SCHOOLS.

27 WEST ONE HUNDRED AND FIFTEENTH STREET,
NEW YORK, December 16, 1901.

To the Editor of the *New York Medical Journal*:

SIR: In a very exhaustive and instructive series of papers on The Daily Medical Inspection of Schools, in the *New York Medical Journal*, November 16 to December 14, 1901, Dr. Lamb quotes Dr. Eaton as saying: "During the past year my own practice showed no case of measles not directly traceable to one of the public schools in my neighborhood."

From observations which I have recently made I think there can be absolutely no doubt on this point. When ten or twelve cases of measles occur in one class, among children who live in different houses, it is fair to assume that the disease was communicated by contact in the schoolroom.

In one of his lectures, Charcot says: "How is it possible for some one to discover a disease which has probably existed since the time of Hippocrates? Really it is remarkable. A psychologist could make a study of the method by which we see in medicine. How is it that we see so late, so imperfectly, and with so much difficulty the things which are always there? Where a discovery is made, why is it necessary to repeat the thing twenty times before it is accepted? Why does the first communication of something new meet with such a cold reception? I believe it is because we are expected to accept something which disturbs our old ideas. We are all, more or less, pronounced conservatives."

In a letter to the editor of the *New York Medical Journal*, June 4, 1899, I called attention to the great value of the presence of the Koplik spots on the buccal mucous membrane in the early diagnosis of measles, and to the possibility of preventing the spread of this disease through the public schools. During the present epidemic I have had another opportunity of demonstrating these points. Three primary classes in which a number of cases of measles had been reported were inspected. The mouths in suspicious cases and in all those who had never had measles were examined. In this way three cases were found on one day, in the pre-emptive stage, and excluded. As the rash appeared from twelve to twenty-four hours later, these pupils

would have remained in school at least from half a day to a day longer if they had not been examined.

As measles is probably the most contagious of the diseases of childhood, especially in the early stage, it becomes all the more important to separate the cases as soon as possible. It is unnecessary to dwell on the importance of such separation, the danger, the time lost by not only the patient, but also by all the other children of the same family who attend school, and the hesitation of parents in sending their children to school when there is danger of contracting an infectious disease.

In what way can such early separation be best accomplished?

1. The teachers should be instructed, especially during an epidemic, to send to the medical school inspector all cases which are at all suspicious. In the case of measles, for example, all having coryza, running of the nose.

2. The family physician should report his cases to the department of health *immediately*.

3. The department of health should notify the school principals of such cases *immediately*.

4. The principals should notify the medical school inspector if several cases are reported from one classroom.

5. If such a notification is received, the inspector should examine the mouth in suspicious cases, and the mouths of all those who have not had an attack of measles.

The same rules, with slight modifications, are applicable to all the contagious diseases.

In this way I believe it will be possible greatly to reduce the number of cases.

CHARLES HERRMAN, M. D.

Book Notices.

A Text-book of Medicine for Students and Practitioners. By ADOLF STRÜMPPELL, Professor and Director of the Medical Clinique at the University of Erlangen. Third American Edition, Translated by Permission from the Thirtieth German Edition, by HERMAN F. VICKERY, A. B., M. D., Instructor in Clinical Medicine, Harvard University, etc., and PHILIP COOMBS KNAPP, A. M., M. D., Ex-President of the American Neurological Association, etc. With Editorial Notes by FREDERICK C. SHATTUCK, A. M., M. D., Jackson Professor of Clinical Medicine, Harvard University, etc. With One Hundred and Eighty-five Illustrations in the Text and One Plate. New York: D. Appleton & Company, 1901. Pp. xxii-1242.

It is seven years since the preceding American edition of this important work appeared. During that period seven new German editions have been brought out. The author has constantly recognized the need of revision, and has given heed to it. The American version, however, has been allowed to drift along until now without revision. This is very much to be regretted, and we hope that subsequent editions will be published at short intervals, for it is an injustice both to the author and to his

readers to withhold from the latter the former's most finished work for such a length of time.

Strümpell's great work has become such a favorite that we need add but little to what we have said concerning the previous American editions further than to notice some of the new matter that has been inserted in this one. Taking up, first, the subject of diphtheria, we find the author expressing himself about the antitoxine treatment in the following conservative terms: "If further observations confirm the present results, this treatment is one of the most brilliant and triumphant medical acquisitions." We infer, however, that Strümpell really places more reliance on the serum treatment than this guarded statement would seem to imply, for he says of local treatment that it is unnecessary in conjunction with the use of antitoxine, except that tracheotomy or intubation may be required on account of laryngeal stenosis.

We find mention made of changes in the bone marrow in certain forms of anæmia, but we do not find the use of bone marrow as a remedy considered. As to the preparations of iron in the treatment of anæmia, the author thinks their usefulness is well established, although their mode of operation is not clear. He doubts if, on the whole, the organic preparations of recent years are in any way superior to the old inorganic chalybeates.

Concerning the Nauheim treatment of heart diseases, the author admits its value even in many cases in which compensation is beginning to fail, but he does not consider the subject so fully as might be wished. On the other hand, the Brand system of treating typhoid fever with cool baths he designates as, besides symptomatic and dietetic treatment, the only method to be chiefly considered, although he thinks that some of Brand's technical minutiae should be changed, and does not agree that that author's views as to the indications are in every respect correct.

Among Dr. Knapp's additions, which are all extremely valuable, we find paragraphs on Cretinism, Myxœdematous Infantilism, Adiposis Dolorosa (Dercum's disease), and Scleroderma. Concerning Dercum's disease, Dr. Knapp says that disease of the thyroid gland has been found post mortem, but the true nature of the trouble is still obscure. While treatment has thus far been of little avail, every effort should be made to improve the nutrition, and thyroid feeding should be employed.

Progressive physicians, we think, will hardly subscribe to the statement that the Widal reaction, while "interesting theoretically" as a test for typhoid fever, "can be used only in clinics and hospitals."

As to the diagnosis of cerebrospinal meningitis by means of lumbar puncture, Dr. Knapp points out the extreme importance of the discovery of the *Diplococcus intracellularis* in doubtful or sporadic cases.

The part played by mosquitoes in the spread of malarial disease, yellow fever, and filariasis is not quite so fully set forth as we should expect to find it portrayed in a book dated 1901, but the meagre statements made concerning it are quite in consonance with current conviction.

The chapters on Yellow Fever and on Plague have been added by Dr. Vickery and by Dr. Shat-

tuck respectively. They are short, but at the same time they are pithy, and it may be said of all the American additions that they greatly enhance the value of the book.

The index is clear and copious, and we have noted in it only two typographical errors, namely, "spirilli" for *spirilla* and "erythromyelalgia" for *erythromelalgia*. The book-making is quite up to the high Appleton standard.

A Text-book of the Practice of Medicine. By JAMES M. ANDERS, M. D., Ph. D., LL. D., Professor of the Practice of Medicine and of Clinical Medicine in the Medico-chirurgical College, Philadelphia, etc. Illustrated. Fifth Edition, thoroughly Revised. Philadelphia and London: W. B. Saunders & Company, 1901. Pp. 5 to 1297.

The continued popularity of this text-book has called forth a fifth edition within a year of the publication of the fourth. The book has been improved by a revision of the portions on some of the group of infectious diseases, the article on typhoid fever showing many changes. The articles on malaria and yellow fever have been partly rewritten, and this ætiology and mode of transmission made to conform to the newest views. As new articles, appear fatty infiltration of the heart, streptococcus pneumonia, and acute diffuse interstitial nephritis. The book deserves its popularity.

Surgical Technic. A Text-book on Operative Surgery. By FR. VON ESMARCH, M. D., Professor of Surgery at the University of Kiel, etc., and E. KOWALZIG, M. D., Late First Assistant at the Surgical Clinic of the University of Kiel. Translated by Professor LUDWIG H. GRAU, Ph. D., Formerly of Leland Stanford, Jr., University, and WILLIAM N. SULLIVAN, M. D., Assistant of the Surgical Clinic at Cooper Medical College, San Francisco. Edited by NICHOLAS SENN, M. D., Professor of Surgery at Rush Medical College, Chicago. With Fourteen Hundred and Ninety-seven Illustrations and Fifteen Colored Plates. London and New York: The Macmillan Company, 1901. Pp. xl-866. (Price, \$7.)

To a select few this erudite work has been very familiar in the original, and it has now been well presented in English by the able and conscientious translators who will have in the wider publicity which this treatise will enjoy among English-speaking surgeons, the best recognition of their services. The original work appeared in two volumes, but this translation has been published in one handsomely executed volume.

The fortunate selection of the accomplished editor has been a decided gain for the work, as his great familiarity with surgical literature and with the progress of surgery has enabled him to make such additions as were necessary to bring the treatise up to date and at the same time place it in harmony with the practice of surgery in America.

On the whole, the translation is fair, but the involved style of the German sentences has been retained, and not infrequently one encounters decided Germanicisms; for instance, "The safest informa-

tion gives the exposure to the rays, * * * which already in very many clinics are used;" and, again: "Kocher uses recently a similar incision." Finally the anatomical nomenclature is partly Latin and partly English, which cannot fail to be perplexing. The illustrations number almost 1,500 and so extraordinarily well executed are they that in themselves they would constitute a graphic surgery. The motto "*kurz und bündig*" (short and concise) adopted by Esmarch aptly describes the style of the text. There are two indices, one of names of authors coupled with the surgical methods originated by them, the other an index of subject matter. This book is regarded as a classic in Germany, because of its masterful conception at the hands of a foremost practical surgeon who lived through all those evolutionary phases which the surgery of the close of the nineteenth century underwent. Every student of surgery and every practical surgeon will find in this book a veritable storehouse of the best precepts of operative surgery.

As to the word "technic" in the title, we decidedly object to it. The translators can of course plead that it is a "dictionary word"; all the same, it is not good English.

Miscellany.

The Deterioration of Artificial Foods.—The *American Journal of Pharmacy*, for October, contains an interesting article on this subject, by Charles H. LaWall. He says that intelligently to comprehend the subject consideration must first be given to the ingredients and constituents of the various artificial foods.

The constituents taken collectively may be divided into three general classes: (1) Fats; (2) proteids; (3) carbohydrates. These may be still further subdivided according to their origin, whether animal or vegetable; the carbohydrates may be soluble or insoluble—that is, they may consist of sugars or dextrins, or they may belong to the group of starches. The ingredients furnishing these constituents may be any of the following: Dried milk, flours or ground cereals, sugars or dextrins, starches, desiccated eggs or meat extracts. The deterioration may be due to chemical changes involving one or more of these constituents or may be due to physical alterations brought about in one of several ways.

The principal causes involving chemical change may be divided into three classes: (1) Oxidation of the fatty matter, resulting in what is commonly known as rancidity; (2) fermentative changes, which generally affect the carbohydrates; (3) putrefactive changes, which involve the proteid or albuminous matter.

The oxidation of the fatty matter is the only one of these changes that can possibly take place in the dry product, as both putrefaction and fermentation require the presence of a certain amount of moisture for their accomplishment. This oxidation may be of bacterial origin or be due simply to the action of the oxygen in the atmosphere. The latter supposition is borne out by the fact that this change occurs in dry material (containing less than five per cent.

of moisture), is favored by access of air, and retarded by protection from the atmosphere.

Thorpe's *Dictionary of Chemistry* says concerning the stability of fixed oils and fats: "If air be excluded the fixed oils may be preserved unchanged for a lengthened period; when absolutely free from foreign matter most of them remain unchanged, but commercial specimens gradually turn rancid. This alteration is generally attributed to the presence of certain foreign matters, such as the cellular substance of the animal or plant from which the oil was extracted; volatile fatty acids are set free. Max Grager considers that rancidity is due to the oxidation of fatty acids and glycerin in presence of traces of water." Decomposition of this kind is favored by continued exposure to high temperature, such as being placed on a shelf which adjoins a chimney flue.

Fermentative changes and alterations produced by the agency of micro-organisms are of rare occurrence unless the product has become damp, either from being packed in containers which were not thoroughly dried, or by the absorption of moisture from being kept in a damp place, or the packages themselves becoming wet through accident. Where the container is air- and moisture-proof these latter causes are eliminated from consideration. Mould growths will take place in the presence of ten per cent. of moisture, while bacteria will not flourish in the presence of less than fifty per cent. of moisture, except in the presence of sugars, when the limit is reached with thirty per cent. of moisture. When fermentative changes have once set in it is difficult to retard their operation. They alter the nature of the product, but seldom evolve any products of a harmful nature.

The putrefactive changes are most to be feared, for they involve the nitrogenous or proteid matter and often produce toxic substances such as ptomaines, or the so-called cadaveric alkaloids. The cases in which putrefactive changes have taken place are of rare occurrence, however, on account of the large amount of moisture necessary for their successful accomplishment. Then, too, such alterations are usually accompanied by the production of sulphuretted odorous compounds which give warning of the change which has occurred. The first step in putrefaction is the peptonization of the albuminous matter, after which the liberation of volatile fatty acids and sulphuretted gases takes place and the production of the toxic principles or ptomaines is the last step in the series of changes. It therefore follows that, if air and moisture are excluded, food products will keep for an indefinite period and this fact has been borne out by experimental work performed by numerous investigators on the subject.

When the package is not air tight the product should always be kept in a cool dry place, as this is the safest way to minimize the chances of deterioration occurring.

Another change which often takes place in products of this kind is one which involves purely physical processes. It is produced by the absorption of odorous compounds and subsequent alteration of odor and flavor, either by the close proximity of some volatile body having a powerful odor, or by the standing in an atmosphere surcharged with such odorous compounds. It is a well-known fact that most drug stores have a distinctive odor, usually of

an unpleasant character, and at certain seasons of the year, when naphthalene, or "coal tar camphor" as it is termed, is in great demand, some druggists have window displays in which a large amount of the product is heaped up so as to attract attention. As this compound is very volatile and of a peculiar penetrating odor it can easily be seen that when the store is closed up for the night so that there is no ventilation to carry the odor out, every container in the store which is not practically air-tight will be subjected to the influence of this vapor, and in such cases as the food products enough of the odor is often absorbed to be readily appreciable to the senses for a long time afterward.

Osteitis Deformans.—Dr. Thomas S. Kirkbride (*American Journal of the Medical Sciences*, November) closes an exhaustive article, containing a detailed report of a case, with the following conclusions derived from the study of that case and of the literature of the subject:

A. From the Clinical Standpoint.—1. Beside our own case, 66 true cases of osteitis deformans are found in the literature. 2. Osteitis deformans is a distinct disease of obscure ætiology, but possibly allied to, although not identical with, osteomalacia, fragilitas ossium, and acromegaly. 3. The disease is one especially of later adult life, although its onset has been noted at as early a period as the twenty-first year. Of the 67 cases, 61 per cent. occurred in males, 35 per cent. in females. In a small number of cases trauma has seemed to play a part in the ætiology. There is very little evidence of a family tendency to the disease, although there are a few examples in the literature. 4. The subjects of the disease bear a striking resemblance to each other in their general characteristics, the most noteworthy features of which are enlargement and forward projection of the head, dorso-cervical kyphosis, the prominence of the clavicles, the spreading of the base of the thorax, the diamond-shaped abdomen crossed by a deep sulcus, the relative increase in the width of the hips, and the outward and forward bowing of the legs. 5. The bones most frequently affected are those of the cranium, the tibiæ, and the femora, in the two former of which the deformity was usually first noted. There is a curious preponderance of cases wherein the left side was either first or most involved, although at times it was noted that the enlargement was crossed so that the lower extremities of one side while the upper extremities of the other were involved to the greatest degree. 6. The association with malignant disease, while present in our case, would seem to be not quite so frequent as is usually stated.

B. From the Pathological Standpoint.—1. Osteitis deformans is a disease affecting the skull, vertebræ, and certain of the long bones. Its essential pathological characteristics are: (a) Absorption of the compact substance causing enlargement and confluence of the Haversian canals. (b) Formation of new bone which runs diffusely through the affected and the adjacent healthy portions. This new bone remains uncalcified, and is in turn reabsorbed. (c) The conversion of the

medullary substance into a vascular connective tissue containing fat cells, giant cells, and leucocytes. In a small proportion of the reported cases, cysts filled with gelatinous material and giant-celled sarcomata occur in the medulla. (d) As a consequence of these three processes, the ordinary relations of the compact substance and medulla are destroyed. The bones become exceedingly thickened and asymmetrical, but since the new bone tissue remains uncalcified its elasticity permits of great deformity of the long bones from the weight of the body, and fractures do not occur. 2. The whole picture of osteitis deformans from its pathological aspect is so very characteristic that it must be considered a distinct disease, and its pathological diagnosis is correspondingly easy. 3. The ætiology of the condition is as obscure as when Paget first described it. Some predisposing tendency, probably trophic, must be assumed, and the exciting cause may be mechanical; in the skull, extremes of heat and cold, and in the vertebra and long bones the ordinary traumata to which these bones are exposed. Lesions of the nervous system are inconstant and rare, and are probably not a causal factor.

Morphine and Atropine in Cardiac Dyspnoea.—Dr. Graham Steel (*Quarterly Medical Journal*), in an article entitled *A Present Day View of Heart Disease and Its Treatment*, says:

"I will conclude with reference to a treatment that is too often also the conclusion of our therapeutic endeavors, I refer to the relief of dyspnoea and the promotion of euthanasia by the hypodermic administration of morphia and atropia, but do not think there is any throwing up of the sponge when we have recourse to it. Only within the last couple of months I had a patient, with aortic incompetence and complications, in the Infirmary, who seemed not likely to live half a dozen hours, and whose friends had been so informed. His distress of breathing, etc., was great, and I ordered him a hypodermic of morphia and atropia. He began to improve almost immediately and is now unquestionably convalescent. Every now and again we meet with such a result. Paroxysmal dyspnoea is the symptom that specially indicates the use of morphia, and such dyspnoea is often found to be associated with considerable arterial tension. At first nitrites and alcohol give relief, but later we must have recourse to morphia and atropia. As conditions that militate against the use of morphia, I think much accumulation of bronchial secretion is a stronger contraindication as regards its use than kidney disease. Indeed, some cases of heart failure in Bright's disease derive great benefit from its use and stand fairly large doses, but the first dose should always be small; one must feel one's way to the dose that brings relief without risk.

One thing is essential for the practitioner who treats heart disease, it is that he should never know when he is beaten while his patient is alive. When his patient is dead, he should at least have the consolation of having fought a good fight on his behalf."

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